

Challenges of Inflation and Price Reform in Developing Economies (With Reference to the Iranian Economy)

Hamid Nazeman*

Received: 2011/03/05

Accepted: 2011/05/10

This paper intends to address the problem of inflation in less developed, and transitional economies, where the institutions of market is not fully developed. It is argued that the conventional Neo-Classical policies based on rigid Monetarist views fail to properly address the problem in less developed economies, and as a result its policy prescriptions are bound to fail. In These economies the issue of persisting inflation and unemployment, presents a serious challenge, which requires a more realistic approach in studying the problem. Considering the case of Iran, following a brief review of the background of a dualistic structure in the economy, the nature of recent price changes and distribution patterns is analyzed for various income groups. Then it is argued that while the current price and subsidy reform could lead to higher economic efficiency, a significant success in this program requires however, supplementary macroeconomic reforms in several areas, towards the goal of greater economic growth and a more competitive position in global markets.

Keywords: Inflation, Stabilization Policy, Iranian Economy, Distribution, Subsidy and Tax Reforms.

JEL Classification: E31, E63, O53, D30, H24.

1. Introduction

Macroeconomic fluctuations in the form of changing prices and employment level have been the most important economic challenge during the last century. Most economies have experienced episodes of rising prices and inflationary pressure throughout the last fifty years. During this period, most major industrialized economies have, to some extent succeeded in reducing the rate of inflation while keeping

* Ph.D in Economics, Faculty of Economics, Allameh Tabatabaei University.
Email: nazeman@atu.ac.ir

the rate of growth in aggregate output and employment at a reasonable level. But during all these years less developed economies have in many cases suffered high levels of inflation coinciding with large slugs and unemployment.

Although, Keynesian approach to macroeconomic policy has introduced alternative remedies for short run sluggish growth and occasional recessions in some advanced industrialized countries, but excessive reliance on large public spending and loose fiscal policies in developing economies, have on many cases been too costly and ineffective.

However, most developing economies, facing structural economic problems in the form of weak infrastructure, insufficient investment, stagnant output and growing unemployment, in the absence of well developed market institutions, have for many years had to adopt some sort of interventionist economic policies, which among other things, have to some extent substituted for the market mechanism in order to keep the economy functioning.

For obvious reasons, these economies would not, and could not benefit from adopting a totally passive mode of macroeconomic policy, as originally designed for fully competitive market economies. However, with continued growth and gradual development, these economies are likely to experience a process of transition towards a relative maturity, as identified by a fairly favorable environment for effective functioning of market forces.

Under these circumstances, moving from a totally or partially planned economy towards a mixed market economy would require an array of structural reforms, of which the price and subsidy reforms are known to be as of paramount importance. It is during the course of such a transition that the standard classical anti inflation policies, as prescribed for controlling a "simple excess demand inflation" in fully competitive economies, are not expected to be of any relevance.

As the process of price change and subsequent inflation in the case of developing and transitional economies are known to involve a significant degree of change in relative prices, it would require an inquiry into the nature and extent of such a fluctuation. It is therefore essential to initially examine the theoretical basis of conventional anti-inflation policy and its methodological limitations prior to investigating our proposed practical case.

2. Argument on General Perception from Inflation

In an introductory context inflation is defined as "overall rise in prices". But how do we add up all price changes into a single number? As economists we use price index, and in doing so deal with statistical methods such as sampling and probability models, *etc.* We also utilize economic analysis to define these indices in a meaningful way.

By designing and using price index for measurement of inflation, we usually assume certain statistical properties to the figure we call the rate of inflation, which may or may not reflect the exact reality about variation in prices. These implicit assumptions are as follows:

- i. Regarding a given rate of inflation representing the overall price rise, it is assumed that, as if all prices change in exactly the same proportion.
- ii. This overall change in prices is not related to any relative price change.

These definitional assumptions can be analyzed in a rather accurate manner. In an economy with (N) sectors producing various goods and services, a price vector (P_i) is assumed to correspond to a commodity vector (X_i), where we have:

$$\begin{aligned}(X_i) &= (X_1, X_2, X_3, \dots, X_n) \\ (P_i) &= (P_1, P_2, P_3, \dots, P_n)\end{aligned}$$

A general price index is defined as a macro variable P as a function of the price levels in all the N sectors of the economy, as:

$$P = f(PX_i) \quad , \quad (i = 1, N)$$

In a linear form this Index can be written as:

$$P = (a_1.PX_1) + (a_2.PX_2) + (a_3.PX_3) + \dots + (a_n.PX_n)$$

Where $(a_i) = (a_1, a_2, a_3, \dots, a_n)$ denotes the vector of coefficients specifying the varying weights of different components for all the goods and services in the economy.

Since the level of prices for goods and services are assumed to be variable in the course of time, a more specific formulation would require the above definition for price index to have time dimension as

well. Thus the above linear expression for the general price index in time (t) could be expressed as:

$$P_t = (a_{1t} \cdot PX_{1t}) + (a_{2t} \cdot PX_{2t}) + (a_{3t} \cdot PX_{3t}) + \dots + (a_{nt} \cdot PX_{nt})$$

Using this expression, the common definition for the rate of inflation (R), as described above would be expressed as:

$$R_t = \frac{d}{dt}(P_t) \quad , \quad \text{and}$$

$$\frac{d}{dt}(P_t) = \frac{d}{dt}(PX_{1t}) = \frac{d}{dt}(PX_{2t}) = \frac{d}{dt}(PX_{3t}) = \dots = \frac{d}{dt}(PX_{nt})$$

It is obvious that such a condition can hold, if the following holds:

$$\frac{d}{dt}(a_{1t}) = \frac{d}{dt}(a_{2t}) = \frac{d}{dt}(a_{3t})$$

This means that the relative weights for price of various goods and services in the economy have to remain constant in the course of time, and their prices change all to the same rate.

