An Analytical Study on Inflationary Expectations with Reference to Evidences from the World

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Abstract:
Amidst the dynamic global financial environment, developing countries like India have a host of opportunities available. Alongside comes macroeconomic disturbances channelized both through internal and external factors. Inflation in such scenario becomes a very important variable. India, especially after 2008 has observed the crucial role played by the financial markets in building macroeconomic strength of the country. Hence, it becomes imperative for the world economy to focus on inflationary pressures in the country.

The relevance of inflationary expectations has been understood long back in 1960s when Milton Friedman, in December 1967, in the eighteenth Annual meeting of American Economic Association introduced the significance of the subject officially for the first time. He proposed that economics function efficiently if all its agents, viz., producers, consumers, employers and employees anchor their behaviour confidently in line with swift anticipated movement of prices in future. In this backdrop he raised three crucial questions, "(i) How to measure inflationary expectations?, (ii) How expectations affect inflation?, (iii) What affects inflation expectations and how well expectations are anchored?".3 Policymakers across the world understood the important bearing these expectations have on the actual level of prices to have a hold on the erratic monetary environment and started conducting research in full swing mode to evaluate how people anchor their expectations about prices in the future. This was a gigantic move by economies to understand how these changes over time have a favourable and healthy monetary environment.

This urgency has been understood by numerous central banks across the globe while targeting inflation. RBI, following the suit also started considering inflationary expectations 2008 onwards. It recognized the importance of its determinants and has taken a few steps to evaluate the premises on which people in India anticipate prices. RBI conducts the Household Inflation Expectations survey to provide directional information on near-term inflationary pressures. These expectations are formed by individuals based on their consumption baskets across 18 cities of the country. (RBI report on Quarterly Survey on Inflationary Expectations of Households)

Researchers worldwide have done extensive study to evaluate varied factors affecting how inflation expectations are formed that leaves a big room for Indian researchers to dig deep the main determinants of anchoring inflation in India. Withstanding the importance of inflation as a macroeconomic variable, the country has now adopted flexi-inflation targeting policies that helps anchor expectations, with the dispersion of inflationary expectations declining considerably, particularly during periods of high uncertainty (RBI, monthly reports). Apart from the inflation target, the stance of fiscal policy is instrumental in shaping expectations (William E. Gibson, 1972).

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Conceptual Framework

Inflation Expectations, in simplest terms may be understood as how people anticipate prices in an economy to move in future. The relevance of understanding inflation expectations in an economy is not new. It ranges back from 1967 when Milton Friedman, in the eighteenth Annual meeting of American Economic Association noted that economic systems will work best when producers and consumers, employers and employees, can proceed with full confidence that the average level of prices will behave in a known way in the future. That is, expectations matter a great deal in the real economy.

However, the idea of modelling inflationary expectations to understand the real economy was introduced by John F. Muth in the year 1961 which was further made influential by Robert Lucas and other such economists to incorporate behaviours of individuals, firms and other agents while making their choices (Bruno Solnik, 1983). Hence incorporating expectations formed by different agents while studying aggregate stochastic macroeconomic models holds a significant place. On realising the importance of inflation expectations as a centre of modern macroeconomic theory, various specifications of Phillips curve have also been suggested by different schools of economic thoughts i.e. the expectations-augmented Phillips curve[i] (Friedman, 1968; Phelps, 1967), the New Keynesian Phillips curve[ii] (NKPC, Goodfriend & King, 1997) or the Hybrid New Keynesian Phillips Curve (HNKPC, Fuhrer & Moore, 1995; Gali & Gertler, 1999; Roberts, 1997) predict that inflation expectations have direct impact on prices.

The significance of having a deep understanding of inflationary expectations spread like an epidemic in the pool of world economists who could then clearly bring out its hold on making changes in the actual variables supported by empirical analysis. Lewis Johnson (1976) clearly explains the overt role played by inflationary expectations in shaping the macroeconomic variables using the Mundellian argument[iii]. Following the suit, major economies of the world started incorporating inflationary expectations in their policy making process. About 25 developed nations welcomed inflation anticipations with open arms in their macroeconomic policy sphere by 1980. This number swelled to 45 by the end of 25th century (Stephen Figlewski, Paul Watchel, 1981).

