

## INDIVIDUALISTIC ATTRIBUTES OF INFLATIONARY EXPECTATIONS: EVIDENCE FROM PAKISTAN

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**Abstract.** Macroeconomics today has evolved to a very dynamic nature in terms of the way it handles and approaches the macroeconomic modeling. Among the various pronounced features, the one that has acquired the central theme is the micro foundations. Individual entities, attributes, behaviors and tendencies which were more of a concern to microeconomic models have become a more acknowledged part of the contemporary macroeconomic models. Analyzing inflationary expectations and incorporating them in the models designed to evaluate the efficacy of economic policy is the biggest evidence of this paradigm shift. Owing to the critical role, inflationary expectations can play in transmission mechanism of policy, researchers are eager to explore them from measurement perspective and in terms of factors determining them. The study at hand is an attempt to explore inflationary expectations from individualistic perspective. The study is conducted based on the survey responses of salaried and self-employed individuals from twin cities of Pakistan; Rawalpindi and Islamabad. An ordinal Logit model is fitted based on the high, medium, low and stable forecast about the increase in general price level in upcoming year and is analyzed for

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various qualitative and quantitative determinants of inflationary expectations. The results suggest that the individualistic attributes including age, income level, degree of optimism, degree of myopia, degree of relative comparisons, economic literacy, and occupational differential significantly explain the choice of inflationary forecast on the part of respondents. High level inflationary expectations are tracked among the respondents who are more myopic, relatively makes more comparisons in evaluating their income, consumption choices and wage negotiations, hold more economic literacy, are occupationally salaried and belong to old age group, while low level inflationary expectations are observed among the individuals who belong to higher income group and those who are more optimistic. The findings of this study provide a strong case to advise policy makers to incorporate and anticipate these individualistic attributes while designing policies destined towards controlling inflation to make policies more effective.

**Keywords:** Inflationary Expectations, Qualitative attributes, Individualistic tendencies, Survey Method, Micro-foundations

**JEL Classification:** B22, B31, C25, C83, D84, E31, E71

## I. INTRODUCTION

### THEORETICAL AND PRACTICAL RELEVANCE

In macroeconomics “Inflationary Expectations” have been a critically discussed and versed phenomenon for a long time. Owing to their key role, macroeconomists and policy makers retain keen interest to capture expectations from various aspects and dimensions especially due to their policy relevance. For instance, it is believed that the efficacy and credibility of central bank’s monetary policy is strongly linked with inflationary perceptions and expectations; for this reason, central banks around the world are engaged in their own inflationary expectation surveys and also rely on some other professional forecasts. Sausa and Yatmen (2016) in a seminal paper evaluate central banks across different countries in terms of their reliance on inflationary expectations surveys and report a significant increasing trend in this reliance overtime. Monetary authorities are concerned with reviewing these expectations from the prospect of macroeconomic stability. These expectations appear

to move in tandem with the goals and objectives of monetary policy, as stabilizing inflation is among the crucial goals of any monetary policy and stabilizing inflationary expectation now a day has become a complementary part. A quote of a renowned economist “Ben Bernanke” ex-governor of Federal Reserve Bank is worth quoting in the context of this discussion:

*“We expect inflation because we have it, and we have inflation because we expect it”.*

The introduction of Fisher equation into macroeconomic literature accorded a special value to inflationary expectations and this real interest channel is a significant addition to the channels explaining the aggregate demand and demand pull inflation. As expected inflation increases, real interest rate decreases, which makes consumption relatively more attractive for individuals than to save and therefore, consumption spending increases. This positive relationship is justified in many studies where inflationary expectation serves as a cause and spending serves as an effect, (D. Acunto et al. 2015; Bachmann et al. 2015). Economists have perhaps realized that inflationary expectations are the driving force behind inflation inertia and its rising levels, that is why, special emphasis is placed in developing theoretical models which can explain the link between inflation and inflationary expectations (Nailwaik, 2016).

## **MEASUREMENT CHALLENGES**

Measuring inflationary expectations is not as easy as it appears to be in literal language. Their measurement mostly involves subjective surveys and analysis which make their precise estimation a daunting and challenging task. Researchers have tried to adopt simplifying approaches to approximate subjective responses; consumer surveys seeking expectations on future increase or decrease in inflation are most prominent of this chain (e.g. EC consumer survey, NOP survey of inflation attitudes in UK, University of Michigan survey of Consumer attitudes for US). Quantification of qualitative survey responses on inflationary expectations have been a pronounced subject matter in literature; Carlson-Parkin method (Probabilistic Approach), regression method and balance method are among the most typical techniques employed by researchers to quantify them (Nardo, 2003). Most surveys on inflationary expectations involve questions on predicting inflation rate

or price level on 3, 6 or 12 months' basis (see for instance, Livingston survey). Sometimes the purpose of research is met by asking the direction of increase or decrease or no change (e.g. Michigan Survey), while other studies employ different strategy by asking question on 5-point scale in a format of most likely to increase to the other extreme of most unlikely to increase.

Although bulk of literature is available on measurement methodologies and quantification techniques, consensus is yet to be established on a common measure. Various studies suggest that inflationary expectations are quite sensitive to the time horizon used to extract forecast; for instance, some commonly used time horizons are one year ahead, two years and three years ahead used in different surveys. A study by Armantier et. al (2013) makes a comparative analysis of some prominent surveys and reports significant difference in inflationary forecasts based on time horizon. Evidence is also available where the wording scheme of questions, survey mode, belief of respondents and opportunity to revise responses cause a lot of differential in expectations about inflation (Bruin et al. 2017; Klaauw, 2008).

## DETERMINING FACTORS

The determining factors of inflationary expectations encompass a very broad spectrum. The idea is beautifully comprehended by a renowned economist, Hicks in (1939) in the following words:

*“It seems possible to classify three sorts of influences to which price-expectations may be subject. One sort is entirely non-economic: the weather, the political news, peoples state of health, their psychology. Another is economic, but still not closely connected with actual price movements; it will include mere market superstitions, at the one extreme, and news bearing on future movements of demand or supply (e.g., crop reports), at the other. The third consists of actual experience of prices, experience in the past and experience in the present; it is this last about what we can find most to say’. (p. 204)”*

Perhaps the researchers of current era have acknowledged this idea presented by Hicks long time before, that is why, we find this concept being explored based on economic and non-economic factors. Manifold studies are available which have focused upon inflationary expectations

and the mechanism through which they are governed in the perspective similar to what is proposed by Hicks. Some find adaptive learning dominating the rational learning as its principal determinant (Mariman & Sunder 1995; Barnasconi & Kirchkamp 2000; Hey 1994); some find beliefs (perceptions) and habits of individuals as a primary source of variations in inflationary expectations (Roetheli, 2011) and some focus on information owned by the respective agents especially financial/economic literacy and awareness as primary explanatory factors for heterogeneity in inflationary expectations (Briun et al. 2010; Burke & Manz, 2014).

Past studies have mostly analyzed inflationary expectations as per conventional approach that how these expectations are driven by some economic factors like income, wage, and consumption expenditures etc. But recent literature emphasizes on qualitative factors including demographic and age profiles, literacy, household size, family setup, perceptions, social and physical environment, awareness to the policy designs, understanding of economic variables and their policy covariates as determinants of inflationary expectations (Bobeica et al. 2017; Fritzer & Rumler, 2015). Analyzing perceptions and uncertainty faced by individuals (while quoting inflationary expectations) is a formal concept which appears to complement the paradigm shift in literature towards the identification of qualitative determinants of inflationary expectations. Economists try to rationalize the macroeconomic dynamics of inflationary expectations based on studies involving individual behavior. Binder (2017) is a classic example in this domain, which demonstrates how uncertainty about inflation relates with qualitative attributes such as age, income group, educational domain and market sentiment of investors.

## **RESEARCH MOTIVATION, UNIQUENESS AND OBJECTIVES**

Although the received literature on topic of inflationary expectation is quite rich and broadly discussed in various themes, it is apparently limited to focusing on its measurement scales and quantitative determinants. A few studies which have focused on the qualitative attributes (including education, beliefs, perceptions, financial literacy etc.) are either of experimental nature or they deal with one or two attributes at a time. This scrutiny leaves us with a literature gap, which is to be filled with some additional predictors concerned more with

individualistic tendencies explored through subjective survey. Our study intends to explore the linkage of individual's behavioral aptitude with his/her expectations. The study is unique in the sense that it analyzes the individualistic qualitative attributes including (optimism/pessimism, spending tendencies, myopic tendencies, degree of relative comparisons, individual's satisfaction with his/her political/economic life, education level, occupational status and economic literacy) as determinants of inflationary expectations in an exploratory manner. Available research scantily addresses inflationary expectations in such dimensions particularly in terms of the variables we have brought upfront. Also, the study is unique of its nature particularly in case of Pakistan.

The way or the process through which an individual forms his/her expectations is tidily linked with the behavioral aptitudes he or she possesses. The way one makes expectations regarding general affairs of one's life cannot be considered independent from the way one forms expectations regarding a phenomenon like inflation. The processing or habitual scheme of expectation formation regarding general matters would also be reflected in expectations regarding inflation and this habitual scheme is strongly linked with the above mentioned behavioral attributes. These attributes should be regarded as critical determinants of inflationary expectations because they affect individual's capacity or ability to process information. This ability leads to create a differential in the information set possessed by different individuals which in turn is a documented determinant of asymmetries and differences in inflationary expectations (Pfajfar, 2013; Pfajfar & Santoro, 2008).

In nutshell, our study aims at the following two objectives:

1. To explore whether individuals hold high, low or stable inflationary expectations.
2. To relate these inflationary expectations with their various personal attributes.

