BUSINESS-POLITICAL CYCLES IN IRAN

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Abstract- According to the public opinions in most countries, the incumbent officials attempt to increase their chance for re-election by mobility, dynamism and flourishing the economy before the elections. This viewpoint in political terminology is called Business-political cycle. In accordance with this theory, the existence of political cycles in the economy may bring with itself Business-political cycles in the country. The present paper tries to test the hypothesis of Business-political cycles in Iran with respect to the terminology of political economy and with the use of successive data for the period 1981 - 2013. The results indicate that there is not a long-run political budget cycle in Iran's economy, and Business-political cycles have no effect on budget deficit in the long-run.

Keywords- Business-political cycles, business cycles, Auto-regression distributed Lag

I. INTRODUCTION

The concept of Business-political cycles means that politicians and parties who have power and authority and want to be incumbent in the next elections, represent some economic behaviors with the hope that the constituents would be impressed and re-elect them. Therefore, repetition of these policies in the period of election time, will result in creating cycles in some economic variables.

Annual budget is an important variable in macroeconomics. To achieve the objectives of economic stability, which results equilibrium in macroeconomics, the government should focus it's attention on the allocation of optimal budget. In developing countries, lack of investment in private sector, and also shortage of total supply contribute to the use of budget deficit policy. This policy should be coordinated with total supply, otherwise, not only it doesn't solve the recession, but also it can cause much inflation, and has unfavorable effects on the variables of macroeconomics. Whereas it seems that in election years, the governments, without paying attention to the coordination in total supply, make use of expansionary policies. With respect to this matter that after victory in Islamic Revolution, so many presidential elections have been done, therefore, the major issue which has induced the researchers to this matter is that whether there has been the phenomenon of Business-political cycles during the three decades, and whether these cycles have been so effective in budget deficit? On this basis, the purpose of this research is to survey the effects of Business-political periods on budget deficit in Iran's economy.

II. REVIEW OF RELATED LITERATURE

Among the most important studies done in this field, we can mention the research by chang, et al,(2012). They have tried to survey this matter that whether the political parties are reinforcing Business-political cycles. In this research, they have tried to survey various effective factors on Business-political cycles in industrial countries over 25 years. These researchers focused their attention on 14 developed countries, which have similar economic policies, to use a comprehensive model as the major external factors. The results indicate that the economic policies and political environment have had influential effects on Business-political cycles in each of the studied countries. There has also been a significant relationship among the outcome of each countries.

Drazen and Slava(2003) have indicated, that in Colombian economy, during election years, current expenditures and government assets have been changed in favor of current expenditures and also the political cycles have created political budget cycles.

Pearson and Tobellini (2002) have concluded that, in a sample of 60 democracies and during the period of 1960-98, in some developing and developed countries, there is a significant relationship between election years and government budget deficit.

Shi and Sevenson (2002) indicated that, in 91 developing and developed countries, in election year, the government budget surplus falls significantly.

Bonomo and Terra (2001) tried to investigate the election cycles by focusing on exchange rate and price of exchangeable and non-exchangeable goods in some countries of Latin America. They observed that, before elections, there is a value added in real exchange rate, and after elections, they consequently expect to see some decline in real exchange rate.

Grier and Trill (2000) surveyed the election cycles phenomenon by emphasizing on exchange rate in Mexico and America. This phenomenon has been supported in the case of Mexico, but rejected in the case of America.

Among studies done in Iran, we can refer to Asgharpur and Nasrollahi (2005). They surveyed the election cycles phenomenon by focusing on variables such as government's budget deficit. They observed

that budget deficit increases meaningfully before election years.

Mazini (2006) in a research called "investigating the election cycles phenomenon in Iran's economy ", by emphasizing on exchange rate, which is one of the most important variables in this field, concluded that this theory is not supported.

III. METHODOLOGY

The use of traditional statistic methods in empirical studies is based upon the consistency of variables in economy. Studies show that this hypothesis is not so practical in successive data of macroeconomics, since most of these variables are inconsistent. Therefore, according to the hypothesis of co-integration in econometrics, it is essential to make sure of consistency of variables. This study has been used Augmented Dickey- Fouler statistic in order to investigate the consistency and inconsistency of variables. Methods of auto-regression distributed lag, error correction, dynamics of long-term and short-term relationship are employed to gain our aim.