As we know the ratio of prices in a competitive economy is defined as the ratio of their marginal utilities.

If we use (MU) to denote the marginal utility, we have

$$\frac{(PX_1)}{(MUX_1)} = \frac{(PX_2)}{(MUX_2)} = \dots = \frac{(PX_n)}{(MUX_n)}$$

$$\frac{(PX_i)}{(PX_j)} = \frac{(MUX_i)}{(MUX_j)} \quad , \quad (i, j) = (1, N)$$

Considering this, the above definition for inflation requires that all the prices change to an assumed rate. It also requires that the marginal utility of various goods and services in the economy should also change to the same rate. This means that there could be no change in relative utility of goods and services, or no change in relative prices.

This as we know is contrary to basic requirements for any dynamism in the economy in the course of time. Where, the perfect flexibility of relative prices is assumed to hold as an essential axiom for functioning of the so called "Perfectly Competitive Market Economy". Thus it

could be duly argued that the current definition of inflation as a macroeconomic index is explicitly in contradiction to the fundamentals of a dynamic economic system, and therefore of little or no significant use in a practical economic analysis

3. Theoretical Basis for Stabilization Policies

By the analogy presented above, the hypothetical classical case is reduced to that of a seemingly single commodity economy, where the quantity theory of money is conveniently applicable to set the price level as a linear function of the stock of money:

$$M.v = P.y$$

$$P = \left(\frac{v}{y} \right) . M$$

Where (M) represents the stock of money, and (v) the velocity of money is defined as the average number of times that the stock of money is used in transactions, and (y) as the national income in constant prices.

Following the Marshallian tradition of instantaneous adjustment in prices, and rather slower adjustment in quantity of output (y), it is argued that in a short run analysis both (y) and (v) can be regarded as constants. As a result any change in price level is simply described as a linear function of change in the stock of money:

$$\frac{dP}{dt} = m \left(\frac{dM}{dt} \right)$$

This is in fact the assertion of the well known Classical quantity theory of money which tends to relate the variation in nominal income to the variation in money supply (Friedman 1970).

This seemingly innocent compromise in interpretation of the concept of inflation, in fact implies a unique pattern of change in prices, which is incidentally suitable for a given theoretical approach to macro-economic equilibrium analysis, and also bears particularly convenient economic properties for a specific policy conclusion. In context of neo-classical analogy, what one needs to add to this system is a basic relationship between the "overall" trend of change in prices and the stock of money in order to conclude that the cause of inflation

is necessarily an exogenous growth in money supply. It implies, among other things, an equi-proportionate change in all the prices across the economy, which means no change in relative prices.

Based upon these rather naive assumptions about inflation, according to the neo-classical analysis it is simply concluded that, as an integral part a perfectly competitive economic system, there exist a fully stable set of relative prices, which is permanently capable of allocating resources in the most efficient pattern, and in the absence of an exogenous shock, the system will continuously keep functioning with no autonomous change in prices or quantities. Whereas in case of monetary growth, a rationally expected trend of inflation can be observed. This would continuously convey the inflation through the time.

However, this is a crucially important hypothesis, which can be challenged. It certainly would not be reasonable in theory or practice to assume that changes in relative prices and the subsequent general dynamism of the economy are all short run monetary phenomenon.

As a conclusive elaboration of Keynesian income-expenditure approach, we can argue that:

- a) Theoretically, even under the condition of full flexibility of prices, there need not exist a long run equilibrium position characterized by full employment of resources.
- b) In a short run analysis, under an effectively competitive market, contrary to Classical orthodoxy, prices could be assumed either as constant, or changing with some delay, and at a relatively slower pace than quantities of output.
- c) Due to changes in relative prices, and its significant role on expectations and subsequent changes in liquidity preference, the velocity of money is highly unstable most of the time, so that changes in the quantity of money would simply produce changes in its velocity in the opposite direction.

Thus, under the unpleasant condition of an absolute liquidity preference in certain market economies, and also in the case of many developing economies suffering from institutional uncertainties and persistent unemployment, the quantity of money equation could be regarded simply as a theoretical identity, largely useless or ineffective for stabilization policy, or for the prediction of short run fluctuations.

However, despite the very significant role of relative price change

in microeconomic factor allocations and macroeconomic fluctuations, many neo-classical economists tend to suffice with the study of inflation on the basis of an entirely hypothetical neoclassical model, either because of its simplicity, or for the sake of full compliance with requirements of the common neoclassical reasoning. As a result, the state of policy analysis in dealing with inflation can best be described as dismal.

4. Shortcomings in Conventional Theory and Policies

Most conventional neo-classical economists blame the Keynesians or the so called Heterodox economists for expansionary policies leading to the high rates of inflation. Although, it is not far from reality to relate certain episodes of high inflations, particularly in less developed economies, to excesses in aggregate demand management in some cases, but it should be added that too passive monetary policies have also contributed substantially to most persisting cases of unemployment and stagnation on many occasions.

It is argued that strictly managed monetarist policies in turn have significantly contributed to failures in stabilization policy plans in developed economies, and hindered many strides for economic growth and poverty elimination programs in underdeveloped economies.

As a theoretical dogma, neo-classical economists assume an ideal condition, where the economy is always in full employment equilibrium, and thus the unemployment level cannot be lowered without an increase in inflation. Thus, any real effect expected from an active monetary policy is assumed to be limited to the effects of an unanticipated change in monetary aggregates, and that is also assumed to hold just for a short term interval, where the adjustments due to rational expectations are assumed to have not been realized to their fullest. (Mishkin, F. 1995).