## **II. DESCRIPTION OF VARIABLES**

### **DEPENDENT VARIABLE (INFEXP)**

Our dependent variable is inflationary expectations. Respondents have been asked to quote their future forecast regarding general price

level that whether it would increase, decrease or remain stable in upcoming year. As our study involves some piloting upon the questions, it is found that the respondents are more convenient with per year terminology rather than monthly or quarterly figures. This question is also complemented with another question which is supposed to be answered by those respondents who quote an increasing forecast in first question. The second question requires respondents to quote the magnitude of increase; that is, by what percentage they expect general price level to increase. Three figures are provided; one quoting a two-digit increase (representing high inflation), the other quoting a single digit mid-level increase or third specifies a mild single digit increase. It is a usual convention or belief that the inflationary environment serves as a mark of reference for inflationary forecasts or expectations. To categorize inflationary expectations as high, moderate and low one can use past few years' average trend or current value as a benchmark. Our survey was conducted in later half of year 2016, when actual inflation rate in Pakistan was at around 3.8% and average trend of preceding 4 to 5 years remained at around 6%. This average trend has been used as a guiding mark of reference for categorization of our dependent variable inflationary expectations. Respondents are allowed to choose between three options while reporting their expectations on inflation: (a 10% increase; a 5% increase and a 3% increase. The choice of 10% relative to our mark of reference (average trend of 6%) is termed as high, while a choice of 5% is termed as moderate/mid-level and finally the choice of 3% is termed as low relative to the benchmark. The construct and design of our dependent variable is purely based on the state of inflation corresponding to the time of survey. These questions are constructed under the guideline of Michigan Survey on consumer's inflationary expectations. Based on these two questions we construct a variable containing following five categories:

1. Individuals who expect high inflation (Coded as 5)
2. Individuals who expect an intermediate or mid-level inflation (Coded as 4)
3. Individuals who expect a low/mild inflation (Coded as 3)
4. Individual who expect inflation to remain stable (Coded as 2)
5. Individual who expect inflation to decrease (Coded as 1)

The mentioned categories specify our ordinal dependent variable having 5 ranks.

## **INDEPENDENT VARIABLES**

### **Degree of Myopia (DOM)**

#### **Theoretical Justification**

Human beings are observed to be quite short sighted in many affairs of their life. This feature is not only specific to their social or general affairs of life but also quite common in many economic decisions they make and expectations they form. Introduction of this concept “Myopia” in economic modeling is deeply rooted in literature, especially literature linked with intertemporal choice theory (Pashardes, 1986; Pollak, 1976). The investors’ myopia is quite a well pronounced term in this relevance used in the literature of economic finance. This tendency defines a lot of upward and downward swings of stock market via role of myopia on investors’ expectations regarding future (Rozmainsky, 2015). If history has witnessed that investors’ expectations are driven by their myopic tendency, one can always assume inflationary expectations to be driven by this myopic tendency at individual level. This variable is included in the model to check if people who are myopic are more likely to expect high or low levels of inflation.

#### **Construction of Variable**

This myopic tendency in our context is captured by dividing the past life of respondents into two domains; near past and farther past. The respondent is then judged whether he places more weight on the instances of near past experiences of his life or farther past experiences. Any respondent who places more weight on the happenings of near past is termed as myopic and the one who places more weight on the events of farther past is termed as non-myopic. We cannot subjectively track the myopic tendency of an individual by directly asking him about his shortsightedness, therefore, the construction of this variable is carried out by quoting some examples from everyday routine matters and taking the opinion of respondents accordingly. Myopic tendency has been tracked by categorizing myopia into three dimensions: “Perceptive Myopia”



captured by the response of an individual against the quoted example at general level (Exemplary or conditional statements are specified for this dimension); “Self- Myopia” captured by addressing the respondent’s view about how he would have behaved personally or feel about that condition himself, if he were to assume himself in the given scenario or state; “Reasoning Myopia” captured by the response of individual when he is allowed to rank shortsightedness among the various causative factors offered for the given examples or situations in the said questions. However, as the question capturing the first aspect captures the responses through Likert scale, questions on second aspect deal with the percentages, and the questions on third aspect deal with the ranking, we need to accord some common scores to the responses to get an average value of these three dimensions of myopia. The coding scheme is explained in Table 1:

TABLE 1  
Dimensions of Myopia

|       | Perceptive Myopia |   |   |   |   | Self- Myopia |                  |                  |                  |      | Reasoning Myopia |   |   |   |   |
|-------|-------------------|---|---|---|---|--------------|------------------|------------------|------------------|------|------------------|---|---|---|---|
|       | Likert Scale      |   |   |   |   | % Response   |                  |                  |                  |      | Ranking          |   |   |   |   |
| Scale | 1                 | 2 | 3 | 4 | 5 | >= 80%       | >=60<br>-<br><80 | >=40<br>-<br><60 | >20<br>-<br><=40 | <20% | 1                | 2 | 3 | 4 | 5 |
| Score | 10                | 8 | 6 | 4 | 2 | 10           | 8                | 6                | 4                | 2    | 10               | 8 | 6 | 4 | 2 |

For perceptive myopia, any respondent who chooses option 1 which corresponds to strongly agree is assigned a maximum score of 10, likewise successively lower scores are assigned to the other options. For self-myopia, respondents who assume themselves to behave in a given manner in a given state by the highest percentage are assigned the highest score of 10, while successively lower percentages are associated with lower scores. For reasoning-myopia any respondent who top ranks shortsightedness for a given behavior is assigned a maximum score of 10, likewise low ranks are associated with successively low scores. The scores from all types of myopia are averaged to get to a final value used for our variable containing following five categories (Table 2); these categories are designed based on interval in which average value (*Avg.V*) falls.

TABLE 2  
Degrees of Myopia

| Categories | Highly Myopic                | Myopic                      | Neutral                     | Non-Myopic                  | Highly Non-Myopic           |
|------------|------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Interval   | $10 \leq \text{Avg. } V < 8$ | $8 \leq \text{Avg. } V < 8$ | $6 \leq \text{Avg. } V < 8$ | $4 \leq \text{Avg. } V < 8$ | $2 \leq \text{Avg. } V < 0$ |
| Coded as   | 5                            | 4                           | 3                           | 2                           | 1                           |

### Spending Tendency (ST)

#### Theoretical Justification

This question subjectively asks respondents to quote their spending tendency whether they are more spendthrift, thrifty or in between the two extremes. High level of spending generates more demand for goods and services at the macroeconomic level and thus contributes to demand pull inflation. Living in an inflationary environment is theoretically thought to cause high inflationary expectations on the part of individuals. This variable is included to test this theoretical proposition.

#### Construction of Variable

The variable is accorded three categories in our theoretical model and the responses through questionnaire are utilized to construct our desired variable with the following classification:

TABLE 3  
Categories of Spending Tendency

| Categories | Spendthrift | Moderate | Thrifty |
|------------|-------------|----------|---------|
| Coded as   | 3           | 2        | 1       |

### Degree of optimism/pessimism (DOPT)

#### Theoretical Justification

One can never separate out expectations of one's life from the inevitable/inherent optimistic/pessimistic tendency of mind. It would be more plausible to propose that every expectation we make regarding future is screened through this optimistic/pessimistic filter. What we foresee is strictly tied to what we perceive, and our perceptions are

framed by our optimistic or pessimistic tendencies. Based on the strong theoretical link between expectations and this tendency of human mind we can always analyze inflationary expectations under this realm. People who are optimistic supposedly expect different levels of inflation as compared to people who are pessimistic. This tentative theory serves as an impetus behind the inclusion of this variable as independent variable in our theoretical model. Empirics also support the inclusion of this variable in our model based on the significant role it plays in affecting the economic variables. Optimism is believed to affect the investment decisions (David et al., 2006) and it is also shown to affect the saving behavior of individuals (Brown and Taylor, 2008). Inflation and inflationary expectations being within the domain of economic variables can always be tested for their reliance on degree of optimism.

### **Construction of Variable**

Respondents are asked to quote their expectations regarding different future outcomes especially related to their external lives at country level and an index is constructed based on average score of respondents on Likert scale. As per construction scheme, a strong agreement to a positive statement is awarded a maximum score of 10, an agreement to a positive statement is assigned a score of 8, a score of 6 is attributed to a neutral response, a score of 4 is allocated to a disagreement against a positive statement and finally a score of 2 is specified against strong disagreements. The scoring scheme is reversed for any negative statement. Our questionnaire comprises of 12 such statements among which 10 is positive and 2 are negative statements. The score of all 12 statements are averaged to get to a value representative of our variable-degree of optimism (DOPT)- with following five categories. These categories are based on the following intervals of average scores ( $Avg.V$ ).

TABLE 4

#### Degrees of Optimism

| Categories | Highly Optimistic   | Optimistic         | Neutral            | Pessimistic        | Highly Pessimistic |
|------------|---------------------|--------------------|--------------------|--------------------|--------------------|
| Interval   | $10 \leq Avg.V < 8$ | $8 \leq Avg.V < 6$ | $6 \leq Avg.V < 4$ | $4 \leq Avg.V < 2$ | $2 \leq Avg.V < 0$ |
| Coded as   | 5                   | 4                  | 3                  | 2                  | 1                  |

## **Degree of Making Relative Comparisons (DRC)**

### **Theoretical Justification**

Individuals who use to make more relative comparisons in their social, private and economic life tend to be more aware and informed as compared to individuals who behave in contrary manner. One could argue that information gathering is a by-product of making relative comparisons; for example, people who only focus on their absolute wage or income would be less informed about the job market as compared to people who compare their wage or income with the other economic groups. This happens because process of comparison in lieu provides many means to acquire information. Tendency of relative comparison does not only allow individuals to gather more information but also provide them an opportunity to evaluate a given concept from various dimensions. The way one considers the future to forecast inflation is linked with the information set one possesses regarding different variables affecting inflation. In this connection, tendency of relative comparison regarding wage, income, consumption, job market always helps to process the information necessary to make this forecast. Empirical literature on expectations is not silent on this front; bulk of literature is available which considers relative income to be more important than absolute income when income is made explicative in models of happiness and expected well-being (Caner, 2015). Evidence is also available where individuals adjust their expectations on the basis of their relative well- being (Konrad et al., 2015).