Having understood the importance of expectations about price movements in the economy, it further open doors for the researchers to find out how are these expectations formed. This room for researchers was explored by economists in the first world right aft3e3r they took up inflationary expectations as an important subject matter. It was further identified by the econometricians across the globe that different countries had varied specifications that affected how people anticipate prices for future. However, these determinants may be clubbed under same net for similar nature of countries. On digging deep, the studies carried out in different parts of world like United States, European zone, Israel, Norway, Brazil, China among the others, there were some variables found in common that may be tested for other countries as well. Emerging market economies like India for how they finely tuned sensitivity to world macroeconomic movements hold more acute connotation of understanding the determinants that affect their residents' behaviour and thereby anchor inflationary expectations in these economies.

This urgency of incorporating inflationary expectations in policy framework has been understood by numerous central banks across the globe, especially while targeting inflation. Reserve Bank of India, following the suit also started considering inflationary expectations while targeting inflation from 2008 onwards. It made use of survey-based measures of households of 12 cities, three each from north, south, east and west that revolved around four metropolitans. The sampling techniques tried to have geographical coverage making use of quota sampling to have ample representation of different categories, age groups and gender. The results of these quarterly survey rounds tried to sketch a rough picture of price movements in the country. It was identified that price level in the economy followed a similar pattern of that of its expectations. It was later in 2014 when the economy adopted a clear cut flexi inflation targeting monetary policy with its first round of targets to be achieved by 2021; it started with its formal quarterly survey on households to provide for directional information on near-term inflationary pressures. These expectations are formed by individuals based on their consumption basket across 16 cities in the country[iv]. Since then the central bank conducts a household survey on inflation expectations every quarter and reports it on its official website. The following table provides a glimpse of the results presented every quarter by the Reserve bank:

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Table 1.1: Quarterly Inflationary Expectations

Year	Quarter	No. of Respondents (Urban Households)	Cities covered	Expected 3 months ahead (Median, expressed in percentage)	Expected 1 Year ahead (Median, expressed in percentage)	Actual (Median, expressed in percentage)
2008	June	4000	12	7.5	7.9	6.9
2008	October	4000	12	11.6	12.4	11.3
2008	December	4000	12	8.9	9.6	9.3
2009	March	4000	12	5.3	6.2	5.2
2009	June	4000	12	6.3	6.7	5.8
2009	September	4000	12	8.2	8.7	9.2
2009	December	4000	12	11.1	11.6	11.9
2010	March	4000	12	10.3	10.6	11.0
2010	June	4000	12	11.1	11.4	11.9
2010	September	4000	12	12.1	12.3	12.7
2010	December	4000	12	12.4	11.8	13.1
2011	March	4000	12	11.5	11.9	12.7
2011	June	4000	12	11.2	11.8	12.9
2011	September	4000	12	12.7	12.9	11.7
2011	December	4000	12	12.4	13.3	11.9
2012	March	4000	12	11.7	12.5	11.0
2012	June	4000	12	11.5	12.5	10.5
2012	September	4000	12	10.5	13.5	9.5
2012	December	5000	16	11.5	14.5	10.5
2013	March	5000	16	11.3	13.0	10.3
2013	June	4960	16	11.4	12.7	10.5
2013	September	4765	16	14.5	16.0	11.0
2013	December	4907	16	13.9	16.0	13.2
2014	March	4926	16	12.9	15.3	13.3
2014	July	4931	16	14.0	15.0	13.3
2014	September	4933	16	16.0	14.6	13.8
2014	December	5000	16	8.9	8.3	8.8
2015	March	4966	16	9.1	8.5	9.0
2015	June	4944	16	10.3	10.1	9.5
2015	September	4901	16	10.8	10.5	9.9
2015	December	4828	16	10.5	10.3	10.3
2016	March	5404	18	9.4	8.1	7.9
2016	June	5360	18	9.6	9.2	8.0
2016	September	5300	18	11.4	9.5	8.5
2016	November	5233	18	10.1	8.2	7.3
2016	December	5162	18	8.3	7.3	6.5
2017	March	5084	18	8.8	7.5	6.8
2017	May	4732	18	8.5	7.3	6.3
2017	June	4737	18	7.5	8.6	6.4
2017	September	4996	18	7.2	8.0	6.3
2017	November	5100	18	7.5	8.6	6.3
2017	December	5321	18	7.5	8.5	6.7
2018	March	5150	18	7.8	8.6	7.2
2018	May	5289	18	8.7	9.9	7.9
2018	June	5189	18	8.9	10.1	8.1
2018	September	5760	18	9.4	9.8	8.4
2018	November	5802	18	9.0	9.8	8.2
2018	December	5828	18	8.2	8.5	7.1
2019	March	5829	18	7.8	8.1	6.9
2019	May	5714	18	7.6	8.1	6.6