However, it could be argued that the very fact that in a comprehensive analysis, inflation is shown to be influenced by changes in expectations based on relative prices, indicate that there is a correlation between inflation and real output, or inflation and unemployment. Though, the relationship has proven to be much more complicated than one could imagine, probably because of the role of expectations and relative price dynamism, yet to be identified.

For long it has been argued that a structurally induced inflation in the form of a relatively rapid change in composition of demand is

bound to lead to a significant change in price level, even without an excessive growth in overall demand (Shultze 1959). This argument was further elaborated in studies on the nature of inflation, employment and growth within various sectors of a rather competitive economy (Robinson, 1960).

Later studies in the field of the impacts of inflation on the distribution of income and wealth have clearly documented the evidence of the "Non-Neutrality" of inflation (Budd and Siders 1971).

Generally, the lack of a clear analogy in dealing with inflation and other major macro-economic issues is considered as a serious shortcoming to the credibility of the profession.

Trying to plan for everything by a single monetary aggregate, and therefore, discounting the structural policy implications of targeting for growth and employment, are in fact very costly in advanced industrialized economies, as well as in less developed world. This in itself is sufficient to reject the exclusivity and universality of the quantity theory of money as the sole explanation for sustained inflation. Instead a more comprehensive policy package could be sought by simultaneously planning for a balanced fiscal and monetary policy (Alvarez et al. 2004). Yet, for many years many professional economists have been practicing in central banks with absolute loyalty to neoclassical orthodoxy of perfectly passive monetary policies. This line of policy, among other things, seems to have played a significant role in development of a rather speculative and uncertain financial environment, which in certain cases has lead to episodes of persistent stagnation and decline across the world. It could be documented that transitional and developing economies have on many occasions experienced significant economic fluctuations identifiable as cases of induced inflation, and unemployment in recent decades.

5. Theoretical Grounds for Revision in the Definition of Inflation

Though, technical advances have played a great role in postulation and development of vigorous mathematical models used in modern economics, but in spite of all these, it is a pity that the profession has to accommodate an oversimplified model of inflation for such a crucial issue. It is noteworthy that theoretical elegance and technical vigor can be put to a better use, if we do not insist in an old dogmatic view, and try instead to utilize the advanced technical instruments in relaxing the hypothetical assumptions of theoretically ideal model,

and come to terms with more sophisticated models of real world.

There is no doubt that, like all other sciences, in economics too, abstract models are essential for theoretical analysis, but no scientist ever resists the motivation to develop practically useful models for better explaining the real world, by systematically relaxing the hypothetical assumptions and replacing them with observation backed realities. It is not difficult to imagine that for a given rate of inflation, the combination of possible price changes for various commodities, which may be observed in a market economy, are almost infinite. Unless one makes an "a priori" assumption that all the changes occurring in prices are equi-proportionate, there is no reason to ignore the role of relative prices in economic fluctuations in general and inflation in particular.

In fact, it seems quite plausible to argue that a totally proportionate change in all prices, if possible at all, is not reasonably probable. It can also be demonstrated that such a level of inflation is quite exceptional, and with little or no impact on economic activity, it would be of no significance in real economic terms. Because during such an inflation all the prices, wages, and interest returns are assumed to rise in the same proportion, with no change in actual purchasing power of the currency within the domestic economy

. This type of an inflation would not require any policy action to be halted, and could be properly termed as a " Neutral Inflation " But, it is obvious that what we are faced with in reality, are not neutral at all.

The types of inflation we are dealing with, and have difficulty in treating them, are not neutral in their composition. On the contrary, most of the time what we call inflation is in fact a general rise in prices with no proportionality among its components. That is inflation with substantial changes in relative prices.

Moreover, there are many cases of inflation identifiable mostly as consequences of economic dynamism primarily initiated or ultimately fueled by significant changes in relative prices.

It can be established that by using a simple factor analysis method, we can measure the effects of two categories of variables separately, for this purpose a set of components, or factors are produced: One of these factors measure the volume of common component in all price changes, that affect all of them equiv-proportionately, and in a monetarist analogy, may be taken as the influence of a steady growth in the stock of money across the economy. The other factors measure

the effect of major changes in relative prices, such as, fiscal or monetary shocks, liberalization shocks, major union wage changes, tariff restructuring, subsidy plan reforms, *etc.* By using this sort of analysis, one can compare the relative size of each factor influencing the rate of inflation. Once the magnitude of money growth on inflation is realized, and separated from the others, it may be termed as "The Monetary Inflation", and dealt with accordingly.

Findings of macroeconomic studies in certain developing and transitional economies indicate that only a portion of the observed inflation can be traced back to changes in monetary aggregates. That is to ascertain that the remaining portion of the observed inflation originates from alternative sources. Among the factors influencing the rate of inflation are changes in price of imports as well as changes observed in patterns of distribution, as represented by significant changes in relative prices. Furthermore, practical experiences in some developing economies do not support the monetarist hypothesis of an absolute determining role for the interest rate and monetary aggregate in price dynamism. In certain cases in these economies, the lack of an efficient money market due to shortcomings in the banking system presents a totally different economic environment with no significant correlation between money supply, interest rate and the opportunity cost of holding money (Kooros 1969). Even in the case of fully industrialized economies like the United States, it has been indicated that most of the movements in general measures of inflation like CPI, or the GDP price deflator are due to relative price changes. In some estimates it has been found that only around %20 of the movements in these measures of inflation correspond to pure inflation. Where, Most of the time, the pure monetary inflation and CPI inflation are found to be significantly related (Reis and Watson 2008).

6. The Role of Relative Prices in Inflation

As we mentioned, logically one would expect any real change in prices to come from a change in relative prices. In the context of economic theory, there are many grounds to for elaboration on the nature and causes of various types of changes in relative prices.

