



Institutional quality and inflation dynamics: A case study of Iran

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Abstract

This paper examines the contribution of institutions to the inflation of Iran with emphasis on the financial market development, Central bank independence and political institutions. Results from Generalized Method of Movements (GMM) suggest that political institutions, budget deficit and oil income affect inflation via direct and indirect mechanisms. The results indicate that budget deficit even neutralize the positive impact of financial market development and central bank independence on inflation. Our findings emphasis that institutions are important to analyze price stabilization policies and inflationary pressure of deficit and oil income in Iran, as the absence of institutional quality particularly stronger, where financial markets are not fully developed and central banks are not free to follow their goals and objectives.

Jel Classification: E31, E44, E50, H60, G20

Keywords: Institutional quality, Inflation Dynamism, Central bank independence, Financial market development, Oil Rent





Introduction

More recent studies about inflation and stabilization have shifted their attention away from traditional direct economic causes of inflation such as money creation towards political and institutional determinants of inflationary forces. This new literature, which has come to be known as the political economy approach to macroeconomic policy, has built on some important insights of game theory and the theory of public choice, trying to explain why some governments decide to run large fiscal deficits and to rely heavily on the inflation tax. Typically, in answering these questions this recent strand of the literature has emphasized the role of institutions, political instability, credibility, reputation, and political cycles (Banks and Hanushek, 1995).

A number of researchers have recently assumed that policymakers behave strategically, taking into account their own political and ideological objectives when making decisions regarding taxation, expenditure, and monetary expansion (Alesina and Tabellini 1988). This approach departs significantly from the traditional view that considers policy actions as either completely exogenous or as being undertaken by a "benevolent dictator" who tries to maximize the present value of society's well-being. In fact, the most important implication of this strategic approach is that policy becomes an endogenous variable that depends on the economic, political, and institutional features of the country.

This paper argues the effects of institutional factors, which determine stance of inflation. In line with Cukierman et al (1992), and Aisen and Veiga (2006), we anticipate that political and institutional factors directly and indirectly affect inflation dynamism. Moreover, central bank independence and system transparency play a vital role in stemming the negative effects of political instability on inflation. This hypothesis is consistent with the increase in operational and political autonomy of central banks observed in developing countries (Arnone et al. 2006). Greater central bank independence protects monetary policy from the influence of fiscal authorities which may be susceptible to lobbying and political pressures prevalent in politically unstable and socially polarized countries. Similarly, greater transparency reduces the scope for government intervention in the economy, discouraging rent-seeking behavior and lobbying, while promoting fiscal discipline.

The rest of the paper is organized as follow; First section provides literature review on the relationship between inflation and economic and institutional factors, section 2 provides empirical studies, methodology and estimation are described in section 3 and in the Last section summary and conclusion are presented.

Literature

Understanding the drivers of inflation has always been the center of interest to researchers, politicians and policymakers. Economic institutions, such as private property, rule of law, political stability and investment protection, play a vital role in promoting economic stability. Research shows that institutions are important determinant of economic activities (Alchin, 1965; Acemoglu et al, 2005). A ubiquitous number of studies in the 1990's have discovered a strong positive impact of institutional development on macroeconomic stability, such as growth and low level of inflation (Barro, 1991; Torstensson, 1994). Naturally, inflation has important implications for the society as it results in social and political complications of a serious nature (Salahodjaev and Chepel, 2014). Since the statement that "inflation is always and everywhere a monetary factor", cross-country



determinants of inflation have been subject to economic attention (Campillo and Miron, 1997). These include openness (Romer, 1993), institutions (Cukierman, 1992; Aisen and Veiga, 2006) and level of economic development (Campillo and Miron, 1997).

There are some stylized facts about inflation and relation of inflation and other macroeconomic variables (Paldam, 1994);

The acceleration of the price level, \dot{P}, is more stable than the inflation rate, p.
The standard deviation of inflation, $S(p)$, has a bend relation to average inflation $A(p)$.
Inflation is a process that contains high autocorrelation.
The price structure, R, has an equilibrium value, R_q, which is independent of the inflation rate. R becomes more volatile around R_q, as inflation rises.