The base for the quarterly survey is individual consumption baskets

Compiled by the author, data taken from RBI quarterly report on inflationary expectations in India

The table brings out quite a clear picture of how actual prices vis-à-vis inflationary expectations move in India. A closer examination reveals that there is a synchronised movement between the two showing how actual inflation rate moves in line with expectations formed by people. The table further reveals that people anticipate lower prise rise for one year ahead than that of three months ahead. The table establishes bewildering buoyancy between people's anticipations and actual inflation figures wherein the latter are always found to be lower than the former. Such a pattern of movements for expectation figures and actual inflation figures provide a big room for the policymakers to cater how people make inflationary expectations. Once policies are targeted towards the factors that determine how people make expectations, people would anticipate lower prices in future and the actual rate of inflation in the country will be checked.

The present study aims at understanding the important variables that are likely to affect inflationary expectations with special reference to India.

Availability of Credit

Most of the third world countries have been identified to be capital deficit in nature. Major businesses in this scenario hence depend on credit for their day to day operations to a large extent. This makes availability of funds and their sources an important determinant further. Luba Peterson, (2015) in his paper titled 'Do expectations and decisions respond to monetary policy?' explains the relation between credit availability and price expectations in an economy and found that in credit-constrained economies with flexible prices, an increase in availability of credit leads to high price expectations.

Saudi Arabian Monetary Agency in 2015 in their paper titled 'Inflation mechanisms, expectations and monetary policy in Saudi Arabia' also explains how financial markets and availability of credit in order to explain how residents' anticipation about prices get affected.

Alessndro Calza and Joao Sousa (2005) in their paper titled 'Output and Inflation Responses to Credit Shocks: Are there threshold Effects in the Euro Area?' published in Working Paper Series of European Central Bank in April 2005 also clearly brings out the significant impact of credit availability in the process of forming inflationary expectations and thereby actual inflation in European area.

Traditionally, in India it's been hard to get credit. For individuals or for small companies, when a loan is needed, it has not been easy to obtain. The formal financial system has had a limited outreach, and for most people in the country, even today the only option remains going to a loan shark who likely charge a high rate of interest. In such harsh credit constraints, government's initiative to provide for micro-credit and hence increase availability of credit for people should lead to higher price expectations.

Nominal Rate of Interest

Researchers across world working on macroeconomic scenarios in different parts of the world have come up with enough research studies explaining the role of interest rates in any economy. Nominal rate of interest enter multi-facets of an economy via diverse means take different forms ranging from small loans taken by households for consumer durables, vehicles, personal needs or constructing/renovating their properties; or huge loans raised by the business people to meet their ends meet, financing their investments or investing for expansion via research and development. It is not only the demand side of funds that depend on the interest rates but also the supply side also gets significantly impacted by the prevailing rate of interest. Interest rate is one of the deciding factors for a business man on his portfolio of investment.

Interest rate also has an important bearing on the quantity of money people would want to hold in hand. Keynes clearly explains rate of interest as an opportunity cost of holding money in hand. Hence rate of interest not only affects the savings and investments in an economy, it also has bearing on the quantity of money people would want to hold in hand. Monetarist school of thought also lays down a full-fledged map of understanding any economy with interest rate as a centre stage. Hence there is a common consensus among various economic schools of thoughts on the relevance of interest rate in any economy. Formulation of inflationary expectations in such a scenario cannot be left untouched by interest rates.