In reality as well, close examination of extensive data for the prices of goods and services that constitute the price index, CPI and others, indicate the fact that fore most economies, relative prices do change during episodes of significant inflation. In fact, it is very hard to

observe genuine cases of changes in various prices as indicating full extent of proportionality. It is obvious that the concept of relative prices is of paramount importance in the whole body of economic theory. It is also important in the analysis of practical issues of political economy in general and income distribution in particular. But despite all this, the oversimplified notion of inflation commonly used by the general public is also widely used by academicians, and professional economists, with little or no explanation on its intellectual and practical implications in reality.

According to classical theory, changes in relative prices are caused by real shocks, which are not always expected to lead to an overall increase in the price level. But, it is certainly known that there is a relationship between the rate of inflation and a substantial variation in relative prices. Although it is some how costly to measure the variability of relative prices across the economy. But it is not impossible to design models for sampling data in major sectors of the economy.

The relative price change of a given commodity in relation to aggregate price index such as CPI, or the price deflator of GDP, can be defined by comparing the changes in one as compared to changes in the other. For instance, if the rate of increase in the price of houses exceeds that of the overall inflation rate, it is said that the relative price of housing has increased. As for measuring inflation and analyzing its relationships with major variables, a realistic model should include, among other things, the effect of changes in relative prices, which has a significant role in the allocation of resources in productive sectors, as well as distribution effect for consumers, and as such it can explain a great deal about macro-economic fluctuations. These variations in relative prices can be expected to happen for a variety of reasons, namely:

Macroeconomic reforms and liberalization policies, that introduce substantial changes in subsidized prices and set price shocks by liberalizing certain industries.

Trade policy changes, which tend to alter the extent of influence from international prices to varying degrees, for various industries.

Labor union actions, that usually change the structure of wages, and other benefits for certain industries.

Monetary and banking reforms, that may change the structure of interest rates and other monetary variables.

Change in foreign exchange and investment rules, which can alter the conditions for trade and investment across the economy.

Tax laws and subsidy policies, that can promote or restrict certain economic activities.

Obviously, most advanced market economies may seldom experience dramatic policy shocks of this nature, with significant changes in relative prices and their consequent effects on the rate of inflation. Whereas, these type of exogenous shocks and many others are common developments in many transitional and developing economies around the world. A more realistic approach to macroeconomic policy is therefore a necessity for successful implementation of any major reform programs in these countries.

For the purpose of designing a policy model useful for a rather dynamic economy, that characterizes most of transitional and developing countries, it is essential to distinguish the effects of two different categories of variables which influence inflation from one another. That is the influence of money and monetary aggregates as compared to the influence of major changes in relative prices.

7. Macroeconomic Priorities for Developing Economies

As a result of adopting a rather naive monetarist approach to macroeconomic policy, many economies have been subjected to the consequences of policies that focus exclusively on inflation for an extended period of time. Inflation targeting has become fashionable among various countries across the world.

Advanced western economies, which enjoy reliable body of data, have contemplated using theoretically advanced indices like "NAIRU", that is (non-accelerating inflation rate of unemployment), in their policies for controlling inflation. While many transitional and developing nations have launched monetary policy packages for achieving and sustaining ideally low single digit inflation. Most of these policy plans have been rather costly in real economic terms, as in terms of lost employment and slower growth. Whereas, there is no empirical evidence that a moderate rate of inflation, has any real harmful effect on output and employment. According to many conventional economists there is a given natural rate of unemployment for a particular economy, which cannot be changed by policy makers. But the counter argument is that in reality the oversimplified ideal model of a neo-classical economic system can

never be realized.

Although, a gross approximation of the overall rate of growth of the real output could be estimated with a fairly reasonable degree of accuracy at macro level, the time path of movements across various sectors of the economy can hardly be traced in a reasonable manner. This phenomenon is basically due to changing factor utilization ratios in the course of technological development in productive activities, as well as changes in consumer preferences occurring in the course of social change. All these can lead to significant changes in relative prices across the economy. As a result of this, the observed amount of inflation is expected to be considerably different for various sectors of the economy.

On the other hand, the pattern of wealth and income distribution in a society is likely to have significantly different impacts on various income groups for a given level of inflation at any period. Many economists, policy makers and central bankers in developing countries are also known to be steadily following their counterparts in fully developed western economies, and are engaged in designing, developing and implementing policy packages focused exclusively on fighting inflation. While, even their colleagues in the west have little to gain from such one dimensional policy models, it is of paramount importance for developing nations to employ their economic professionals in development of policies endogenous to their own economy.

It must be noted that the great emphasis on policies that focus mainly on inflation, may lead to the exclusion of more important concerns, such as growth promotion, employment creation, poverty elimination, social infra-structure development, *etc.*, which have to be placed higher in priority list of economists in developing countries. It is also noteworthy here to indicate that with the world economy suffering from financial crisis, as well as, food and energy shortages, policy priorities for economists in these countries are in no way similar to that of the expert economists in the industrialized west.

Governments all over the world are expected to act for implementation of packages of policies, to not only contain the inflation, but also to help the economy operate at a higher level of output and employment. This would necessarily require a more realistic view of inflation, and its relationship with other major macroeconomic variables. Many developing and transitional

economies have had little success in controlling inflation. Although monetary expansion has been a significant factor on many occasions, but relative price changes and nominal wage adjustments have also contributed to this phenomenon fairly significantly.

As a well studied case, the experiences of liberalization in Eastern Europe have indicated that during initial periods of structural reforms, the impact of relative price change and its distribution effects, could very well be above that of monetary shock alone. In order to pursue structural reform programs, policy makers should take into account the full impact of distortions arising from such distributive shocks, and their effects on relative prices, if they are concerned with the ultimate health of the economy (Sharmini, *et al.* 1997).