Table 1. Stylized facts about inflation

Regarding fact 1 Inflation rates have a distribution that is much closer to being log-normal than normal. Once inflation takes off, it accelerates at a fairly constant pace till it is stopped. The constant acceleration property mean that drawings of $\log p$ looks like straight lines with kinks.

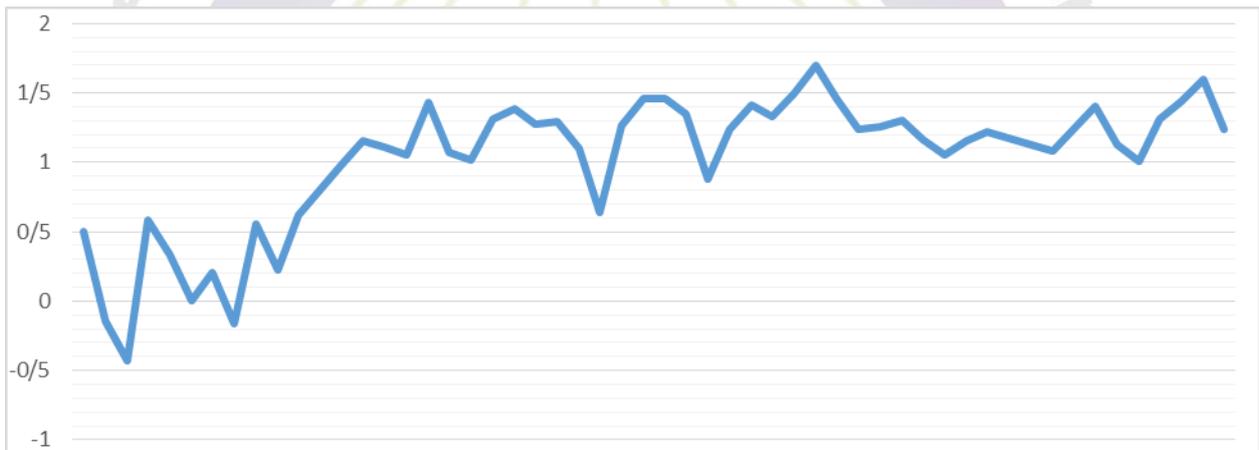


Fig (1). Log distribution of inflation of Iran (start from 1349 to 1392)

Figure 1 shows the log distribution of inflation of Iran, indicating the inflation acceleration remains constant at various level on inflation.

Fact 2 deals with the relation between the standard deviation of inflation, $S(p)$, and average inflation, $A(p)$. There is no example of a high inflation that has managed to have as low variability as the average one under low inflation. A country that wants to have a stable inflation must therefore go for a low one. It is often argued that the welfare losses generated by inflation are due to its variability, and not to its average. So one should not be much concerned about the average rate.

Fact 3 is equally well known. The annual inflation series of Iran contain an autocorrelation of $r(p, p_{-1}) \approx 0.6747$. It means Inflation is consequently a process with much inertia. This fact has three basic explanations:

- (i) The most popular explanation among theorists is surely that it is due to accumulation of inflationary expectations.
- (ii) Non-economists probably prefer explanations building upon institutional arrangements involving indexing of contracts.
- (iii) The inertia can be understood together with the fourth stylized fact, dealing with the price structure, R . In standard theory, there is only one equilibrium structure, R_q , which is the GE (general equilibrium). Here production and aggregate welfare is maximized (with all the usual caveats). So, once some prices go up, all other have to go up too. Some prices will surely overshoot keeping the process going.

It is worthy to point out several notes about wage-price structure. Consider two matrices of R , R_1 and R_2 with the elements of $r_{1,i,j}$ and $r_{2,i,j}$. Their distance Φ defined by;

$$\Phi^2(R_1, R_2) = \frac{[\sum(r_{1,i,j} - r_{2,i,j})^2]}{[(n^2 - n)/2]} \text{ for all } i, j \quad 1 \geq i \geq j \geq n. \quad (1)$$

The distance Φ between R and R_q , shall be termed the tension variable. There are tensions both at the goods market and at the labor market. Several additional arguments confirm, that Φ rises with p .