Though significant research work has been undertaken in India checking the impact of inflation expectations on the rate of interest in the country, the correlation other way round alludes to support. Willian Gibson (2016) clearly makes out a significant direct relationship between interest rates and

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inflationary expectations formed by people in US taking US treasury securities as a premise.

Agricultural-Output Gap

Many research studies focusing on finding the factors that affect how people anchor their anticipations about the future price level try to incorporate supply-side constraints in their study. These studies could also bring out the significant impact it has on the actual price level in any economy. Since these constraints have major bearing on the actual level of prices in any economy, its weightage on how people expect prices is significant especially in developing countries like India. these new developed economies bear a strong pressure to provide for all the needs of an economy in order to meet its growing demands with the available limited resources. This aggravates the gap between the scarce resources owned by these economies and their ever-growing demands and hence result in supply-gap.

Louis Kujis (1998) while explaining trends in inflation finds out crucial impact of output gap on price postulations. Most of the studies recognize the strong hold of agricultural commodities on consumption bundles of households. Hence, agricultural-output gap acts as the best representative to study supply-side constraints in developing economies. India, no exception to this trend also faces chronic problems in its agriculture sector with high dependence on monsoons for irrigation purpose twined with the use of obsolete, labour intensive technology. The conventional theories on the movement of Indian agricultural products lay special emphasis on monsoons in the country affecting prices. However, Shyamlal Banerjee (June, 2016) in his article titled ‘Three Bumps in the Road Ahead’ explains weak linkage between monsoons and food prices in India. The article provides empirical evidence explaining the inability of a time bound and sufficient monsoon to contain inflation in the country. Some studies in the recent years have also come up with this similar trend. This further raises a question on the actual relationship between people’s expectations towards prices and changes in production especially in primary sector which not only includes monsoon as a supply side constraint but enwraps all the bottlenecks faced by developing countries in production sector.

Past Performance of Prices, Inertia

Research studies[8,9,13]on consumer behaviour have found consumers to highly depend on the performance of the variables in the past to ascertain how it will behave in future for their myopic view. Consumers are generally found to show adaptive pattern in their behaviour for their inbuilt irrationality. Also, consumers face information constraints.

This problem gets even more severe in developing economies. A dramatic proportion of their population is either illiterate or unaware of financial and macroeconomic movements and hence depend on the pattern of behaviour macroeconomic variables have shown in the past. This may be understood as forward-looking inflationary expectations based on recent year prices for their short-lived memory.

M.A. Akhtar, Conelis A. Los and Robbert B. Stoddard in their work on Surveys of Inflation Expectations clearly brings out how people adjust their expectations about prices in future based on inflation performances in the past. Hence one may easily presume that price level in developing economies like India will show adjustment with a lag. However Indian experience has seen sudden breaks from the structural trends when it comes to price levels in an economy. This makes it imperative for the Indian researchers to check the authenticity of the control that previous year trends have on how people anticipate prices for future in India.

Inflation-Targeting Policy Framework

A policy framework having an explicit target of containing and maintaining the level of prices at a certain level in an economy is understood as inflation targeting policy framework. Fluctuations in prices level have a magnificent impact on functioning of any economy which makes it imperative for policymakers to pay their specific attention to this issue. Having understood the relevance of inflation targeting policy framework major developed countries introduced inflation targeting policies by the end of 1980s. This number swelled to 45 by the end of 20th century. This policy regime change helped most of these economies to contain their prices right through inception and delivered acknowledgeable results until 2008 when with the dawn of global slowdown, researchers started doubting the power of such a policy implementation.

Indian policymakers also recognized the importance of this move and hence introduced inflation targeting monetary policy in the annual report of RBI in 2000. However, the relevance of the concept faced criticisms with special reference to India. It was only by 2014 that the country could think of introducing a flexi-inflation targeting monetary policy functional from 2016 to have inflation target of containing price

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level at 5% with eligible fluctuations of +/- 1 percent by 2021. This move had an inbuilt time lag if compared to the world statistics that reveals the number of countries having introduced such a policy frame to cross 80 by then. Introduction of this policy has been able to deliver successful results in its initial operational term. However, it is still one of the most debated policy changes.