8. An Overview of the Iranian Development in the 20th Century

In the course of her long history Iran has experienced periods of power and prosperity marked with progress and glory in the arts and sciences, but has also suffered from numerous attacks and invasions followed by periods of decline and instability. Superficially touched by the industrial revolution, Iran at the beginning of the 20th century was a fairly primitive and isolated state barely recognizable as an economic entity.

Although the discovery of oil early in the 20th century had, to some extent, paved the road for utilization of the country's natural resources in economic growth, unjustifiable financial relationship with foreign companies did not let the oil sector serve the development of the economy. Forced involvement in the First World War was also a significant factor causing crisis and instability and blocking the road for progress. Though some serious strides were made in pursuit of economic development during the 1930s and early 1940s, but in the absence of democracy the fragile institutions of the country could not stand the shocks invasions and interventions by foreign armies, and was all halted during the Second World War. After the war the nation struggled for the nationalization of the petroleum industry but under pressures from western governments was forced to compromise and accept new arrangements which assured the western interests in country's oil sector.

During the second half of the century the volume of oil export gradually increased and following the gradual rise of oil prices a considerable source of revenue was realized, which to some extent

could help finance government development plans. But generally the economy as characterized by "dualism" in its structure and behavior, had to deal with extended periods of stagnation and poor growth for decades. The structural dualism of "Oil and Non-Oil" economy, and the lack of structural linkages between economic sectors had been an obstacle for any significant economic interaction between the advanced oil industry and the relatively backward traditional domestic economy. At the same time the so called "Cultural and Behavioral Dualism" between urban and rural parts of the economy was seen as an impediment to significant growth and expansion in the domestic trade and industry.

The growing inflow of oil revenue helped Iran in financing several development plans calling for economic reforms, which resulted in a fairly steady economic growth with relative price stability during the 1960s. But sudden influx of oil income after the 1973 rise in oil prices further aggravated the inherent dualistic conditions of the economy and destabilized it considerably. A highly significant disparity in income and wealth among various classes of society, together with a rather poor infrastructure of the economy, and a rapid urbanization identified by a widening gap between urban and rural communities, all in the absence of a competitive market system resulted in periodic shortages for many commodities, where substantial rise in prices of food and necessities was recorded. It seems, therefore that all these imbalances in domestic economy, as well as a growing deficit in foreign trade had virtually brought the process of economic development to a halt by the late 1970s.

Although, a significant role taken by the government in planning the economic activities and controlling the inflation, to some extent helped to ease the hardship of stagnation and shortages during the war in early 1980s, but inflationary pressures did eventually surface by the end of the war, and during the course of plans for reconstruction of the economy in the 1990s. The government programs for privatization of the nationalized industries and liberalization of the domestic economy early in the 1990s, which was to be pursued by open trade policies, along with flexibilities in monetary sector and expansionary fiscal policy in the form of large public spending in infrastructure created serious economic imbalances and lead to major social problems.

These policies resulted in a significant price rise in the market for foreign exchange, real property, as well as consumer durables, and

necessities. Consequently, record levels of inflation was registered which forced the government to halt its ambitious programs for subsidy cut and price reforms. Instead a policy of economic stabilization was adopted in order to control the prices and halt the growing deficit in foreign trade. However, significant levels of fiscal expansion in the form of budget deficits, along with debt monetization was experienced during the late years of the twentieth century, and continued through the early years of the current century.

Considering the structure of the economy in terms of its dependency on oil revenue, it seems the task of planning for a well balanced fiscal-monetary policy package in a developing economy, is the matter of most creativity in applied macroeconomics, which would require more than just theoretical expertise. If anything, it would require a comprehensive plan for promotion of aggregate supply through an efficiently functioning competitive market system, along with a fairly strict discipline in public spending and government budget. This obviously is rather difficult to exercise in any resource based developing economy.

9. Recent Programs on Price and Subsidy Reforms in Iran

In recent years a new round of economic policies have been initiated by the government, which has identified a greater role for the public sector in infrastructure development, along with more restrictive monetary policies in the form of credit rationing and interest rate settings. These policy packages have been criticized by liberal economists and proponents of free market economy.

At the same time a more detailed and well studied program of subsidy cut and price reforms have recently been introduced, which calls for greater self restraint in prices by the private sector in order to proceed with success.

Subsidies for electricity, water, food, fertilizers, and other petroleum products, which have been in place for decades in the Iranian economy, are estimated to count for a rather substantial part of government budget. These subsidies have also been considered as a major factor in price distortion and inefficiency in productive sectors of the economy. While a significant volume of wasteful consumption as well as smugglings in subsidized items are known to cause extra costs to the national economy. Although the need for price reform has for many years been supported by local as well as international

proponents of free market economy, it seems that a call for national cooperative movement to implement it is a rather pioneering initiative introduced to the economic policy planning in Iran.

A notable point in current stabilization policy is consideration of the fact that all prices should not be taken as homogeneous in their dynamism. Because, as we previously argued a simple neo-classical anti-inflation policy is not based on a solid theoretical grounding and therefore it is not expected to deliver much in the case of a developing economy, where institutions of a hypothetically ideal competitive market are not in place to steer the economy towards stable macro equilibrium. Instead there are many rigidities and imperfections in the adjustment process which are likely to let actual or potential disequilibria develop across various sectors of the economy.

It could be argued that this feature is not specific to developing economies at all. In fact more liberal economies where unregulated financial markets are better placed than developing economies are also known to have conveyed speculative transactions from financial sectors to the real sectors of the economy, and suffered its consequences as episodes of serious financial crisis on many occasions.

The American economy known for its more obvious characteristics of a liberal market economy has hosted most of the recorded economic fluctuations and significant financial crises throughout the twentieth century, as well as the major crisis of recent years (Derakhshan, 2008).