Auto-regression distributed lag (ARDL) has been developed on the basis of dynamic approach, and it's formula for two variables is as following:

$$Y_t = \alpha_0 + \sum_{j=1}^{p} \alpha_j Y_{t-j} + \sum_{i=0}^{\alpha} \beta_i X_{t-i} + V_t \qquad (1)$$

In this equation, dependent variable is a function of level variables, and we rewrite this formula as following:

$$A(L)Y_t = B(L)x_t + u_t \qquad (2)$$

In the equation (2), L, i.e. the distributed lag, is as following:

$$1-\alpha_1 L - \alpha_2 L^2 - \alpha_3 L^3 - \cdots - \alpha_p L^P$$

And distributed lag B (L) is as following:

$$B_0 + B_1 L + B_2 L^2 + \cdots B_q L^q$$

One of the characteristics of auto-regression distributed lag is that not only it represents the estimated amounts of the variables, but also it examines the existence of co-integration between variables.

To incline this dynamic pattern (2) toward long-term equilibrium, the sum of (i=1,…, p) must be less than one. The testing method is as following:

We must obtain the statistics of (t) through the equation, then compare it with critical values provided by Banerji, Douladu and mester.

$$t=\frac{\widehat{\alpha_1}-1}{s\widehat{\alpha_1}} \qquad (3)$$

If the statistics of (t), obtained from equation (3), be more than critical value of Banerjee, Douladu & Meter, there is a long-term equilibrium relationship in the estimated regression. Otherwise, these variables are not co-integrated. While there is a co- integrated relationship between variables, we can survey the dynamics of short-term and it's inclination toward equilibrium.

In 1996, Pesaran & Shin, in their studies, showed that, by the ECM coefficient, they can determine the existence of long-term relationship among Model's variables. Thus, if ecm(1) coefficient, in the estimation model, be between zero and (-1), and statistically meaningful, there is a long-term relationship among the variables of the model.

To estimate this pattern, at first, we must estimate this relationship, on the basis of various lags, for all possible combinations, by the use of ordinary least squares (OLS). Maximum number of lags are determined by the researchers on the basis of the number of observations.

Then, in the next stage, one regression,out of estimated regressions, is selected on the basis of four criteria of Akaeek, Schwartz-Bayesian, Hannan-Quinn, Augmented R-Squared.

IV. EMPIRICAL STUDY

Testing the business-political cycles has been explained by the use of estimating auto-regression estimated lag method and of time series data in Iran's economy during the period of (1981-2013). According to the statements mentioned above, the basic model of research is as following:

$$SBDGP=C_1 + C_2\ INFLATION + C_3 GDP + G_4 DU$$

In the aforementioned model, SBDGP, Inflation and GDP represent "portion of Budget Deficit in gross product", "Inflation Rate" and "Gross Domestic Product", respectively, and DU stands for "Domestic Violence "in the presidential election year.

Before examining co- integration between variables, it is essential to survey data in order to select type of test for consistency of time series variables. For this purpose, the two methods of "Augmented Dickey-Fuller" (ADF) and Philips-Pron (PP), as the most common methods of testing the consistency of the time series variables, are used. In the present research, and on the basis of the " Augmented Dickey Fuller " Method, the results of the consistency testing indicate that the variables of " Inflation rate " and " portion of budget deficit " in Gross Domestic Product are consistent, while the variable of Gross Domestic Product is inconsistent.

Table 1: Consistency Testing on the basis of Augmented Dickey-Fuller

variable	Statistics of ADF Testing	Critical Amounts of Dickey-Fuller(95%)
INFLATION	-3.39	-2.9665
SBDGP	-4.92	-2.9665
GDP	2.40	-2.9665

Source: Research findings

Now, by selecting the maximum lag 2 and due to the annual data and on the basis of schwartz-Bayesian criterion and by the use of Microfit5.0 Software, we can estimate ARDL model for determining error correction term and short-run and long-run relationships among the model variables.

Table (2) indicates that the effects of inflation rate on budget deficit is meaningless, but the effect of Gross Domestic Product is so significant. It can also be seen that the value of 't ' (-1.88) is not meaningful. In other words, there is no short-term political budget

cycle in Iran, and Business-political periods have no effect on budget deficit.

Table(2):Short-run estimation coefficients of the model by the use of ARDL Approach

variable	coefficient	Criterion variance	Statistics of t
SBDGP(-1)	0.85409	0.95377	5.5542
INFLATION	-0.076741	0.05793	-1.6271
GDP	-0.1965E-4	0.5120E-5	-2.8744
GDP(-1)	0.3688E-4	0.6859E-5	4.43161
GDP(-2)	0.1472E-4	0.6054E-5	-3.4322
DU	-1.8059	1.040	-1.88
C	1.09790	0.028624	3.4205
R-squared= 0.70333, R-Squared=0.64939 Serial correlation=0.00016611 Functional Form=0.0004268(0.984) Normality=0.89859 Heteroscedasticity =3.2600(0.071)			

Source: Research findings

Table (3) indicates long-run estimated coefficients by Auto-regressive distributed Lag Method. Results indicate that, at the confidence level of 95%, 'Domestic Violence' of election year is not meaningful. That's, there is not a long-term political budget cycle in Iran and business-political periods have no effect on budget deficit in long-run.