Gilberto Tadeu Lima, Mark Setterfield and Jayslon Jair da Silveira in their paper on Inflation targeting and macroeconomic stability with heterogenous inflation expectations conclude that an announcement of policy regime targeting a certain rate of inflation improved credibility of the policy functioning in an economy and encourage people to revise their expectations about prices in line with it. This explains the important role of inflation targeting monetary policy in an economy and hence deserves special attention of investigators to analyse its control over people's anchoring of inflation figures.

Exchange Rate Substance

Exchange rate is simply the value of domestic currency in terms of foreign currency. In the wake of globalisation and tremendous increase in the volume of transactions between economies is bound to have an impact on domestic currency prices in terms of foreign currency. Since emerging market economies depend on foreign economies for a wide range of goods and services, fluctuation in their currency vis-à-vis others has a decisive impact on their balance of payment position.

It is not only the current account of the country that gets affected by exchange rate movements, capital account is no exception. Hence containing a sustained pattern in the price of domestic currency finds important relevance in policy initiatives for emerging market economies, like India.

Carlos A. Carrasco and Jesus Ferriero (2013) in their study on inflation expectations clearly state that in recent times exchange rate has become one of the most relevant variables in the transmission mechanism of monetary policy in open economy and hence finds its way in the pool of factors that help people anchor their expectations. These studies are not restricted only to the first world countries but have been recognized by researchers working on third world nations. Charan Singh (2015) in his study on inflation targeting in India explains exchange rate to have a significant impact on the level of prices in Indian economy.

Raghbendra Jha (2008) in his working paper for IMF titled, 'Inflation targeting in India: Issues and Prospects' recognizes some of the advantages of having exchange rate targeting policy framework in the country.

The advantages put forward by this study clearly brings out how inflation can be controlled by containing the price of essential import items from current account of emerging market economies. The study also explains how exchange rate pegging with other currencies help the economy to have clean anchoring of inflationary expectations. Also exchange rate targeting helps the transmission of monetary policy in an economy. Further a well charted and simple exchange rate targeting policy framework makes it easier for the residents to understand the economic environment and anticipate future course of action in line with it.

On having understood the importance and relevance of exchange rate in an open economy, it may easily be said that exchange rate substance plays a crucial role in determining how people anticipate prices in the future.

Monetary Policy Transmission

Monetary Policy transmission may be simply understood as how efficient and effective monetary policy is to affect people's choices about cash holdings. There are various research studies that have found the monetary policy transmission to be slow in India majorly because of two reasons, viz., the limited access of people to financial markets along with limited knowledge of people about financial markets and its instruments.

However, Michael Debabrata Patra and Partha Ray (2010) while working to find stance between inflationary expectations and monetary policy reveal that a well transmitted monetary policy help people in building their confidence on central bank's functioning and hence have an effective process of forming expectations about prices. The researchers interested in determining the factors that help people anchor their inflationary expectations in India should dig deep on the extent of monetary policy transmission in the country and further find out the ways to expand the reach of the same in the country.

Once the right linkage is developed between monetary policy and masses, the instrumental linkage between the power of monetary policy and people's anticipation about prices will work in a more efficient manner and households will then able to have more informed anticipations about prices. This can further help the policies of the economy to have a wider impact.

Credibility of Financial Markets

Credibility financial markets for a layman may be understood as how the world investors rank or assess the soundness of financial markets in any economy. This soundness is verified not only by the structure of financial markets, it also includes the types of instruments available, their return risk, risk involved, magnitude of volatility. Financial market will also envelop the quality of financial services being offered by the system. There are special research agencies which take up the responsibility of undertaking in depth market research across various parts of world and then rank these markets as per their credibility.

Karl Yuxiang and Zhongchang Chen in their study on US economy found that an international credit rating of a country majorly affects people's belief on the soundness of economy and hence significantly impact how they form their expectations about prices in future.