### **Construction of Variable**

The tendency of making relative comparison on the part of respondents is captured on following three accounts: how do respondents weigh the increase in their income relatively; (what relative factors respondents utilize while making a choice or purchase of consumable items; and what relative factors respondents would utilize if they were to negotiate their salary or wage in job market? All these aspects are scaled on a 5-points Likert scale. The same scoring scheme is followed as has been explained for the previous variables and an index value is obtained based on average score of responses from these three questions. The resultant categorical variable accompanied with its coding scheme is given as followed:

TABLE 5

## Tendency of Making Relative Comparisons

| Categories | Extremely High               | High                        | Medium                      | Low                         | Extremely Low               |
|------------|------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Interval   | $10 \leq \text{Avg. } V < 8$ | $8 \leq \text{Avg. } V < 8$ | $6 \leq \text{Avg. } V < 8$ | $4 \leq \text{Avg. } V < 8$ | $2 \leq \text{Avg. } V < 0$ |
| Coded as   | 5                            | 4                           | 3                           | 2                           | 1                           |

**Economic Literacy (EcoLit)****Theoretical Justification**

Inflation being a variable of pure economic nature needs at least some elementary level understanding of economic concepts if it is to be forecasted for its high, medium or low levels. Economic literacy has been recently acknowledged as an important determinant of inflationary expectations. Individuals who are more economic literate can use certain different forecasting tools in making a forecast about inflation as compared to contrary. Awareness of economic policy making, policy making tools, controlling authorities, inflation control targets, different interrelated variables, and basic knowledge of linkages between economic variables are all such things which allow individuals to approach inflationary forecasts in an appropriate manner. We can also assign an empirical tag to justify the selection of this independent variable. A study by Bruin et al. (2010) reports high inflationary expectations on the part of individuals having lower financial literacy. Accounting such significance owned by economic knowledge and basic understanding, a variable named economic literacy is deemed desirable to be added in our empirical model to depict how high/low economic literacy is likely to affect high/low inflationary expectations.

**Construction of Variable**

Economic literacy of respondents has been evaluated by taking the two aspects into consideration: policy awareness; and basic theoretical understanding. Maximum score is assigned to the correct responses and minimum score to the wrong ones. A slight differential is observed in construction of interval for this variable; the sum of maximum score one can acquire if all responses are marked correct is used as benchmark for calculation of percentages. If aggregate score obtained by respondent

exceeds or equals to a certain percentage of maximum attainable score, it is termed as a distinct category. For instance, if aggregate score (Agg.S) obtained by the respondent exceeds or equals 80% of maximum attainable score (Max.S), it will be termed as “High economic literacy”. Likewise, the other intervals are constructed based on different percentage ranges as mentioned in Table 6:

TABLE 6  
Levels of Economic Literacy

| Categories | High                    | Moderate                          | Weak                              | No Literacy             |
|------------|-------------------------|-----------------------------------|-----------------------------------|-------------------------|
| Interval   | If Agg.S > 75% of Max.S | If Agg.S ≥ 50% But < 75% of Max.S | If Agg.S ≥ 25% But < 50% of Max.S | If Agg.S < 25% of Max.S |
| Coded as   | 4                       | 3                                 | 2                                 | 1                       |

### **Age (AgeGp)**

#### **Theoretical Justification**

Inflationary expectations are usually analyzed to figure out those determinants of inflationary expectations which can be prescribed to the policy makers while designing a policy and controlling it. Age is among those variables which can be highlighted within the domain of this discussion as, by having knowledge of the trends different age groups follow in terms of inflationary expectations, authorities can have the option to make policies destined towards a larger group or population. Identifying age as a determinant of inflationary expectations is very important from policy perspective; if a country has a bigger proportion of old aged people, and if old aged people are found to expect high inflation, then this information plays a pivotal role in the construct of policy design. Empirical research has found diverse trends in terms of this variable. Some studies have found a U-Shaped curve of inflationary expectations with respect to age; old age and young age people are found to expect high inflation as compared to middle age people (see for example, Palmqvist & stormberg, 2004; Bryan & Venkatu, 2001). Other studies report old age people to expect high inflation as compared to middle or young age group.

**Construction of Variable**

As per collected sample of our survey, three age groups are identified and used in our empirical model.

TABLE 7

## Classification of Age Groups

| Categories | Age group 1          | Age group 2          | Age group 3             |
|------------|----------------------|----------------------|-------------------------|
| Interval   | $\geq 20$ but $< 30$ | $\geq 30$ but $< 40$ | $\geq 40$ but $\leq 50$ |
| Coded as   | 1                    | 2                    | 3                       |

**Satisfaction Content (SCEP)****Theoretical Justification**

Expectations about inflation are quite sensitive to the level of satisfaction individuals hold about their external environment especially the political and economic environment. People always associate a negative connotation to the word inflation; therefore, high inflation is usually sensed as something negative. Individuals who hold confidence and feel satisfied about the political and economic setup of their country usually hold positive perceptions and expectations. Inflationary expectations being the subset of this universal set of expectations supposedly should be low. Hypothetically individuals who are more satisfied with respect to the political and economic environment are likely to expect low inflation rather than high. Duke/CFO business outlook survey is one of the most renowned and frequently conducted surveys by the Duke University since 1996. One concrete finding of this survey helps us to justify the formulation of our hypothesis; the survey finds a strong linkage between political conditions of a region/country and pace/growth of multiple operating firms via expectations of the chief financial officers of these firms. Likewise, economic environment plays a pivotal role as well. Larina (2008) for example, scrutinizes employment status and income as determinants of optimistic expectations on part of individuals and finds significant relationship between employment status and expectations. Within this contextual framework, "Satisfaction Content" is included justifiably in our empirical model.

### **Construction of Variable**

Four questions are designed to extract the satisfaction content of individuals in terms of political and economic environment they live in. Two questions directly address this concern by asking individuals about their satisfaction level while the other two questions indirectly capture the satisfaction level through respondent's opinion about any political and economic state they are subject to. The intended variable is constructed with three categories based on whether someone is fully satisfied (coded as 3), satisfied to some extent (coded as 2) or not at all satisfied (coded as 1).

### **Income Level (IncomeL)**

#### **Theoretical Justification**

The infliction caused by high prices on rich and poor is not alike, likewise its impact on their expectations about prices should not be same. This suggests that inflationary expectations should differ across various income groups. Those income groups which are hurt more by the high levels of inflation would expect high inflation and the case should be different for the contrary. Hypothetically, lower income group should expect high inflation as compared to high income groups. A piece of evidence is found in Pfajfar and Santoro (2008), which narrates income levels as quite significant in causing asymmetries in inflationary expectations across various demographic groups. Another piece of evidence is reported in a study by Plamqvist and stormberg (2004), which reports high inflationary expectations on the part of low income households. The inclusion of this variable in our empirical model is aimed at examining these evidences in case of our selected sample.

#### **Construction of Variable**

Certain income ranges are provided to the respondents in our questionnaire and they are required to pick the range best suited to them or the domain in which their income lies. The accumulative responses are used to construct the following five categories of income levels (IL) with their respective coded scheme:



TABLE 8  
Classification of Income Level

| Categories | Fairly High | High              | Moderate            | Average            | Low     |
|------------|-------------|-------------------|---------------------|--------------------|---------|
| Interval   | If > 1Lac   | >70 Th but < 1Lac | > 40 Th but < 70 Th | > 25 Th but < 40Th | < 25000 |
| Coded as   | 25          | 20                | 15                  | 10                 | 5       |

### **Education Level (EduLevel)**

#### **Theoretical Justification**

When it comes to compare low education level with high education level, there is a clear dividing line of mental grooming and maturity with every additional educational attainment. Highly educated individuals tend to be stronger in their information domain. They not only hold comparatively better information set but also enjoy competitive edge in their ability to process and utilize the given information. Educated people use to sit in company of intellectuals, they use to attend the academic seminars, conferences, and they use to keep themselves in touch with the ongoing happenings in the economic world around them. Their domain allows them to have access to more correct and authentic sources of information regarding inflation and utilize it accordingly in making expectation about it. One can say that these individuals are not the blind followers of exaggerated hype created in terms of figures regarding inflation rather they can review the facts and figures at their own. Supposedly, high level of education can either be associated with high or low inflationary expectations depending upon the current state of inflation and economic environment prevailing in the country. The variable education level holds its ground justifiably in our empirical model along these said propositions. An important empirical study by Abbas et al. (2015) provides evidence on the impact of education level on inflationary expectations. According to this study, inflationary expectations are exaggerated among individual with low education level.

#### **Construction of Variable**

As discussed in our sampling design the minimum qualification criterion for our survey respondent is at least intermediate level qualification. We, therefore, construct this variable for the following four categories:

TABLE 9  
Categories of Education (Education level)

| Categories | Intermediate | Graduation | Masters | M.Phil/PhD |
|------------|--------------|------------|---------|------------|
| Coded as   | 1            | 2          | 3       | 4          |

### Dummy Variable for Categorizing Salaried and Self-Employed Individuals (DummyS)

Our final independent variable is a dummy variable which is used to differentiate the inflationary expectations of salaried from self-employed respondents. Code 1 is used for salaried and 0 is used for self-employed.