$$\Phi_p = \partial\Phi / \partial p > 0 \quad (2)$$

The tension variable has a further use. It is a measure of inefficiency. R_q is the most efficient R , Φ , therefore measures the distance between the actual R and the most efficient R .

$$y_\Phi = \partial y / \partial \Phi < 0; \quad \Phi > 0 \quad (3)$$

Combination of 2 and 3;

$$y_p = \partial y / \partial p = (\partial y / \partial \Phi)(\partial \Phi / \partial p) = y_\Phi \Phi_p < 0. \quad (4)$$

Relation (4) is first and more general relation between y and p (Sheshinski and Weiss, 1977). When we discuss the relation between inflation and related variables, we shall use the usual co-integration terminology. We shall define it as the minimum period allowing us to see that the said series are co-integrated (Paldam, 1994).

In addition there is some stylized fact about relation between inflation and other macroeconomic variables.

Table 2. Five stylized facts on the relation between inflation and other variables.

The longer run relation between average inflation, $A(p)$, and real growth, $A(y)$, is weak.
The price level, P, the money stock, M, and the real product, Y, are co-integrated if inflation are with a limited interval.
The real exchange rate, E, is trendless, so E, is $I(0)$, provided inflation rates are limited. The (P, E) relation is known as the PPP.
High inflation is often associated with public sector deficits, D. There is causality relationship between them.
The real rate of interest, i_r, is always highly volatile under high inflation.



The first fact deals with the relation between real growth, $A(y)$, and inflation $A(p)$. It assumes that causality goes from $A(p)$ to $A(y)$. It is clearly a weak connection in Iran's macroeconomics.

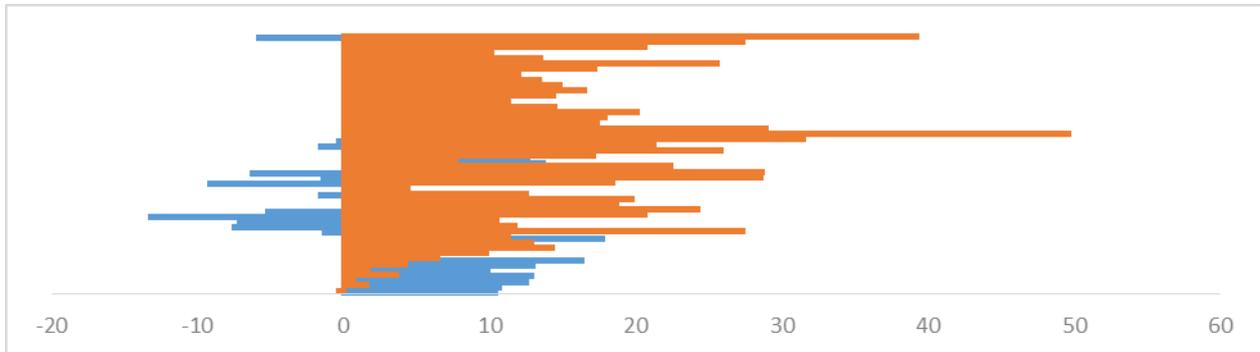


Fig (2). Real growth and inflation in Iran ($A(y)$ blue, $A(p)$ orange, 1345 to 1391)

According to figure 2 there is not a clear relationship between real growth and inflation. Although in some period inflation and growth have same direction but overallly robust connection cannot be seen here.

These relations between M , P , E discussed as the (M, P) relation and the (E, P) relation. While both relations have a complex lag structure for low inflation, they slim down under high inflation (Bernholz et al, 1985). Even under low inflation there exists overwhelming evidence that the two relations are strong, and that their causal structure is complex. There are many instances where rising prices cause the stock of money to rise and the exchange rate to rise (devalue). The nominal money stock, M , and the nominal exchange rate, E , are therefore often termed the two nominal anchors of the price level. The public sector budget is closely related to M and, more indirectly also to E . If the size of the deficit is kept within bounds, so is M and E , and subsequently inflation. We consequently have a couple of cures against inflation right away: Fix one or both of the anchors and inflation will stop. The E -anchor is obviously irrelevant in a closed economy. If the economy is sufficiently open, there is an argument that it makes no sense to try to fix the domestic stock of money. This has led to the idea of the two Anchors Monetarism. M is the main anchor in a closed economy, and E is the main anchor in an open economy (Paldam, 1994).