This indicator of financial health of an economy holds even more a special place for emerging market economies like, India. These economies are primarily capital constrained and rely largely on foreign capital to fill their investment gap. Also, countries with good credit rating fetch business from the world to access wider markets and achieve economies of scale. This confidence of world investors has a huge bearing on the prices in these countries. It has been observed in the past that people anticipate higher prices resulting in increased rate of actual inflation in case of credit rating of a developing country is worsened. In light of this argument researchers have ample evidence to focus their studies to explore international credibility as a determinant of inflationary expectations in India.

Dependence on Foreign Currency/ Dollarization

Third world economies that are novice on the growth trajectory have been found to rely heavily on its global presence as supported by empirical analysis done by various experts working on international linkages across the world. In this scenario dependence of these economies on the foreign currency is also found to be humungous. This practice of making use of a foreign currency in making transactions in an economy especially while indexing debt may be understood as dollarization.

Inflation in presence of dollarization would depend not only on the demand and supply of domestic currency but also on the degree of dependence of economic transactions on foreign currency (dollars in general). The researchers may make use of quarterly figures available for demand and supply of both Indian rupees and US dollars to undergo an analysis on the extent of dollarization in an economy.

Lula G. Mangesha and Mark J. Holmes in their study on Eritrea explain the relevance of dependence on foreign currency like US dollars in explaining inflation in developing economies. The inevitable impact of dollarization across many developing and emerging market economies across the world makes it vital for Indian researchers to study it in detail. The irreversible rather ever-growing characteristic of the phenomenon pins the policymakers to understand all its features and impact in detail especially in a country like India with monetary markets so vulnerable to minute changes in the global sphere. The main policy implication of this research work would be the relevance of considering dollarization while anchoring inflationary expectations and lay a foundation stone not to overlook it while controlling inflation both in short and the long run.

Major Reforms in Asset Markets, like Demonetization

Financial reforms help an economy to build in its sound financial system. A well-functioning financial system is one of the important indicators to assess economic health of any economy. Besides being an important indicator, smooth functioning of the financial system also helps the households to confide in the financial instruments that further stimulates their savings in the formal sector helpful in paced up flow of funds in the economy. This mobilization of saving holds even special relevance in credit constrained developing economies.

Simatele, Muncinga in their study on Zambia explain the significance of introducing a financial reform in an economy to build people's confidence in the financial system and hence anchor their expectations about prices. India recently observed a major reform, Demonetization in the economy which revised people's anticipation about prices downwards.

Demonetization- the much talked about word not only in India but also all over the world is possibly the largest financial reform that the country has witnessed in the last decade or even more. Experts define 'Demonetisation as the act of stripping a currency unit off its status as legal tender. The existing form or forms of currency is pulled from circulation and retired, often to be replaced new notes or coins. Sometimes, a country even opts to completely replace

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the old currency with the new one'[v]. In India this however came with a shock treatment with an intention to strip off the unaccounted and fake currency from circulation.

It was announced quite dramatically maintaining thee surprise element on 8th November 2016 at about 8:30 in the evening by the Prime Minister himself coming forward to speak to the public. Many measures were announced then and even later to help out those who might be having their hard-earned money in cash. Accordingly, about 86 per cent of the currency in circulation lost its status of legal tender except for use in some areas like hospitals and petrol pumps, for some days. The government argued of multi-fold objectives behind this; to curb corruption; counterfeiting terrorist activity funding; tax imposition on unreported incomes; targeting black money and curbing fake notes in the system are to name a few.

Political gurus claim that with this bold step the government signalled a regime change on one hand and also tried to prove that they are for the hard-working middle class tax payers on the other, who actually voted them in power. This one act confirmed their determination to penalize illicit activities and the associated wealth. In effect, the tax on all illicit activities, as well as legal activities that were not disclosed to the tax authorities, was sought to be permanently and punitively increased[vi].

Almost all the decisions of demonetization that took place across the globe were taken in events of uncertainty in their economies, however the one that happened in India was timed strangely when the country was doing quite well in terms of macroeconomic variables including growth rate of the country.