### EMPIRICAL MODEL

Based on the above theoretical framework we propose the following empirical model for statistical analysis:

$$\begin{aligned}
 INFEXP = & \alpha_0 + \alpha_1 DOM + \alpha_2 ST + \alpha_3 DOPT + \alpha_4 DRC + \\
 & \alpha_5 Ecolit + \alpha_6 AgeGp + \alpha_7 SCEP + \alpha_8 IncomeL + \alpha_9 Edulevel + \\
 & \alpha_{10} DummyS + \varepsilon
 \end{aligned}$$

### III. DATA AND METHODOLOGY

The focus of the underlying research is to analyze the inflationary expectations at individual level and to relate these expectations with various individual characteristics owned by them. The data on inflationary expectations have been captured from a survey of 240 respondents including 120 salaried and 120 self-employed individuals from the domain of twin cities, Rawalpindi and Islamabad. The sample has been controlled for ethnicity and gender; only male candidates who are ethnically Punjabi are surveyed. This is done to ensure some homogeneity in the sample so that the real effects in terms of inflationary expectations can be judged in more pronounced manner. Secondly, if data had been categorized in terms of gender and ethnicity, it would require more respondents to be interviewed (larger sample size) which was considered infeasible as per resource requirement and cost constraint for this research. The data have been collected through personal enumeration with the help of 5 field enumerators in the period October to

December 2016. We adopt a purposive sampling design owing to the following requisites: (1) Our targeted respondent is assumed to be an “Economically Mature” agent because our questionnaire involves quite of few questions related to economic life including budgetary analysis, consumption and saving behavior, financial liabilities, inflation and inflationary expectations etc. It is necessary for our respondent to at least have some involvement in economic transactions within the domain of his family or household. As, until or unless an individual is personally engaged in managing the economic or financial matters personally, his subjective responses may not be regarded as representative or authentic.

(2) As our questionnaire involves some questions of technical nature, it is necessary that our respondent should be able to understand the meaning and essence of the asked questions. Therefore, it is desirable to target such people who qualify to some minimum defined level of education. Explaining these pre-requisites of our study, we define an economically mature agent as an individual who is an earning hand, have at least 4 to 5 years’ work experience in his respected domain, having a status of either a sole bread winner or partial supporter within the domain of his family, having at least intermediate level of qualification. The minimum defined level of qualification could be argued as graduation or masters but as our sample involves both self-employed and salaried people, it is easy to find graduates or masters respondent in the salaried class but quite difficult to find in self-employed class. The said requisites qualify us for the choice of purposive sampling technique rather than the probability sampling.

#### **IV. EMPIRICAL FINDINGS**

The basic estimation of our specified ordinal logit model is carried out in SPSS, followed by the use of STATA to report the proportional odd ratios against each category of predictors. The computed coefficients, proportional odd ratios along with the preliminary tests for ordinal logit models are presented in the following sections:

##### **PRELIMINARY TESTS**

The results of some pre-requisites of ordinal logit model are presented in Table 10. Table 10 confirms that our finally fitted model is

better than the model without regressors or predictors as the null hypothesis is rejected based on significant P-value.

TABLE 10

## Model Fitting Information and Test of Proportional Odd Assumption

|                                  | Chi-square | Degree of Freedom | Significance |
|----------------------------------|------------|-------------------|--------------|
| <i>Model Fitting Information</i> |            |                   |              |
| Final Model                      | 79.595     | 22                | 0.000        |
| <i>Goodness of Fit</i>           |            |                   |              |
| Pearson                          | 656.94     | 671               | 0.644        |
| Deviance                         | 481.59     | 671               | 0.999        |
| <i>Test of Parallel lines</i>    |            |                   |              |
| General                          | 50.012     | 44                | 0.24         |

Source: Author's Calculations

Table 10 also provides a verification of null hypothesis that our model is a good fit; the results are insignificant for both Pearson and Deviance static which is an accepted and established criterion to judge goodness of fit of a model. It is also a prerequisite of an ordinal model that the relationship between the independent variables and the response variable should be same across all categories of response variable. This is called "Parallel Line" assumption" or "Proportional Odd" assumption. This assumption is tested as a null hypothesis under the title "Test of Parallel lines". Results reported in Table 10 suggest that this requirement is met (acceptance of null hypothesis) in our case, therefore, we are legitimate in fitting ordinal logit model to our data set.

**PERFORMANCE OF INDEPENDENT VARIABLES**

TABLE 11

## Pseudo R-Square (Explanatory Power of Independent Variables)

|               |       |
|---------------|-------|
| Cox and Snell | 0.282 |
| Nagelkerke    | 0.311 |
| McFadden      | 0.138 |

A well-known criterion to analyze the performance of independent variables of a model is the explanatory power of these variables in terms

of capturing the percentage variation in response variable. Table 11 is comprised of those measures which are used to identify the percentage variation in dependent variable in response to independent variables. Researchers mostly rely on the second measure (Nagelkerke), which in our case states that 31 percent variation in our dependent variable is explained by independent variables, which in conventional norms represents a reasonable figure.

### CLASSIFYING INFLATIONARY EXPECTATIONS

TABLE 12

Classification of Inflationary Expectations

|       |                      | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|----------------------|-----------|---------|---------------|--------------------|
| Valid | Stable inflation     | 53        | 22.1    | 22.1          | 22.1               |
|       | Mild level inflation | 17        | 7.1     | 7.1           | 29.2               |
|       | Mid-Level inflation  | 51        | 21.3    | 21.3          | 50.4               |
|       | High level inflation | 119       | 49.6    | 49.6          | 100.0              |
|       | Total                | 240       | 100.0   | 100.0         |                    |

Table 12 reports the classification of inflationary expectation in terms of the specified categories. The maximum proportion of our sample respondents expect high inflation in upcoming year (49.6%), while the second highest category labeled as mid-level inflation occupies third highest percentage that is 21.3% of the total sample. Stable inflationary expectations stand in second place in terms of their percentage weight in the total sample with 22.1% respondents while mild level inflationary expectations hold the meager 7% weight in the overall sample. The general outlook of this classification reveals that maximum proportion of respondents lie in the domain of high level inflationary expectations.

### INTERPRETATION OF PARAMETER ESTIMATES AND PROPORTIONAL ODD RATIOS

Altogether there are 9 categorical (nominal) and one binary dummy independent variable in our model. Table 13 reports the estimated parameter coefficients, proportional odd ratios and significance across each category of these independent variables.

TABLE 13  
Parameter Estimates & Proportional Odd Ratios

|             |                   | Estimate<br>( $\hat{\beta}$ ) | Std. Error | Wald<br>Statistics | df   | Sig.  | Odd Ratios<br>$\exp(\hat{\beta})$ |
|-------------|-------------------|-------------------------------|------------|--------------------|------|-------|-----------------------------------|
| Threshold   | [INFEXP = 2.0]    | -0.23                         | 0.83       | 0.08               | 1    | 0.78  |                                   |
|             | [INFEXP = 3.0]    | 0.22                          | 0.83       | 0.07               | 1    | 0.79  |                                   |
|             | [INFEXP = 4.0]    | 1.39                          | 0.84       | 2.73               | 1    | 0.10  |                                   |
| Location    | [DOPT = 4.00]     | -1.04                         | 0.46       | 5.18               | 1    | 0.02  | 0.35                              |
|             | [DOPT = 3.00]     | -1.3                          | 0.39       | 11.24              | 1    | 0.001 | 0.27                              |
|             | [DOPT = 2.00]     | 0 <sup>a</sup>                | .          | .                  | 0    | .     |                                   |
|             | [DRC = 4.00]      | 0.28                          | 0.40       | 0.48               | 1    | 0.489 | 1.32                              |
|             | [DRC = 3.00]      | 0.17                          | 0.398      | 0.17               | 1    | 0.677 | 1.18                              |
|             | [DRC = 2.00]      | 0.96                          | 0.46       | 4.42               | 1    | 0.036 | 2.62                              |
|             | [DRC = 1.00]      | 0 <sup>a</sup>                | .          | .                  | 0    | .     |                                   |
|             | [AgeGr = 3.00]    | 0.85                          | 0.42       | 4.11               | 1    | 0.043 | 2.34                              |
|             | [AgeGr = 2.00]    | 0.18                          | 0.32       | 0.30               | 1    | 0.585 | 1.19                              |
|             | [AgeGr = 1.00]    | 0 <sup>a</sup>                | .          | .                  | 0    | .     |                                   |
|             | [EduLevel = 3.00] | 0.11                          | 0.45       | 0.06               | 1    | 0.807 | 1.18                              |
|             | [EduLevel = 2.00] | 0.18                          | 0.365      | 0.24               | 1    | 0.625 | 1.195                             |
|             | [EduLevel = 1.00] | 0 <sup>a</sup>                | .          | .                  | 0    | .     |                                   |
|             | [DummyS = 1.00]   | 0.87                          | 0.33       | 6.77               | 1    | 0.009 | 2.38                              |
|             | [DummyS = .00]    | 0 <sup>a</sup>                | .          | .                  | 0    | .     |                                   |
|             | [EcoLit = 4.00]   | 0.77                          | 0.57       | 1.84               | 1    | 0.174 | 2.17                              |
|             | [EcoLit = 3.00]   | 1.69                          | 0.49       | 12.15              | 1    | 0.000 | 5.44                              |
|             | [EcoLit = 2.00]   | 1.38                          | 0.47       | 8.53               | 1    | 0.003 | 3.95                              |
|             | [EcoLit = 1.00]   | 0 <sup>a</sup>                | .          | .                  | 0    | .     |                                   |
|             | [DOM = 5.00]      | 2.003                         | 0.896      | 5.001              | 1    | 0.025 | 7.41                              |
|             | [DOM = 4.00]      | 0.88                          | 0.33       | 7.17               | 1    | 0.007 | 2.41                              |
|             | [DOM = 3.00]      | 0 <sup>a</sup>                | .          | .                  | 0    | .     |                                   |
|             | [ST = 3.00]       | 0.296                         | 0.41       | 0.51               | 1    | 0.47  | 1.34                              |
| [ST = 2.00] | -0.272            | 0.39                          | 0.48       | 1                  | 0.49 | 0.76  |                                   |

|   | Estimate<br>( $\hat{\beta}$ ) | Std. Error | Wald<br>Statistics | df | Sig.  | Odd Ratios<br>$\exp(\hat{\beta})$ |
|---|-------------------------------|------------|--------------------|----|-------|-----------------------------------|
| [ST = 1.00]   | 0 <sup>a</sup>                | .          | .                  | 0  | .     |                                   |
| [SCEP = 2.00]   | 0.26                          | 0.33       | 0.63               | 1  | 0.43  | 1.29                              |
| [SCEP = 1.00]   | 0 <sup>a</sup>                | .          | .                  | 0  | .     |                                   |
| [IncomeL=25.00]   | -0.58                         | 0.79       | 0.54               | 1  | 0.46  | 0.56                              |
| [IncomeL=20.00]   | -1.83                         | 0.59       | 9.53               | 1  | 0.002 | 0.16                              |
| [IncomeL=15.00]   | -1.08                         | 0.50       | 4.62               | 1  | 0.032 | 0.34                              |
| [IncomeL=10.00]   | -0.91                         | 0.47       | 3.74               | 1  | 0.053 | 0.40                              |
| [IncomeL= 5.00]   | 0 <sup>a</sup>                | .          | .                  | 0  | .     |                                   |
| Link function: Logit.                                     |                               |            |                    |    |       |                                   |
| a. This parameter is set to zero because it is redundant. |                               |            |                    |    |       |                                   |