Despite theoretical macroeconomic argument about inflation, there are some structural issues especially in oil producing countries. Main theoretic framework in this regard is rentier state especially rentier social contract. A rentier social contract emerges as the creation of artificial employment opportunities and handouts become a means for the government to obtain support and, from this, legitimacy (Gray, 2011). Second order rents refer to situations in which business or trade professions can generate unearned income by law or social convention (Beblawi, 1987:389).

Inflationary pressure in rentier state theory same as the Dash disease concept which oil boom may lead to these outcomes (Frankel, 2012);

- A large real appreciation in the currency (taking the form of nominal currency appreciation if the country has a floating exchange rate or the form of money inflows and inflation if the country has a fixed exchange rate);





- An increase in spending (especially by the government, which increases spending in response to the increased availability of incomes);
- An increase in the price of non-traded goods (goods and services such as housing that are not internationally traded), relative to traded goods (manufactures and other internationally traded goods other than the export commodity),
- A resultant shift of labor and land out of export-commodity traded goods (pulled by the more attractive returns in the non-export commodity and in non-traded goods and services), and
- Sometimes a current account deficit (despite the enhanced revenue from commodity exports), thereby incurring international debt.

There are also compelling reasons for the analysis of oil price-inflation nexus. First, monetary policy authorities are concerned about ensuring price stability and therefore, they are constantly under pressure to understand and deal with macroeconomic shocks that may affect the actualization of their mandate. Thus, knowledge of the inflationary effects of oil price shocks and consequently oil revenue by relevant authorities will assist in the coordination of policies to accommodate these shocks when they arise. In addition, inflation is considered as a prominent measure of macroeconomic stability in an economy and foreign investors often reflect this factor among others when making investment decisions. Thus, it becomes imperative for both fiscal and monetary authorities of an economy to promote price stability in order to attract substantial investments (Salisu et al, 2017). In any case, as long as crude oil revenue for oil countries is considered a major income, discussions on the inflationary effects of oil price will remain prominent among policy makers.

Empirical studies

Several authors have reported a link between the degree of central bank independence and the level and the variability of inflation (Berger et al, 2001). There is also similar findings on the effects of specific elements within the monetary policy framework. These elements include the role of central bank transparency and accountability, the impact of inflation targeting regimes (Truman, 2003), the legal and political environment, the adoption of specific exchange rate regimes, the effects of joining a monetary union (Krause and Méndez, 2008).

Here are a few examples of the previous works done on the relationship between inflation and institutional and economic factors:

- Studies on central bank independence (CBI). The main differences across the studies rest on the methods used to measure CBI, the sample of countries and the periods considered. Even though there are some studies that question the robustness of the results (Posen, 1995), there appears to be general agreement that a higher level of CBI results in a lower level and variance of inflation (Cukierman, 1992; Eijffinger et al, 1996).
- Studies on the contracts between the government and the monetary policy authority. Some theoretical and empirical papers have examined the role of contracts between

the government and the central bank (in particular central bank transparency and





accountability) and its effect on inflation (Tallman, 2003). However, even though more transparent policies and a higher degree of central bank accountability are desirable qualities, neither the theory nor the evidence are conclusive as to whether these features actually contribute towards lowering inflation (Krause and Méndez, 2008).

- Studies on inflation targeting (IT). Attention has shifted to analyzing how countries can benefit from adopting an explicit inflation target regime. Bernanke and Mishkin (1997) argue that an IT framework makes price stability the main goal of policy, but not necessarily the only one, given that the central bank may make room for stabilizing output and, perhaps, exchange rates as well. Still, focusing on inflation does take precedence over other policy objectives. The empirical evidence shows that most IT experiences have been successful in reducing inflation (Bernanke et al., 1999).
- Aside from the national monetary authorities, there are other policy and institutional arrangements that can have an impact on inflation. These include policy measures such as using the exchange rate as an anchor, currency boards, joining a monetary union and employing fiscal policy. Other arrangements, which are not under the direct control of policy makers (at least not in the short run), include the depth of financial development and institutions (Posen, 1995), the legal environment (Cecchetti, 1999) and political stability (Aisen and Veiga, 2006).