In the case of Iranian economy, speculative demand for consumer durables in general and urban real estate in particular, has played a major role in inflationary movements of the economy for many years. This phenomenon among its other unpleasant consequences can duly be considered as a major factor in aggravating disparity in income and wealth distribution pattern. Examination of household expenditure data for various groups of income in Iranian economy can be referred to in support of this argument.

As the above tables indicate the observed rate of change for various groups of expenditure has no similarity to the general level of change in CPI. This clearly rejects the hypothesis of a neutral inflation in Iranian Economy. Income disparity among various deciles also indicates the fact that burden of inflation on various income classes could not be assumed as identical. Since various income groups have

to spend different portion of household income on necessities.

Table 1. CPI for 2008-9 and 2009-10 fiscal years on the basis of (2004-5 = 100.0)

	Relative Weight in Expenditure %	Index 2008-9	Index 2009-10	Change % (Inflation)
CPI (Aggregate)	% (100.0)	183.3	203.0	10.75 %
Food & Beverage	(23.79)	198.9	218.6	9.91 %
Tobaccos	(0.39)	167.8	218.3	30.11 %
Clothing	(4.64)	163.1	179.9	10.31 %
Housing & Utilities	(33.11)	196.2	220.2	12.23 %
Furniture & Appliances	(5.04)	179.0	186.6	4.24 %
Health & Medication	(4.53)	190.0	226.0	18.94 %
Transportations	(11.59)	149.0	157.8	5.91 %
Communications	(2.58)	96.9	97.3	0.41 %
Entertainments	(2.44)	132.6	145.3	8.75 %
Education	(2.25)	187.5	217.4	15.94 %
Hotels & Restaurants	(2.16)	189.0	218.3	15.51 %
Other Goods & Services	(7.48)	184.3	207.6	12.64 %

* Compiled and calculated by author, on the basis of Central Bank Data, Monthly Economic Indicators, March 2010.

Table 2. Total Urban Household Expenditures by Income Deciles for 2008-9.

Income Deciles	Expenditure in Million Rials	Expenditure in USD
Decile 1	25.273	2613
Decile 2	41.713	4315
Decile 3	54.641	5652
Decile 4	67.320	6964
Decile 5	81.204	8399
Decile 6	97.126	10048
Decile 7	116.863	12088
Decile 8	143.882	14885
Decile 9	189.175	19569
Decile 10	337.326	34886
Average Household	115.445	11942

* Compiled & calculated by author on the basis of Central Bank Data, Urban Household Income & Expenditure, March 2010.

In order to better analyze the impact of price rise across the economy, we have considered Food, Clothing and Housing as the major components of the essentials for livelihood. The amount of these items of expense and their relative ratios in household total expenditure, as calculated for various deciles is demonstrated by the following table. Findings of this analysis can further reveal the impact of income disparity and differing burden of inflation among classes.

Table 3. Urban Household Essential Expenditures (Food, Clothing & Housing) for All Income Deciles (in USD at Market Rate of Exchange during 2009-10)

Expend	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10
Food.	747	123	162	204	238	2815	3174	3773	4473	6155
		0	6	7	4					
Cloth.	79	163	219	287	389	511	641	799	919	1536
House.	115	174	224	258	265	3369	4035	4494	5818	1114
	1	5	4	9	9					8
Total Essential s	197	313	408	492	543	6695	7850	9066	1121	1883
	7	8	9	3	2				0	9
Total Deciles	261	431	565	695	839	1004	1208	1488	1956	3488
	4	5	2	4	9	8	8	5	9	6
Essen. Ratio %	75.6	72.7	72.3	70.8	64.7	66.6	64.9	60.9	57.3	54.0

* Compiled & calculated by author on the basis of Central Bank Data Urban Household Income & Expenditure Data, March 2010.

As it is indicated in the above table, the ratio of "Essential Expenditures" to total household expenses has a declining trend when we move up on income deciles. While, these expenses constitute more than 75 per cent of total household expenses in the first (i.e. poorest) income decile, it only accounts for 54 per cent of total expenses in the last (i.e. richest) income decile. This reveals the fact that the rich not only enjoy better quality and greater amount of essential goods (i.e. food, clothing, and housing), they also need to spend lesser ratios of their income for purchasing these items. Therefore, one could conclude that the lower income households having spent a greater share of their income on these very essential means of livelihood would have a relatively lesser share of their income left for other items of expenditure.

Considering the fact that these groups are already in a disadvantageous position in terms of absolute level of family income and expenditure, there will be far less opportunity for them to compete for other goods and services in the market. While some of these goods and services are not luxurious items of expense at all. In fact expenses for health, education, transportation, and communication should be considered as necessities for every family regardless of their wealth and income.

In order to study the composition of household expenses for various categories of goods and services among various income groups, we have regrouped different income deciles in a new

classification where there are four income clusters.

The four clusters are classified as following;

1. Low income class consisting of deciles (1, 2, 3)
2. Middle income class consisting of deciles (4, 5, 6, 7)
3. Upper middle income class consisting of deciles (8, 9)
4. Upper income class consisting of decile (10)

The structure of expenses for various income classes can be clearly compared in the following table. Such an analysis, among other uses, can also be used in improving the pattern of subsidy distribution among various income classes.

Table 4. Categories of Household Expenditures by Income Clusters for 2008-9.

	Low Inc. Deciles1-3	Middle Inc. Deciles 4,5,6,7	Up Mid. Inc. Deciles 8,9	Upper Inc. Decile 10	Average Household
Food, Cloth	3058	6325	10137	18839	7350
Housing	(73.0%)	(67.5%)	(58.8%)	(54.0%)	(61.5%)
Health, Educ.	567	1457	3851	9747	2503
Trans,Comm.	(13.5%)	(15.5%)	(22.4%)	(28.0%)	(21.0%)
Furn, Entertmt.	569	1593	3239	6300	2090
Hotel, Rest, <i>etc.</i>	(13.5%)	(17.0%)	(18.8%)	(18.0%)	(17.5%)
Average Expenditures In Cluster	4194	9375	17227	34886	11943

* Compiled & calculated by author on the basis of Central Bank Data Urban Household Income & Expenditure Data, March 2010.