Education level, spending tendency and satisfaction content are found insignificant across all categories. The rest of the variables degree of myopia, income level, economic literacy, age group, degree of optimism, degree of relative comparison and the dummy variable specified for categorizing salaried and self-employed are found significant either in terms of one or more than one categories. Some categories are merged in case of few variables based on small proportion of respondents in them. Degree of optimism initially designed for five categories has been interpreted in terms of three categories, whereby categories highly optimistic and highly pessimistic are dropped based on small proportion of individuals in them. The results of degree of optimism (DOPT) suggest that individuals who are optimistic rather than pessimistic (reference category) are less likely to expect high inflation rather than combined intermediate level, low-level and stable inflation. In terms of proportional odd ratio, we say that the proportional odd of expecting a high inflation rather than combined intermediate level, low level and stable inflation is 0.65 times lower for optimistic individuals than pessimistic individuals (reference category). Likewise, individuals holding a neutral approach are less likely to expect a high inflation rather than combined mid-level, low and stable inflation. In terms of proportional odds ratio, the proportional odd of expecting a high inflation is 0.63 times lower for neutral individuals rather than pessimistic individuals. Overall, we can argue that degree of optimism is negatively

linked with ratings on expected inflation; optimistic individuals tend to expect low inflation in general. The results are in line with the theoretical propositions we portrayed earlier.

Degree of relative comparison (DRC) is another hypothesized determinant of inflationary expectations in our model. As per results only one category of this variable proves to be significant. Out of five categories “Extremely high degree of making relative comparisons” has been merged into “High degree” based on small proportion of individuals lying in it. Reported results suggest that individuals who hold low degree of making relative comparison rather than extremely low level (reference category) are more likely to expect high level inflation as compared to combined mid-level, low and stable inflation. The proportional odd of expecting high inflation as compared to combined midlevel, low or stable inflation is 2.62 times higher for individuals lying in the low degree category rather than extremely low degree of making relative comparison. We can infer that increments in degree of making relative comparison is positively associated with the ratings on inflation; making more relative comparisons tends to make you expect high inflation. Age group is nevertheless important as individuals belonging to age group 3 (40 to 50 years) as compared to age group 1 (20 to 30 years) are more likely to expect high inflation rather than the combined midlevel, low and stable inflation. In terms of proportional odds ratio, the proportional odd of expecting high inflation as compared to combined mid-level, low, and stable inflation is 2.34 times higher for individuals belonging to age group 3 as compared to age group 1.

As per characteristic of our sample, as we have included both salaried and self-employed individuals the dummy variable (DummyS) for these categories reveals that salaried individuals as compared to self-employed individuals are more likely to expect high inflation rather than combined mid-level, low and stable inflation. The proportional odds of expecting high inflation rather than combined mid-level, low and stable inflation is 2.37 times higher for salaried individuals as compared to self-employed individuals. As our sample of self-employed people mostly comprise of individuals with self-owned businesses, affluence of this class might have been one attribute responsible for this behavior. This contemplation is well confirmed with the help of one of the independent variables we have analyzed, that is, income level. The results of this



predictor ridicule that individuals with high income level as compared to low income level are less likely to expect high inflation. The results are shown in Table 13 where three out of four higher income categories as compared to lowest income category are found with negative parameter coefficients. In terms of proportional odd ratio, we find that the proportional odds of expecting high inflation is 0.84 times lower for those individuals who earn between Rs. 70 thousand to 1 lac as compared to those who earn less than Rs. 25000 (base category). Likewise, this ratio is 0.66 times and 0.60 times lower for successive next two income categories as compared to base category. This gives us an impression that high incremental levels of income are negatively linked with ratings on inflation. Individuals belonging to high income groups expect less inflation as compared to individuals belonging to lower income group.

Next, we scrutinize the variable economic literacy (Ecolit); we infer that high economic literacy increases the likelihood of expecting high inflation as evident from the positive parameters estimates and proportional greater than 1 odd ratio against both categories of this variable. The proportional odds of expecting high inflation as compared to expecting a stable inflation is 5.44 times higher for individuals having moderate literacy rather than no literacy (reference category) and is 4 times higher for individuals having weak literacy rather than no literacy. Incidentally, we conclude that successively higher levels of economic literacy are associated with higher inflationary expectations. These results are against some empirical findings we have quoted before. The reason might be the lack of confidence Pakistani individuals hold on policy makers. Although Pakistan is now assumed to be in near inflation targeting regime especially after the introduction of “Interest rate corridor” in 2009, this result is an indication that our monetary policy is not properly able to anchor inflationary expectations. Inflationary expectations are believed to be anchored when economic agents including investors and private actors hold a consensus and trust on the long run inflationary targets pursued by central bank (Beechay et al., 2011). In our case this result suggests that despite owing policy awareness on the part of respondents this consensus is yet to be established. Finally, we discuss last significant predictor of our theoretical model degree of myopia (DOM). The initially proposed five categories of this variable are finally confined to three categories by

dropping the last two categories based on small response ratio in them. The results of first two categories (Highly Myopic) and (Myopic) as compared to reference category (Neutral) indicate that individuals with myopic tendency as compared to neutral tendency are more likely to expect high inflation rather than stable inflation. The likelihood of differential across each successive category is evident from the proportional odd ratios. Proportional odds ratio column in table 13 identifies that the proportional odd of expecting high inflation is 7.4 times higher for highly myopic individuals as compared to individuals carrying neutral tendency and it is 2.4 times higher for individuals carrying myopic tendency as compared to neutral tendency. On more practical side if we observe Pakistan's inflation rate over the course of last seven years, the figures remained as 14%, 12%, 9.7%, 7.6%, 7.2%, 2.52%, and 3.8%. For a non-myopic person, the figures overall seem to be an improvement whereby inflation rate has declined from a high level of 14% to a meager 3.8%. A non-myopic individual would place weight on both near past and farther past values and would expect stable or low-grade inflation. Myopic individuals on the other would be interested only in recent one or two figures (say 2.5% vs 3.8%) which lie in the existing near past and might expect a considerable increase in inflation based on recent rising trend.

## V. CONCLUSION

The study is aimed at exploring some critical determinants of inflationary expectations in an unconventional manner. Conventionally, inflationary expectations are mostly linked with economic and demographic variables including age, gender, education, income, ethnicity etc. The current study, besides discussing the conventional determinants, additionally focuses on some common individualistic tendencies and personal aptitudes including degree of myopia, degree of optimism, degree of relative comparisons, sense of satisfaction with political and economic environment, individual's spending tendencies, and individual's aptitude in terms of economic literacy. Literature is not enriched in directly addressing inflationary expectations with such individualistic perspective although indirect discussions are available in some remote studies; therefore, the study is unique of such type and is verily of explorative nature.

Some concrete findings of the study include a positive association between degree of myopia and inflationary expectations, highly myopic individuals tend to expect high inflation. Degree of optimism tends to relate negatively with inflationary expectations; individuals with high optimism are found to expect low inflation rather than high. In lieu of testing the idea of “Relativism” posed by psychologists, sociologists and economists for its effect on inflationary expectations, our findings reveal that individuals who make more relative comparisons while making their decisions (especially economic decisions) tend to expect high inflation rather than low. High economic literacy and awareness cause individuals to expect high inflation as per reported results of our study. Incidence of expecting high inflation is observed in individuals belonging to old age group. Besides this, individuals who belong to higher income group hold lesser incidence of high inflationary expectations. Out of the two targeted categories in the sample, salaried individuals are found with a higher likelihood of expecting high inflation as compared to self-employed. Education level, spending tendency and sense of satisfaction are among the insignificant covariates of our model.

In the current era, as the macroeconomic modeling is done keeping intact the micro underpinnings, our study can prove to be provocative in highlighting some meaningful factors or individual characteristics which might become the agenda of interest for macroeconomists and policy makers. As efficacy of macroeconomic inflationary policy is dictated by the expectations individuals hold regarding inflation, having awareness of personality attributes which define these expectations can surely help the policy makers to design policy in more effective way. Monetary policy makers always face a challenge of continuous evolving and changing economy especially in setting up inflationary targets; the impetus behind this change is the individuals whose expectations are to be catered properly. Once the dynamics leading these expectations is understood with its defined foundations, the policy becomes more coherent. Existing literature on monetary policy has placed a lot of emphasis on identifying those factors which can affect the credibility of central bank’s monetary policy in the eyes of market/economic agents. This credibility in turn proves to be consequential for meeting the announced targets of central bank and its commitment to these targets. Developing credibility requires effective communication between central bank and general public whose inflationary expectations ultimately matter for the final settlement of actual inflation level via decisions of public in their respective domains. Arguably, for

meeting the announced inflationary targets central bank must have the information which can potentially affect the inflationary expectations of the public it communicates with. It is not possible for monetary authority (central bank) to approach mass population and every segment of economy for communicating its targets and plans; rather a selected categorical subset of population is a viable solution.