A number of other studies focused on the impact of intuitional aspects like central bank independence, political stability on inflation (Cukierman, 1992; Aisen and Veiga, 2006). Using the system GMM estimator and data on economic, political and institutional variables from 1960 to 1999 for 160 economies (Aisen and Veiga, 2006) find that severe degrees of political instability and low level of democracy and institutional development contribute to volatility of inflation rates. Additionally, central bank independence decreases inflation volatility (Cukierman, 1992). Findings show existence of negative relation between central bank independence and inflation in Western countries. However, in former socialist economies central bank independence contributes to the reduction on inflation only above determined threshold of achieved level of liberalization. A feasible argument for that conclusion is that in command economy, the freedom is significantly limited; hence law abidance, including in particular Central Bank laws, is not as important. Gelos and Ustyugova (2012) provide assessment of the impact of international commodity price shocks on domestic inflation in 31 advanced and 61 emerging economies. According to their results better overall governance, central bank independence helps to anchor inflation expectations and reduce aftereffects of price shocks. However, a study by (Campillo and Miron, 1997) concludes that there is little evidence that institutional development (central bank independence) favors low inflation. Their results are in line with (Posen, 1995). He argues that in countries with high inflation rates financial sectors cannot resist current levels of inflation and central bank independence does not decrease inflation in the environment where banking system and financial companies have adapted to existing monetary environment. Hyperinflation impairs financial system and destroys financial intermediation (Salahodjaev and Chepel, 2014).

Methodology and Estimation

Most of developing countries relies on seigniorage for financing fiscal deficits. So in period of time, fraction of deficit is financed by mode of money creation, which is negatively linked with central bank independence and financial market development (Neyapti, 2003).



$$\Delta M_t = \mu(G_t - T_t + rB_{t-1}) = \mu Def_t \quad (5)$$

Here μ is a scale for financial system development and central bank independence. Lower value of μ indicates that higher degree of independence enjoyed by central bank, and financial sector is more developed. If μ takes value 0 it means that no money accommodation is done for deficits and central bank is fully independent and financial sector is fully developed so all financing is done by debt issuing. On other hand if μ is 1 then central bank independence and financial market development are at lowers values and all financing is done through money creation mode. Basic model for this study is established on the basis of Neyapti (2003) and Aisen and Veiga (2006);

$$inf_t = \alpha inf_{t-1} + X_t \beta + \varepsilon_t \quad (6)$$

Here inf is inflation level of country at time period t , α and β are the parameters to be estimated and X_t is a vector consists of all exogenous variables and ε_t is error term. Model can be extended as follow;

$$inf_t = \alpha_0 inf_{t-1} + \alpha_1 Deficit_t + \alpha_2 ExRate_t + \alpha_3 TOR_t + \alpha_4 FMD_t + \alpha_5 OilRent_t + \alpha_6 Transparency_t + \varepsilon_t \quad (7)$$

Which inf is CPI inflation rate, Deficit is fiscal deficit as percent of GDP, TOR is Turnover rate of central bank governors, ExRate is Real Exchange rate, FMD is Financial Market Development, Oil rent is a proxy of dependence on oil incomes and Transparency as additional proxy for institutional quality. To see how institutional variable affect inflation we use financial sector determinants and CBI as interactive terms with budget deficits. So we can write;

$$inf_t = \alpha_0 inf_{t-1} + \alpha_1 Deficit_t + \alpha_2 [\mu Deficit]_t + \alpha_3 OilRent_t + \alpha_4 Transparency_t + \varepsilon_t \quad (8)$$

Developing economies for finance their deficient have to borrow money through public. Thus they can either monetize or accumulate debt by paying interest. In developing economies at least some portion is assumed to be financed by monetization process. In oil countries like Iran oil revenue is a major source of deficit financing which is somehow associated with money creation. μ , in the model is representing that part of budget deficits that is financed through money creation for each period and μ here is negatively associated with the well-equipped institutional structure. Financial sector and central bank variables are used in "absence" form that is to see how less developed financial markets and dependent central bank will affect the inflationary pressure. Thus lack of financial sector development is introduced with the budget deficits as interaction term to see how less developed financial sector will affect deficits and then how inflation would finally be affected.