As it is indicated in the above table, low income classes spend only 13.5 percent of their budget on such important areas as health, education, transportation and communication. While this ratio for middle income classes are not much higher at only 15.5 percent of household budget. This among other things indicates the importance of providing extra support for low income and middle income groups.

The current program of price and subsidy reform, which has been in effect since December of 2010 has provisioned distribution of subsidy in the form of cash payment to every Iranian to the approximate sum of \$ 40.00 per month to compensate for the expenses of price liberalization in previously subsidized items, including energy, bread and others. As it can be seen from table (4), the annual sum paid per person amounts to about \$ 500.00 and for an average

family of four the annual sum of about 2000.00 constitutes a rather significant portion of expenses for in lower income clusters. This amount would compare to more than %40 of the total annual expenses of an urban family in the low income, and about %20 of the expenses in the middle income cluster. While the share of this cash payment is relatively lower as compared to total income and expenses in upper middle class in the upper class.

As for the aggregate cost of the current program, in terms of its direct impact on price level, and its consequences on household expenses, the first round effect is predicted to be limited to less than %8 of total expenses for urban households and to %9 or less for rural households. These figures are calculated on the basis of pre-reform income and expense structure in the economy and since the government is determined to practice various schemes of wage and price controls, these predictions excludes impacts of any possible reactionary inflationary expectation (Parvin, 2009).

Considering the recent reports on the rate of inflation for the Iranian economy during the last fiscal year which has been recorded at (12.4) per cent, if this trend in demand pull inflation continues, and the expected cost push effect of the current price reform program is assumed to be manageable within the predicted range of 8.00 to 9.00 percent for the current year, then the total inflation could be expected to amount Considering the recent reports on the rate of inflation for the to about 20.00 or 21.00 per cent , which is approximately the same as predicted by the International Monetary Fund for the current fiscal year (IMF. 2011). However if government succeeds in cutting the current demand pull inflation further by practicing a more restrictive monetary policy, then the total rate of inflation can be expected to go lower than the predictions. Whereas, an ambitiously expansionary fiscal policy leading to debt monetization may result in greater demand pull inflation and push up the aggregate rate of inflation to a higher level. Furthermore, it is obvious that the price reform program envisages added distributive benefits in the form of greater savings in major items like energy by the lower income classes as compared to those in higher income brackets.

10. Supplementary Policies for Stability and Growth

It must be noted that stabilization of the economy subsequent to implementation of a major program of price and subsidy reform would

require a wide range of policies which goes beyond the payment of cash subsidy to households in various income groups. Among various policy initiatives needed to support and supplement the current subsidy reform program, following areas seem to be of greater significance:

Economic Equilibrium in General

In an oil exporting economy like Iran with a rather limited significant linkage between the oil sector and the rest of the economy, continuous influx of cash revenue from the oil sector is likely to result in continued fiscal expansion which would subsequently lead to the growth of monetary base. It is therefore of paramount importance to help mobilize the private producers in non-oil sectors of the economy in order to be able to expand the aggregate supply and meet the ever expanding demand. Obviously, failure to do so is likely to build inflationary pressures and result in serious episodes of disequilibrium across the economy. Effective management of the economy at macro level would in turn require planning for, and administration of comprehensive packages of sound economic policies for all the markets, including the labor, money, as well as commodities.

Bank Credits, Exchange rates and Foreign Trade:

Although provision of soft loans and subsidized credits for certain sectors of the economy may be considered as effective in curbing the inflation and promoting growth in those sectors, it should however be noted that direct control of the terms of bank credits by government is likely to result in credit rationing and diversion of resources to less efficient activities. Instead provision of interest subsidies by government through a fairly competitive banking system could be a much more effective policy initiative. Introduction of genuine profit and loss sharing schemes, and its promotion through the banking system could also be an effective initiative in Iranian banking system of considerable value.

On the other hand the policy of currency devaluation suggested by the business community, seem to be rather counter productive for country's overall plans for economic growth and modernization. Since the need for imports, particularly that of capital and intermediate goods is essential for the long term development of the country. Furthermore, it should be noted that any potential trade benefit expected from a significant devaluation of the national currency would be short lived. Where a consequent rise in the overall rate of

inflation would halt the move for export promotion, and result in greater difficulty for industrial sector of the economy. Instead an effectively generous measure of technical and financial assistance to major exporters by government should be considered as an alternative.

However it should be noted that controlling of prices, interest rates and exchange rates; all at the same time, theoretically and practically is not feasible in a market economy. If managing the rate of exchange at certain level is considered as essential for the stability of the economy, then a relative degree of flexibility in terms of bank credits could be accommodated in order to promote private savings and investment. This among other things would help attract the extra liquidity into the money market in pursuit of the overall equilibrium of the economy.

Price Flexibility and Industrial Subsidy:

While there may be a considerable cry on the part of private business for price liberalization, it seems however, a policy of full price flexibility may render the current price and subsidy programs as ineffective. However, since most firms and factories have to a great extent developed and employed a rather energy intensive technology for their plants in the past, in order for them to adjust to new energy saving technologies, financial and technical assistance is expected to be provided by the government within the framework of schemes for successful implementation of the current price and subsidy reform program.

This area seems to be the crucial part of the policy initiative announced late last year as a national cooperative move to secure voluntary participation by private sector in the price and wage control scheme, which is launched in support of the current price and subsidy reform program.