Within the discussed context our research proves to be consequential in identifying that potential subset of population (with certain qualitative attributes) which must be approached while setting up monetary plans. For example, our study has categorized inflationary expectations of individuals with respect to different age group and income levels. It is neither possible nor viable for central bank to approach each age group and income level for communicating its policy plans to develop credibility rather a specific subgroup must be targeted. If in a given point of time central bank sets low level inflationary targets and information is made available regarding specific age group holding high inflationary expectations, communication can be made with that specific group rather than all age groups within population. Our research has tried to highlight how inflationary expectations relates with different age profiles of individuals and the results in essence are aimed at serving as a guiding principle.

Likewise, on deterministic front, myopic learning or tendency has been found significant in our empirical model. If myopic tendency has been a pronounced phenomenon underlying agents' expectations, then this must be accounted for, while setting up monetary policy target or inflationary targets. For example, consider a counterfactual case: to pursue long term inflationary target if central bank compromises upon short term inflationary levels and these short term inflationary levels are perceived as stance of monetary policy by the myopic agents, they would account these levels in their decision making thus making long term targets pursued by central bank hard to be achieved. To cater this myopic tendency, central banks are advised to set short term and medium term inflationary targets rather than long term targets.

Exploring inflationary expectations from firm's perspective and incorporating detailed policy insights is the future agenda of our research.

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## Annexure

| <b>Questionnaire</b>  |  |                              |                         |                               |               |
|---|--|------------------------------|-------------------------|-------------------------------|---------------|
| <b>(Individualistic Attributes of Inflationary Expectations)</b>  |  |                              |                         |                               |               |
| This questionnaire is merely designed for research purpose; the whole content of the questionnaire is meant to extract the individual responses regarding their expectation formation process. All responses would anonymously be kept confidential and will be used to represent the intended idea of research only. |  |                              |                         |                               |               |
| <b>Personal Information</b>   |  |                              |                         |                               |               |
| Name  | Age  | Gender                       | Occupation              | Ethnicity                     | Qualification |
|   |  |                              |                         |                               |               |
| <b>Q1. What is your average monthly income?</b>   |  |                              |                         |                               |               |
| Options   | 1. < 25000                                 | 2. > 25000 but < 40000       | 3. > 40000 but < 55000  |                               |               |
|   | 4. > 55000 but < 70000                     | 5. > 70000 but < 85000       | 6. > 85000 but < 1 lac  | 7. > 1 lac                    |               |
| <b>Q2. Are you married?</b> 1. Yes              2. No   |  |                              |                         |                               |               |
| <b>Q3. If your response to question 5 is yes, how many children do you have?</b> [              ]   |  |                              |                         |                               |               |
| <b>Q4. Which locality you are residing in?</b> Options    1. Village    2. Town    3. City  |  |                              |                         |                               |               |
| <b>Q5. How much satisfied are you with your overall life?</b>   |  |                              |                         |                               |               |
| Options   | 1. Fully satisfied                         | 2. Satisfied to some extent  | 3. Not at all satisfied |                               |               |
| <b>Q6. How much satisfied are you with the political, economic and social environment of your country?</b>  |  |                              |                         |                               |               |
| Options   | 1. Political Environment                   | 2. Economic Conditions       | 3. Social Environment   |                               |               |
|   | Fully Satisfied                            |                              |                         |                               |               |
|   | Satisfied to some extent                   |                              |                         |                               |               |
|   | Not at all satisfied                       |                              |                         |                               |               |
| <b>Q7. What do you consider yourself?</b>   |  |                              |                         |                               |               |
|   | 1. Spendthrift (who prefer to spend a lot) | 2. Thrifty (who saves a lot) | 3. Between 1 & 2        |                               |               |
| <b>Q8. Your family profession is?</b>   |  |                              |                         |                               |               |
| Options   | 1. Teaching                                | 2. Farming                   | 3. Business             | 4. any other (please specify) |               |

| <b>Myopic/Non Myopic Tendency as an Attribute</b>  |        |   |   |   |   |
|--|--------|---|---|---|---|
| Respond to questions 9 through 17 comprising of some behavioral examples from our everyday life.   |        |   |   |   |   |
| (1 - Strongly agree, 2 - Agree, 3 - Uncertain, 4 - Disagree, 5 - Strongly Disagree)  |        |   |   |   |   |
|  | 1      | 2 | 3 | 4 | 5 |
| <b>Q9.</b> It is often the case that we see certain events or happenings taking place and get <u>moved emotionally and psychologically</u> , for example; we see an accident that castes a threatening effect on our mind and we become cautious in our driving style but as time passes by we usually adopt the same driving style as we use to possess before. |        |   |   |   |   |
| <b>Q9.1</b> By what percentage you behave in a manner as mentioned in Q 9?   | Choice |   |   |   |   |
| 1. I 100% behave in the said manner.   |        |   |   |   |   |
| 2. I 90% behave in the said manner.  |        |   |   |   |   |
| 3. I 80% behave in the said manner.  |        |   |   |   |   |
| 4. I 70% behave in the said manner.  |        |   |   |   |   |
| 5. Any other (Please specify) _____.   |        |   |   |   |   |



|   |  |        |
|---|--|--------|
| <b>Q9.2</b> What might be the probable reason for behavior mentioned in Q 9 ? Assign rank.  |  | Rank   |
| 1. We behave in this manner because we are ignorant.  |  |        |
| 2. We behave in this manner because naturally we are shortsighted. (our farther past fades away)  |  |        |
| 3. We behave in this manner because we are ambitious (we think nothing can happen to us)  |  |        |
| 4. We behave in this manner because we are stubborn.  |  |        |
| 5. We behave in this manner because we are careless.  |  |        |
| <b>Q10.</b> We mostly love our dear ones and cannot even think of any departing in any situation from them but once inevitably they depart by a natural death we mourn and feel regret but as time passes by we feel <u>psychologically healed</u> and can only have a faded impression of our dear ones at the backend of our minds/memories.                          |  |        |
| <b>Q10.1</b> By what percentage your psychology resembles the mentioned one in Q 10?  |  | Choice |
| 1. My psychology 100% matches with the mentioned one.   |  |        |
| 2. My psychology 90% matches with the mentioned one   |  |        |
| 3. My psychology 80% matches with the mentioned one.  |  |        |
| 4. My psychology 70% matches with the mentioned one.  |  |        |
| 5. Any other (Please specify) -----   |  |        |
| <b>Q10.2</b> What might be the probable reason for behavior mentioned in Q10 ? Assign rank  |  | Rank   |
| 1. We behave in this manner because we are ignorant.  |  |        |
| 2. We behave in this manner because naturally we are shortsighted. (our farther past fades away)  |  |        |
| 3. We behave in this manner because we are practical (we consider it as normal course of life and believe that things go like that)   |  |        |
| 4. We behave in this manner because we are stubborn.  |  |        |
| 5. We behave in this manner because we are careless.  |  |        |
| <b>Q11.</b> Suppose you are hurt by the deeds or acts of someone say you experience a fight, or somebody deprives you from your right or somebody deceives you, it is very difficult for you to forgive those deeds or acts at the very next day but would rather be easy to exercise if those events become a part of a prolonged history back into your life.         |  |        |
| <b>Q11.1</b> What might be the probable reason for behavior mentioned in Q11? Assign rank   |  | Rank   |
| 1. We behave in this manner because we are emotional.   |  |        |
| 2. We behave in this manner because naturally we are shortsighted. (our farther past fades away)  |  |        |
| 3. We behave in this manner because we are egoistic.  |  |        |
| 4. We behave in this manner because we are sensitive.   |  |        |
| 5. We behave in this manner because we are unkind.  |  |        |
| <b>Q12.</b> Suppose you go to a person who is your close friend for a very long time and has done many favors to you whenever required but has denied just once when you visited him the last time, you'll mind the last denial more than you would regard the previous jesters or favors and probably may not visit him again for asking any favor in your entire life |  |        |
| <b>Q12.1</b> What might be the probable reason for behavior mentioned in Q12? Assign rank   |  | Rank   |
| 1. We behave in this manner because we are emotional.   |  |        |
| 2. We behave in this manner because naturally we are shortsighted. (our farther past fades away)  |  |        |
| 3. We behave in this manner because we are egoistic.  |  |        |
| 4. We behave in this manner because we are sensitive.   |  |        |
| 5. We behave in this manner because we are unthankful.  |  |        |