$$inf_t = \alpha_0 inf_{t-1} + \alpha_1 Deficit_t + \alpha_2 [FMD * Deficit]_t + \alpha_3 OilRent_t + \alpha_4 Transparency_t + \varepsilon_t \quad (9)$$

Similarly to see how dependent central bank will effect inflation, turnover rate of central bank governors is used as proxy for central bank independence and TOR applied as interaction term with deficits in Equation. Higher turnover rate shows that political interference is high and central bank is not independent in following its targets.

$$inf_t = \alpha_0 inf_{t-1} + \alpha_1 Deficit_t + \alpha_2 [TOR * Deficit]_t + \alpha_3 OilRent_t + \alpha_4 Transparency_t + \varepsilon_t \quad (10)$$

So final equation with central bank independence and financial sector development as interactive term with budget deficits is as follows;

$$inf_t = \alpha_0 inf_{t-1} + \alpha_1 Deficit_t + \alpha_2 [TOR * Deficit]_t + \alpha_3 [FMD * Deficit]_t + \alpha_4 OilRent_t + \alpha_5 Transparency_t + \varepsilon_t \quad (11)$$

Lag of dependent variable is included in the model to control for persistence in inflation and also to analyze impact of previous period inflation on current inflation level. Traditional OLS technique for estimation gives inconsistent and biased results due to dynamic specification (Greene, 2003:221). Instrumental variables are used to refine problem of endogeneity and to get efficient estimates. IVLS, 2SLS/3SLS and GMM are proposed techniques by literature for resolving problems of dynamic models. Therefore as endogeneity could emerge, due to feedback relation between variables, simultaneity biased, so in presence of endogeneity usual OLS technique fails and give biased and inconsistent estimates. In addition Lag dependent variable, inf_{t-1} , present as regressor in model, give rise to autocorrelation. To tackle all these problems two stage least square method can be applied but level variables used as instruments may raise the problem of weak instruments. So GMM method is more appropriate which not only uses exogenous variables but also use lag levels of endogenous variables as instruments. So now endogenous variables become predetermined variables and remain no more correlated with error term in above equation. To cope with second problem further lags of dependent variables are used. The lag dependent variables will be less or insignificantly correlated with error term as T increases.

Our empirical models are need unit root test, as non-stationary variables may produce spurious results. Results of Augmented Dickey-Fuller test are shown in Table (1) which shows that all variables have unit root at the level, but not in their first differences.

Table (1), unit root test

Variables	Augmented Dickey-Fuller	Test Critical Value (1%)	Test Critical Value (2%)
Inflation	-2.992066	-3.886751	-3.052169
Deficit	-1.848904	-3.857386	-3.040391
Real exchange rate	-1.765493	-3.857386	-3.040391
FMD	-1.203955	-3.857386	-3.040391
Oil rent	-2.529877	-3.857386	-3.040391
TOR	-1.326862	-3.857386	-3.040391
Transparency	-1.846985	-4.004425	-3.098896
D(inflation)	-3.801551	-3.609148	-3.081002
D(deficit)	-4.820438	-3.886751	-3.052169
D(Real exchange rate)	-3.195236	-3.052169	-2.666593
D(FMD)	-4.072377	-3.886751	-3.052169
D(Oilrent)	-5.074939	-3.886751	-3.052169
D(TOR)	-3.936653	-3.886751	-3.052169
D(Transparency)	-4.194515	-4.057910	-3.119910

The results from GMM estimation are shown in table 2. In model 1, we just consider economic factors affecting inflation, as it can be seen the lag of inflation and current deficit are positive and significant which means there is some inertia in the structure of inflation and deficit is one of the main causes of inflation. Also real exchange rate has a direct relation with inflation although the coefficient is not significant. The impact of these three factors on inflation still remain the same in model 2 which is extended by institutional factors along with oil rent. The findings reflect the fact that political factors have a key role on inflation, However TOR and transparency do not appear significant but still are negative while FMD show its negative and considerable impact on increasing inflation. The other factor, oil rent as it discussed in the literature has an intensifying effect on inflation. TOR is not significant in the model 1 so the main purpose of model 3 was estimating the impact of new factor TOR*deficit on inflation. The idea behind this factor is that when countries face large deficit, that might destroys the positive consequences of other factors like central bank independence. As in model 3 we witness that deficit neutralize the TOR effect on inflation. Another interpretation for this variable is that deficits have stronger positive impact on inflation when central bank is not independent from political pressure. When monetary policy is not independent, central bank adjusts deficits