Therefore, it seems the emphasis should be on providing economic incentive and technical assistance for those firms that are prepared to undertake projects for technological restructuring of their plants as provisioned by national programs of energy conservation. Major industrial companies may have to consider issuing bonds or stocks for financing their renovation programs. Here, public policy support in direction of financial diversification may be needed in order to assist these firms to utilize the national capital market, in addition to conventional facilities provided by the banking system. Greater fiscal discipline on part of the government, in the form of cutting certain less

important items of expenditure, and raising taxes for non necessary and luxuries consumption may also be considered as a worthy line of policy for provision of greater economic support for small and medium size enterprises potentially capable of creating real employment in most sectors of the economy across the country.

Currently, there are certain sectors of the Iranian economy which have been prone to indicate structural imbalances and inefficiencies. In order to control the adverse effects of subsidy reform program these sectors would require greater attention, which may also involve direct public policy assistance. Urban and rural housing, agriculture, as well as small and medium industries are known to be high on the priority list among various economic sectors.

Agriculture, Small and Medium Industries:

Although the current policy of cash payments to all families in the country seem to have benefited lower income groups to some extent, and such an impact would probably be deemed as necessary in the initial phase of a large scale price reform program, but it should be emphasized that investment promotion programs aimed at creating permanent employment opportunities in competitive firms across the economy, would eventually have to constitute the core of an effective policy planning for economic progress in the long run.

Greater benefits of a major price reform program such as the one underway in Iran are expected to be realized in the long run, when technological reforms are made in the structure of the productive sectors of the economy. This in turn can be translated to savings in cost of production and greater opportunities for employment and export.

Agriculture sector, particularly production of organic fruits and vegetables for which Iran is known to have the natural advantage in can play an important role in further development of the economy. Effective use of land and water resources which could be promoted by provision of technical and financial support to farmer can be essential in supplying food and raw material for domestic consumption and export markets, and as such it could play a significant role in the course of a balanced growth for the economy.

Considering the higher labor intensity of Small and Medium sized industries in primary sector, as well as in manufacturing, these activities should be given highest priority in employment creation programs. Provision of direct subsidies, as well as soft loans and

organizational supports to the firms in these sectors can also have a considerable effect on the overall stability of the economy and its balanced growth.

Urban and Rural Housing:

Since a rather great portion of expenditure in low income and middle income groups in urban communities are usually allocated to such expenses as food, housing, health and education, it seems utterly important for public policy makers to consider implementing policies directly focused on controlling inflation on these areas in particular. It seems that current policies recently being pursued in the housing sector, could to some extent yield rather favorable effects across the economy. Although the government subsidized housing projects are to a great extent outside major urban centers, but nonetheless considering the fact that millions of housing units are under construction in most provinces and regions, it seems this will have a considerable impact in the housing market by increasing the total supply and reducing the inflated prices enormously. Obviously expanding thus program to include all urban regions could be more effective in terms of its effect on urban employment, and supply of new housing units to the market.

In fact an extended period of stability in the housing market across the country during the last few years seems to have been largely dependent on a rather serious government planning in the area of housing construction. If this type of promotion is carried out in all the urban areas, there could be an end in sight to speculative dealings in the housing market, which for decades have played a significant role in pushing up the aggregate inflation figures of the country. A Provision of direct assistance to housing projects in the rural communities including the construction of new homes and improvements in existing units seems to be of paramount importance for development of the rural sector and bridging the gap between the urban and rural sector. This certainly could be supplemented by a broader range of economic policies, including tax incentive and soft credit bonuses for builders in major cities and urban areas, as well as rural regions across the country.

11. Summary and Conclusions

The conventional definition of inflation was examined in a formal analytical manner and it was argued that inflation in its commonly used form is an oversimplified index for prices which is not of any

significance in economic policy planning. It was indicated that the current neoclassical hypothesis on inflation tends to exclude the impact of changes in relative prices altogether. As such, it was argued that though, convenient an assumption for a simple monetarist approach to the analysis of inflation, it is of no significant explanatory role in a practical comprehensive study of economic fluctuation in reality.

Considering the importance of change in relative prices it was indicated that a more comprehensive index for inflation could be employed where the impact of relative price change and monetary inflation can be identified and recorded separately. It was also argued that while an oversimplified index in the form of current neo-classical definition of inflation is of little or no significant practical value for developing economies, the comprehensive analysis of this phenomenon could serve a better purpose by facilitating the distinction of distributive effects of aggregate price movements.

Considering the case of Iranian economy as a typical resource based developing economy with significant potential for growth and expansion, it was argued that there is a perpetual dynamism characterized by a young and highly motivated urban population, and substantial inflow of capital from resource export, which requires detailed studying of the economy and careful planning at the macro level. It was also indicated that the economy is subject to continuous expansionary movements as manifested by growing demand for consumer goods, durables, as well as capital goods in its various sectors. Such a dynamic economy would be reasonably expected to require and effectively accommodate a proportionate monetary expansion in order to meet the growing demands of its expanding markets.

However, in order to stabilize the economy, successfully implement the price reform program and help steer the economy towards its long term goals of steady growth, low unemployment and relatively stable prices, it seems advisable for the economic policy makers in Iran to go beyond the conventional policy of fiscal discipline and carefully regulated monetary and financial system. Although, these are basic requirements for any prudential economic planning, but conventional policy prescriptions of standard textbooks in no way seems to be sufficient for practical purposes. Economists in Iran as in any developing country, while observing the fundamental

rules of wisdom and rationality, need to courageously initiate policy plans appropriately custom made for the needs of their national economy.

Comprehensive reforms in tax, trade and investment regimes, as well as serious reforms in monetary and banking system and social security schemes have to be planned for and carried out to meet the requirements of a rapidly changing business environment. To this end responsible entrepreneurship should also be promoted and supported for Iran to be able to successfully meet the challenges of globally competitive markets.

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