|  |               |
|--|---------------|
| <p><b>Q13.</b> The famous Indian cricketer Yuvaraj Singh, who has served Indian cricket for a very long time and has won some exceptional matches for his country, in the recent T-20 world cup his performance suddenly shuffled and got the spectators so aggrieved and annoyed that they physically attempted to burn his house. This exemplifies that we as individuals often evaluate players based on recent performances ignoring the previous good ones.</p>   |               |
| <p><b>Q13.1.</b> By what percentage you overlook the good performance of your team or players?</p> <ol style="list-style-type: none"> <li>1. I am very emotional and can't hold myself back at least from thinking in such extreme manner if not directly involved in such acts. (Dil karta ha goli maar dun)</li> <li>2. I am reasonably emotional and mostly involve in a light verbal criticism.</li> <li>3. I am rather sensible and consider the whole profile of a player or team in giving any verdict not just the recent performance.</li> <li>4. I am rather sensible and idealizes all the good years preceding the bad one and avoid criticism.</li> </ol> | <p>Choice</p> |
| <p><b>Q13.2</b> What might be the probable reason for behavior mentioned in Q13? Assign rank</p> <ol style="list-style-type: none"> <li>1. We behave in this manner because we are emotional.</li> <li>2. We behave in this manner because naturally we are shortsighted. (our farther past fades away)</li> <li>3. We behave in this manner because we are insensible.</li> <li>4. We behave in this manner because we are sensitive.</li> <li>5. We behave in this manner because we are unthankful.</li> </ol>  | <p>Rank</p>   |
| <p><b>Q14.</b> Government representatives win the public's confidence and revive their support by making stumbling claims of removing poverty, unemployment and starting flurry of constructive works just before the election process. This gesture convinces us to turn our votes in their favor.</p>  |               |
| <p><b>Q14.1</b> By what percentage you are influenced by such acts of government representatives?</p> <ol style="list-style-type: none"> <li>1. I am 100% influenced by such acts.</li> <li>2. I am 90% influenced by such acts.</li> <li>3. I am 80% influenced by such acts.</li> <li>4. I am 70% influenced by such acts</li> <li>5. Any other (Please specify) _____</li> </ol>  | <p>Choice</p> |
| <p><b>Q14.2</b> What might be the probable reason for behavior mentioned in Q14? Assign rank</p> <ol style="list-style-type: none"> <li>1. We behave in this manner because we are ignorant.</li> <li>2. We behave in this manner because naturally we are shortsighted. (our farther past fades away)</li> <li>3. We behave in this manner because we are insensible.</li> <li>4. We behave in this manner because we are foolish.</li> <li>5. We behave in this manner because we are mean.</li> </ol>   | <p>Rank</p>   |
| <p><b>Q15.</b> The election held in 2008 in Pakistan is evident of the fact that the death of Mohtarma Benazir Bhutto was given such media hype that a large segment of population which was either not in support of PPP or which has discontinued supporting it for certain grievances and complaints turned into PPP's favor.</p>   |               |
| <p><b>Q15.1</b> How do you expect yourself to behave at that moment of time?</p> <ol style="list-style-type: none"> <li>1. If I were at that time, I would have done the same thing.</li> <li>2. If I were at that time I would have thought to behave in that manner.</li> <li>3. If I were at that time I would have taken that event neutral towards my voting decision.</li> <li>4. If I were at that time I had been among those people who would be convincing the people not to be influenced too much from that recent tragedy.</li> </ol>   | <p>Choice</p> |

|  |   |        |   |   |   |   |
|--|---|--------|---|---|---|---|
| <b>Q15.2</b> What might be the probable reason for behavior mentioned in Q15 ? Assign rank   |   | Rank   |   |   |   |   |
| 1. We behave in this manner because we are emotional.  |   |        |   |   |   |   |
| 2. We behave in this manner because naturally we are shortsighted. (our farther past fades away)   |   |        |   |   |   |   |
| 3. We behave in this manner because we are insensible.   |   |        |   |   |   |   |
| 4. We behave in this manner because we are ignorant.   |   |        |   |   |   |   |
| 5. We behave in this manner because we are obsessive.  |   |        |   |   |   |   |
| <b>Q16</b> . We have observed this thing in our society that whenever any calamity and disaster like flood or earthquake hits us we get awakened for a while, we consider this thing as a sign of God's anger due to our wrong deeds. At that moment of time we repent and make promise to ourselves and to our God that from now on we'll avoid sins and adopts piety but this spell mostly does not last long enough and we again tend get involve in the tempting and absorbing luxuries of life. Do you agree that this attitude generally prevail among us. |   |        |   |   |   |   |
| <b>Q16.1.</b> By what percentage this example matches your physical experience?  |   | Chocie |   |   |   |   |
| 1. It 100 % matches my physical experience   |   |        |   |   |   |   |
| 2. It 90% matches my physical experience   |   |        |   |   |   |   |
| 3. It 80% matches my physical experience   |   |        |   |   |   |   |
| 4. It 70% matches my physical experience   |   |        |   |   |   |   |
| 5. Any other (Please specify) _____  |   |        |   |   |   |   |
| <b>Q16.2</b> What might be the probable reason for behavior mentioned in Q16? Assign rank  |   | Rank   |   |   |   |   |
| 1. We behave in this manner because we are ignorant.   |   |        |   |   |   |   |
| 2. We behave in this manner because naturally we are shortsighted. (our farther past fades away)   |   |        |   |   |   |   |
| 3. We behave in this manner because we consider dooms day to be far apart.   |   |        |   |   |   |   |
| 4. We behave in this manner because we are emotional.  |   |        |   |   |   |   |
| 5. We behave in this manner because we are stubborn  |   |        |   |   |   |   |
| <b>Q17.</b> Assign percentage weight in general to the events which have happened in the nearer past VS the events which have happened in the farther past in your life if you were to base your future expectations upon them.  |   |        |   |   |   |   |
|  |   | Choice |   |   |   |   |
| 1.   | 100% to the nearer past, 0% to the farther past.  |        |   |   |   |   |
| 2.   | 90% to the nearer past, 10% to the farther past.  |        |   |   |   |   |
| 3.   | 80% to the nearer past, 20% to the farther past.  |        |   |   |   |   |
| 4.   | 70% to the nearer past, 30% to the farther past.  |        |   |   |   |   |
| 5.   | 60% to the nearer past, 40% to the farther past.  |        |   |   |   |   |
| 6.   | 50% to nearer past, 50% to farther past.  |        |   |   |   |   |
| 7.   | 40% to nearer past, 60% to farther past.  |        |   |   |   |   |
| 8.   | 30% to nearer past, 70% to farther past.  |        |   |   |   |   |
| 9.   | 20% to nearer past, 80% to farther  |        |   |   |   |   |
| 10.  | Any other (Please specify)  |        |   |   |   |   |
| <b>Degree of Optimism/Pessimism</b>  |   |        |   |   |   |   |
| <b>Q18.</b> Quote your response regarding your expectations about the following state of affairs of your economy. (1 - Strongly agree, 2 - Agree, 3 - Uncertain, 4 - Disagree, 5 - Strongly Disagree)  |   |        |   |   |   |   |
|  |   | 1      | 2 | 3 | 4 | 5 |
| 18.1   | You expect that the households and domestic consumers of gas will be given protection by discouraging the CNG culture in near future. |        |   |   |   |   |
| 18.2   | You expect that prices will become stable in your economy against the tradition that happened to be the case in the past.             |        |   |   |   |   |
| 18.3   | You expect that the upcoming governments will make poor prone policies especially when it comes to imposition of taxes.               |        |   |   |   |   |
| 18.4   | You expect that energy crisis will be resolved in the near future.  |        |   |   |   |   |
| 18.5   | You expect that our country would soon join the pace of countries like china, Japan,  |        |   |   |   |   |

|  |  |  |  |  |  |
|--|--|--|--|--|--|
| Malaysia in terms of growth and development.   |  |  |  |  |  |
| 18.6 You expect that Common man will have access at least to basic necessities of life in near future.   |  |  |  |  |  |
| 18.7 You expect that we will soon get a leadership which would help Pakistan getting out of this vicious cycle of poverty, debt (reliance on IMF) and budget deficits.   |  |  |  |  |  |
| 18.8 You expect that a day will come when we as nation would mitigate the errors in terms of corruption, mal handling of economic resources and concentration of wealth. |  |  |  |  |  |
| 18.9 You expect that your standard of living tomorrow will be better than what it is today.  |  |  |  |  |  |
| 18.10 You expect that Islamic economic system will soon take over the existing capitalistic system.  |  |  |  |  |  |
| 18.11 You are hopeful that the educational divide, culture of political affiliations, Kickback system will soon vanish.  |  |  |  |  |  |
| 18.12 You are so desperate that you hardly can think of any improvement.   |  |  |  |  |  |

**Individual Tendency of making Relative Comparisons**

**Q19.** Suppose you are expecting to get a certain increase in your salary/income in the upcoming budget/year, what is your way of analyzing yourself as better off or worse off as compared to your existing status?

| Option 1  | Option 2  |   |   |   |   |   |
|---|---|---|---|---|---|---|
| I would always take the increase as a positive thing and consider myself as better off. | I would decide by making relative comparison of income with the following. (select relevant degree) |   |   |   |   |   |
|   |   | 1 | 2 | 3 | 4 | 5 |
|   | Increase in expenses on daily consumables   |   |   |   |   |   |
|   | Increase in per capital income of economy   |   |   |   |   |   |
|   | Increase in utility bills   |   |   |   |   |   |
|   | Increase in children school fee   |   |   |   |   |   |
|   | Increase in transportation cost   |   |   |   |   |   |
|   | Increase in income tax  |   |   |   |   |   |
|   | Increase in sales tax   |   |   |   |   |   |
|   | Devaluation/Depreciation of rupee   |   |   |   |   |   |

**Q20.** When you go to the market to make a purchase of any consumable or lasting item, what is your way of making a choice:

| Option 1                                     | Option 2   |   |   |   |   |   |
|--|--|---|---|---|---|---|
| You randomly select the item of your choice. | You make choice by taking into account the following:      |   |   |   |   |   |
|  |  | 1 | 2 | 3 | 4 | 5 |
|  | Number of alternative items available in the market        |   |   |   |   |   |
|  | Relative price of items similar to that purchased by you   |   |   |   |   |   |
|  | Relative quality of items similar to that purchased by you |   |   |   |   |   |
|  | Number of people who are using that product.               |   |   |   |   |   |
|  | Number of shops from where you can purchase that product   |   |   |   |   |   |