As far as demonetization in India is concerned, it has always been questioned to be used as a tool for contractionary monetary policy. It has rather been understood as financial sector reform focused at certain objectives. In the wake of this transitional reform, the researchers will have to carry out a careful investigation to study its impact on GDP, both immediate and in the long run to evaluate its implications in future.

Demonetization brought expectations of growth in GDP to a halt. This was also supported by macroeconomic figures that came for the quarter wherein growth registered in the current trough to be 1.2 per cent only as against the previous four trough figures of about 3.3 per cent (statistics released by Central Statistical Office on Quarter wise estimates on GDP)

To keep up with the surprise element, the process of demonetization could not be supported by sufficient pace of re-monetization, resulting into a standstill GDP growth of the country brought out by its impact on both demand and supply side factors (as per Economic Survey, 2016-17, Department of Economic Affairs, Economic division, Ministry of Finance, Government of India, January 2017).

Demonetization resulted in postponement of demand due to lower or no cash in hand among the middle class who were in queues to get/deposit their money. The retailers and traders associated with businesses of day to day commodities like vegetables, fruits, etc., and the footpath vendors suffered a setback leaving them with leaving them with lesser purchasing power causing their aggregate expenditure to decrease. Although the data on consumption expenditure for this period show a surprising increase in the demands of people which may be explained by the lesser time taken by the urban educated to shift from cash to card. However, the technical support came to them with some lag. The tier two and tier three cities followed the suit and this resulted in higher consumption expenditures of people in the formal sector with greater transactions through electronic wallets, debit cards, credit cards, internet banking among others.

Sectors that are largely based on cash transactions did face some serious concerns like marketing of agriculture and allied products, agriculture inputs, local clothing, street foods, small and marginal entrepreneurs and like. These comprised of the common man who against all odds that came across, looked supporting the move standing patiently in queues waiting for their turn to get/deposit cash from/in banks. The other sectors that showed setback were gems and jewellery and real estate. And it is an open secret that these are the sectors where unaccounted money is highly used.

Thus, the short term anticipated effect on GDP was a slow down due to reduced/postponed demand (due to cash crunch, private wealth), supply (rendered liquidity and working capital, and disrupted supply chains) and increased uncertainty. Indian statisticians expected the growth rate of Indian economy to drop down.

Since introduction of financial reforms like demonetization in an economy not only after household's expenditure pattern in short run but is certain to get long term change in the consumption behaviour, its relevance on how people build their

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expectation about prices cannot be ignored. With this as a back drop this paper proposes to make an investigation about how people's fine tune their expectation process in case of introduction of any kind of reform being introduced in the financial sector of an economy.

Fiscal Policy Substance

Democratic economies have a very special role for the government to play in its growth and development. Fiscal policy in such economies is directed to fulfil multiple objectives and a well-functioning policy also acts an indicator of not only for the political health of the economy but also for the economic functioning.

Martin Cerisola and Gaston Gelos (2009) while explaining the drivers of inflation in Brazil confirms the importance of fiscal policy substance in driving inflation expectations formed by people in any economy. The paper also brings out the inability of the monetary policy to check the inflation rate in the economy if not accompanied by reforms at the fiscal level. Hence fiscal policy substance which generally uses fiscal deficit as its indicator help to evaluate how well the government of an economy functions and hence develop people's confidence on it. This sense of certainty in people's attitude towards the fiscal policy of the country helps them cater their expectations about inflation in a more precise way. Hence fiscal policy substance is indeed an important determinant of inflationary expectations in any economy.

Political Stability

One of the important determinants that help shape expectations about any macroeconomic variable by households in any economy is his confidence in the political sphere of the economy. People are found to have opinions about various political parties in an economy. These opinions play even more an important role for democratic countries. Hence for a country that is the largest democracy in the world becomes even more relevant.

Indian economy has observed varied price patterns in different political regimes. It may also be explained by the physical conditions of the economy in those political eras coupled with people's confidence on then leading political player. It is also the stability in political environment of the countries that helps people belief in the overall functioning of the economy and hence anchor their expectations about their prices in such an environment. This indispensable role played by the political sphere lays enough ground work for the researchers in our country to explore this determinant of inflationary expectations in detail and try to fit in an economic relationship between these two variables such that the random pattern followed by people adhering to different political parties or leaders may be analysed with more precision.