In model 1 budget deficits coefficient 6.6 shows positive association of fiscal deficits with inflation. One possible reason could be that developing and emerging economies mostly dependent on seigniorage for financing fiscal deficits. The lag impact of inflation on current inflation level is significant with coefficient 0.21, this shows that inflation is dynamic phenomena and previous level of inflation do affect behavior of individuals in current period.

Table (2), GMM estimates: dependent variable (inflation rate)

Variables	Model 1	Model 2	Model 3
Inflation(-1)	0.2162** (0.036)	0.030*** (0.0891)	0.0143*** (0.0935)
B.deficit	6.6600*** (0.099)	5.2200*** (0.0739)	-
Real exchange rate	0.0027 (0.948)	0.0113 (0.715)	0.0064 (0.7349)
FMD	-	-1.1989* (0.011)	-0.7547** (0.0204)
Oil rent	-	0.2815** (0.054)	0.2977** (0.0471)
TOR	-	-0.2412 (0.595)	-2.1671 (0.6480)
Transparency	-	-0.0317 (0.913)	-0.0483 (0.3301)
Deficit*TOR	-	-	1.2500** (0.0488)
J-statistic	1.05403 (0.3045)	1.82459 (0.4016)	1.81067 (0.4044)

NOTES: All values in parenthesis denote t-stat. *, **, *** shows level of significant at 1, 5 and 10% respectively.

Exchange rate is also important in analyzing the dynamics of inflation. Inclusion of exchange rate is due to this fact which exchange rate fluctuations impact policies adopted by monetary authority (Mishkin, 2008). Results show that coefficient is positive but insignificant. Political and institutional factors plays important role in high deficits. Low transparency and high corruption rates further increases fret of economies. In column 2, oil rent, financial





system development, central bank independence and transparency are introduced to the model. TOR is political measure of central bank independence, it negative sign of coefficient shows that higher degree of central bank independence associated with lower inflation. Oil rent shows level of independence on oil income in Iran. Results show more dependence on oil income will associate with higher inflation. Also both level of financial institute development and transparency negatively correlated with inflation. It means higher degree of financial system development and more political and economic system transparency will help to reduce inflation.

In third model's estimation, central bank independence TOR is used as interactive term with budget deficits to estimate how central bank independence affect deficit and inflation. Coefficient of TOR*deficit is positive with value of 1.25 and it is statistically significant. This shows that when TOR is higher, deficits will be more inflationary. Higher coefficient of TOR shows that central bank is not enjoying independence in its real sense. As TOR is political measure of central bank independence, so it signifies that political pressure is greater and there is frequent dismissal of governors with change of government or during the tenure of new government. This shows that political agents are very much influential in business of central bank.

Summary and Conclusion

This paper examined the impact of some of the institutional factors on inflation in Iran during 1994 to 2014. Main finding is that institutions play a key role in reducing inflation as we find the increase in the quality of institutional variables, including the ratio of domestic credit to private sector to GDP, central bank independence and transparency, have significant and sizeable effect on inflation. It is shown that developing financial markets is an important determinant of anti-inflation policy. According to the impact of oil revenue factor on inflation, the management seems to have a major role on stabilizing inflation. Also results showed that deficits are more strongly affect inflation when institutions are not well established and not strong enough. When financial markets are fragile, there is no other option for government to finance its deficits so they find printing of money or spending oil income as an easy option. The findings reveal that independence of central bank is very important once studying the relationship between deficits and inflation. When central bank is not free from political pressure then it has minimal say in refusing government to monetization. Besides always regarding money supply as main culprit, there is need to have deep analysis of institutions to see how they play role in aggravating of institutions on inflationary process. This study concludes that institutions are worthy to consider in explaining deficits, oil income spending and inflation relationship.





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