**Q21.** Consider you visit a firm/factory in search of a job, how would you negotiate your wage/salary?

| Option 1  | Option 2   |   |   |   |   |   |
|---|--|---|---|---|---|---|
| You accept whatever will be offered to you on the basis of your need. | Besides your need you will consider the following factors into consideration.                        |   |   |   |   |   |
|   |  | 1 | 2 | 3 | 4 | 5 |
|   | Number of firms besides this where you can apply.  |   |   |   |   |   |
|   | Relative salary/wage offered to people like you in terms of qualification in the job market.         |   |   |   |   |   |
|   | Relative salary/wage offered to people like you in terms of skill/experience in terms of job market. |   |   |   |   |   |
|   | Number of people who have applied for the post besides you.  |   |   |   |   |   |
|   | Overall level of inflation in the economy  |   |   |   |   |   |

| <b>Information about Economic Variables, Policies and their Covariates</b>   |  |                                   |                            |  |                          |                            |                          |                          |                          |
|--|--|-----------------------------------|----------------------------|--|--------------------------|----------------------------|--------------------------|--------------------------|--------------------------|
| <b>Q22.</b> Do you know what inflation is? If "Yes" proceed to Q23 – Q29, if "No" skip to Q30  |  |                                   |                            |  | Yes                      | No                         |                          |                          |                          |
|  |  |                                   |                            |  | <input type="checkbox"/> | <input type="checkbox"/>   |                          |                          |                          |
| <b>Q23.</b> From where do you get the information about inflation? (You may choose more than one option)   |  |                                   |                            |  |                          |                            |                          |                          |                          |
| Options  | Choice   | Options                           | Choice                     |  |                          |                            |                          |                          |                          |
| 1. Self-Assessment   | <input type="checkbox"/>   | 5. State bank's reports           | <input type="checkbox"/>   |  |                          |                            |                          |                          |                          |
| 2. News Bulletins  | <input type="checkbox"/>   | 6. Social Network/Friend's circle | <input type="checkbox"/>   |  |                          |                            |                          |                          |                          |
| 3. News papers   | <input type="checkbox"/>   | 7. Seminars/Conferences           | <input type="checkbox"/>   |  |                          |                            |                          |                          |                          |
| 4. Economic survey of Pakistan   | <input type="checkbox"/>   | 8. Television Talk shows          | <input type="checkbox"/>   |  |                          |                            |                          |                          |                          |
| <b>Q24.</b> While making expectations about future inflation what weighted scheme do you follow?   |  |                                   |                            |  | Choice                   |                            |                          |                          |                          |
| 1.   | You fully consider past inflationary trends in your country.   |                                   |                            |  | <input type="checkbox"/> |                            |                          |                          |                          |
| 2.   | You fully rely on current information of variables which can affect inflation in future.               |                                   |                            |  | <input type="checkbox"/> |                            |                          |                          |                          |
| 3.   | 50% weight to option 1 and 50% to option 2.  |                                   |                            |  | <input type="checkbox"/> |                            |                          |                          |                          |
| <b>Q25.</b> While making expectations about inflation which among the following things you usually take into account. (Select your relevant variables of interest) |  |                                   |                            |  |                          |                            |                          |                          |                          |
|  |  | Choice                            |                            |  |                          |                            |                          |                          |                          |
| 1.   | Government Budget Announcements  |                                   |                            |  | <input type="checkbox"/> |                            |                          |                          |                          |
| 2.   | World oil prices   |                                   |                            |  | <input type="checkbox"/> |                            |                          |                          |                          |
| 3.   | Policies of IMF and other international donor agencies.  |                                   |                            |  | <input type="checkbox"/> |                            |                          |                          |                          |
| 4.   | Past inflation rate.   |                                   |                            |  | <input type="checkbox"/> |                            |                          |                          |                          |
| 5.   | Level of money supply (growth rate of money supply)  |                                   |                            |  | <input type="checkbox"/> |                            |                          |                          |                          |
| 6.   | Exchange rate  |                                   |                            |  | <input type="checkbox"/> |                            |                          |                          |                          |
| 7.   | Interest rates in the market   |                                   |                            |  | <input type="checkbox"/> |                            |                          |                          |                          |
| 8.   | Political state of economy   |                                   |                            |  | <input type="checkbox"/> |                            |                          |                          |                          |
| 9.   | Literacy level in the economy  |                                   |                            |  | <input type="checkbox"/> |                            |                          |                          |                          |
| 10.  | Government Budget deficits   |                                   |                            |  | <input type="checkbox"/> |                            |                          |                          |                          |
| 11.  | Trade deficits   |                                   |                            |  | <input type="checkbox"/> |                            |                          |                          |                          |
| <b>Q26.</b> On what basis you make forecast about future inflation?  |  |                                   |                            |  |                          |                            |                          |                          |                          |
| (1 - Strongly agree, 2 - Agree, 3 - Uncertain, 4 - Disagree, 5 - Strongly Disagree)  |  |                                   |                            |  | 1                        | 2                          | 3                        | 4                        | 5                        |
| 26.1   | You make forecasts about inflation on the basis of your exceptional sixth sense.                       |                                   |                            |  | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 26.2   | On the basis of your complete market analysis from consumer's perspective.                             |                                   |                            |  | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 26.3   | On the basis of your complete market analysis from producer's perspective.                             |                                   |                            |  | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 26.4   | On the basis of information you extract by reading economic reviews, statistical Issues and bulletins. |                                   |                            |  | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 26.5   | You rely on general perception prevailing around you.  |                                   |                            |  | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 26.6   | You make inflation forecasts randomly without having any definite variable of interest in your mind.   |                                   |                            |  | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>Q27.</b> How do you predict or expect future inflation rate in your country in next year?   |  |                                   |                            |  |                          |                            |                          |                          |                          |
| 1. It will increase  |  |                                   | 2. It will remain stable   |  |                          | 1. It will decrease        |                          |                          |                          |
| <b>Q28.</b> If your response to question Q27 is option 1, by what percentage you would expect it to increase?  |  |                                   |                            |  |                          |                            |                          |                          |                          |
| 1. It would increase by 10% or more  |  |                                   | 2. It would increase by 5% |  |                          | 3. It would increase by 3% |                          |                          |                          |

|   |                                       |                               |
|---|---------------------------------------|-------------------------------|
| <b>Q29. If your response to question Q27 is option 1, which thing has led you to expect this increase?</b>  |                                       |                               |
| 1. It has increased recently  | 2. It has increased in past few years | 3. It always used to increase |
| <b>Economic Literacy<br/>(Policy Awareness)</b>   |                                       |                               |
| <b>Q30. Do you know what is fiscal policy?</b>  |                                       |                               |
| 1. Yes, I know it about it with precision   | 2. I have heard about it              | 3. I never heard about it     |
| <b>Q31. If your response to Q30 is either option 1 or 2, can you identify who controls this policy?</b>   |                                       |                               |
| 1. Government   | 3. Industrialist's                    | 5. Businessmen                |
| 2. Central Bank   | 4. Agriculturist's                    | 6. World Bank                 |
| <b>Q32. If your response to Q30 is either option 1 or 2, can you identify its main objective?</b>   |                                       |                               |
| 1. The main objective of fiscal policy is to control inflation.   |                                       |                               |
| 2. The main objective of fiscal policy is to manage the budgetary affairs like monitoring deficits or surpluses; financing publicly oriented i.e. health care, educational, reformative, welfare projects and to stabilize the internal and external shocks faced by the economy. |                                       |                               |
| 3. The main objective of fiscal policy is to keep check and balance on Central bank of the country.   |                                       |                               |
| 4. The main objective of fiscal policy is to channelize funds provided by the IMF, World Bank and other international donor agencies.   |                                       |                               |
| 5. The main objective of fiscal policy is to provide jobs to the people.  |                                       |                               |
| <b>Q33. Do you know what is monetary policy?</b>  |                                       |                               |
| 1. Yes, I know it about it with precision   | 2. I have heard about it              | 3. I never heard about it     |
| <b>Q34. If your response to Q33 is either option 1 or 2, can you identify who controls it?</b>  |                                       |                               |
| 1. Government   | 4. Industrialist's                    | 7. Don't know                 |
| 2. Central Bank   | 5. Agriculturist's                    |                               |
| 3. Businessmen  | 6. World Bank                         |                               |
| <b>Q35. If your response to Q33 is either option 1 or 2, can you identify its main objective?</b>   |                                       |                               |
| 1. The main objective of monetary policy is to control population in the country.   |                                       |                               |
| 2. The main objective of monetary policy is to control inflation and manage supply of money in the economy.   |                                       |                               |
| 3. The main objective of monetary policy is to keep check and balance on the government.  |                                       |                               |
| 4. The main objective of monetary policy is to reduce unemployment in the economy.  |                                       |                               |
| 5. The main objective of monetary policy is to provide loans to the industrial and agricultural sectors.  |                                       |                               |
| <b>Economic Literacy (Theoretical Understanding)</b>  |                                       |                               |
| <b>Q36. What should a government do in order to control inflation?</b>  |                                       | Choice                        |
| 1. Increase its spending and print more money.  |                                       |                               |
| 2. Increase its spending and print less money.  |                                       |                               |
| 3. Decrease its spending and print more money.  |                                       |                               |
| 4. Decrease its spending and print less money.  |                                       |                               |
| 5. No idea about it.  |                                       |                               |
| <b>Q37. Do you think government can always print as much money as it would like to?</b>   |                                       |                               |
| 1. Yes  | 2. No (Quote reason) -----            |                               |
| <b>Q38. Every year government announces a minimum wage rate/ salary in the budget, if this wage rate/salary is above the rate offered by the market, what would happen to employment?</b>   |                                       |                               |
| 1. Employment will increase   | 2. Employment will decrease           | 3. It will not change         |
| <b>Q39. In which shape money is adversely affected by increase in inflation?</b>  |                                       |                               |
| 1. In form of Cash  | 2. In form of saving account          | 3. In form of stocks          |
| <b>Q40. Is it risky to invest in one asset or multiple assets?</b>  |                                       |                               |
| 1. One asset  | 2. Multiple assets                    |                               |