Extent of Financial Literacy

The National Financial Educators Council defines financial literacy as, "Possessing the skills and knowledge on financial matters to confidently take effective action that best fulfils an individual's personal, family and global community goals.'

There are various other definitions of financial literary put forward by different organizations in the world which provide a common understanding of a person who has the ability to understand the financial markets, its instruments and take an informed investment decision to minimize risk in his portfolio. In line with this financial literacy equips the masses to have a broader perspective about the market and take more rational decisions. In the wake of this understanding one may expect the extent of financial literacy in an economy to have directly impact the precision with which people can anticipate prices.

Joseph Palardy and Tomi Ovaska (2015) in their study on understanding how inflationary expectations are formulated by households clearly brings out that household tend to follow the trends on prices projected by professionals.

Fabio Rumler and Maria Teresa Valderrama while digging deep the link between financial literacy and inflation expectations built by financially literates concludes that households with relatively higher levels of inflation literacy tend to have lower and thus more realistic short-term and long-term inflation expectations. Also, their research concludes that deviations of individual inflation expectations from the actual outcome are lower for consumers with higher levels of inflation literacy.

Indian researchers who wish to dig deeper in order to evaluate the determinants that affect Indian masses to from their anticipations about prices have another challenge when it comes to the extent of financial literacy as a determinant. Since the number of quality literates in the country is already limited, the pool of financial literates becomes even shallow. But one cannot ignore the importance of financial literacy on the determinants of inflationary expectations in the country. Hence measuring the extent of financial literacy in India will help to build a concrete base for policymakers to direct policies to control inflation in a more refined manner.

Conclusion

Having understood the nature of inflationary expectations in detail and its relevance in the real economy, the room for researchers to dig it deeper and find the factors that affect how people make inflationary expectations opens up. For emerging market economies like India which face a dynamic economic scenario, understanding the determinants that help people anticipate prices in future in order to tune their behaviour accordingly becomes even more significant for policy makers. The paper goes on to explain the nature of inflationary expectations from its inception stage and how has it been used in economic theory in evaluating consumer's behaviour. It develops further explaining how has it been adopted in various parts of the world for policy initiative.

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[i] The expectations-augmented Phillips curve modifies the original Phillips curve by introducing adaptive expectations into the equation and hence being able to explain the relation between unemployment and inflation rate in a better way. This gives monetarist explanation of Phillips curve. This is sometimes called accelerated Phillips curve as well.

[ii] Lucas and Sargent further criticized monetarist Phillips curve because of including adaptive form of expectations which restricts agent's process of making inflations in an optimal manner. They introduced the concept of rational expectations in the trade off faced by policymakers to target inflation or level of output in an economy. The basic rationale put forward by the new theory is stickiness of prices in the short run. The hybrid form of Phillips curve explain how monetary policy with sticky prices in the short run can boost purchasing power of people thereby increasing the level of real output in any economy.

[iii] In a seminal 1960 article Robert Mundell proposed a model of balance-of payments crises in which confidence in the continuation of a currency peg depended on the observed holdings of foreign reserves. We examine the implications of a reformulation of this view from the perspective of an equilibrium business cycle model in which the probability of devaluation is an endogenous variable conditioned on foreign reserves. The model explains some business cycle regularities of exchange-rate-based stabilizations while also producing devaluation probabilities that capture some features of those estimated in the data. The analysis aims to explain both the real effects and the collapse of temporary fixed-exchange-rate regimes in an unified framework, and provides an economic interpretation for the evidence that foreign reserves are a robust leading indicator of currency crises.

[iv] https://rbidocs.rbi.org.in/rdocs/Publications/PDFs/WDIESHH300914.pdf

[v] http://www.investopedia.com/terms/d/demonetization.asp

[vi] Economic Survey 2016-17, Department of Economic affairs, Economic division, Ministry of Finance, Government of India, January 2017