Table (3) Long-run estimated coefficients of the model by the use of ARDL Approach

variable	coefficient	Criterion variance	Statistics of t
INF	-0.32821	-0.16731	-1.2893
GDP	-0.3382E-5	0.3136E-5	1.1121
DU	-3.9806	2.9115	-0.87541
C	7.1496	2.8978	2.1520

Source: Research findings

Then, we estimate Error correction Model (ECM). Whatever is of far greater importance in this model, is coefficient of ecm(-1) which represents speed of adjustment in disequilibrium process. As you see from table (4), the estimated coefficient (ecm-1) is -0.51, it means that in each period, approximately, 0.51 of short-term disequilibrium is adjusted to achieve long-term equilibrium. Of course, due to the meaningfulness of GDP, this matter is related to Gross domestic product.

Table (4) The results obtained from estimation of Error Correction Model (ECM)

variable	coefficient	Criterion variance	Statistics of t
dINF	-0.076741	0.05793	5.5542
dGDP	-0.1965E-4	0.5120E-5	-1.6271
dGDP(1)	0.1472E-4	0.6054E-5	-3.4322
dVD	-1.8059	1.0430	-1.88
dC	1.09790	0.078624	164205
ecm(-1)	-0.51778	0.17942	-4.0001
R-squared=0.62125		R-Bar-squared=0.55238	
Dw-statistic=1.9530		F-stat=10.825(0.000)	

Source: Research findings

CONCLUSION

According to the information included in the literature of Business-Political cycles and also with respect to Iran's statistics and information, and auto-regression distributed lag method, it has been tried to analyze the business-political cycles in Iran's history. In brief, the results of the research indicate that in relation to the phenomenon of budget deficit there was no indication of business- political cycles. The main reason of this ineffectiveness is that economic condition's of Iran during the period of 1981-2013 was in such a way that, variables as war, economic sanctions, and oil shocks had so much effects over business-political cycles on budget deficit, or at the election time, the governing political atmosphere in the country was in such a way that economic issues were not so important from the viewpoint of candidates and constituents.

REFERENCES

[1]. Backus.D, and Crucini.M. "Oil Prices and the Terms of Trade".Journal of International Economics. No.50,(2000).

[2]. Correia,I.J.Neves and S.Rebelo. " Business Cycle in a Small Open Economy".,Europian Economic Review,No.39(1995):1089-1133

[3]. Mendoza,E. "The Terms of Trade, the Real Exchange Rate, and Economic Fluctuations", International Economic Review,Vol.39,No.1,(1995):101-137.

[4]. Rand,J. and Finn Tarp. "Business Cycles in Developing Countries: Are they Different? "., World Development, Vol. 30,No.12,(2002): 2071-2088

[5]. Hicks,J.R.(1950), A Contribution to the Theory of Trade Cycle, Oxford: Clarendan.

[6]. Hoffmaister, Alexander W. and Jorge E.Roldos(1997), "Are Business Cycles Different in Asia and Latin Americal",IMF,W.P/97/9.

[7]. Leung,H.M.(2003), "External Debt and Worsening Business Cycles in Less Developed Countries", Journal of Economic Studies,Vol.30,No.2.

[8]. Lucas,R.e.Jr(1977), Understanding Business Cycle, Amsterdam: North Holland.

[9]. Kose,A.(2002). "Explaining Business Cycles in Small open Economies: How Much Do World Prices Matter? ", Journal of International Economics 56:299-327

[10]. Mehrgan.N,Ezzati.M(2005)," Estimating the effect of economic variables on people's participation in Iran's elections ",A set of symposium papers about economy and elections, Economy Research Institute of TarbiatModarresUniversity,PP.Izo-132.

[11]. Mazini,A.H.(2006),"Surveying the phenomenon of election periods in Iran's economy: A case study of currency rate", Business Research, Tenth year, No.39,PP.215-236.

[12]. Asgharpur,H.,Nasrollahi,M.(2006)," Elections and business-polilical cycles in Iran's economy ",A set of symposium papers about economy and elections, Economy Research Institute of Tarbiat Modarres University,PP.103-119.

[13]. Ahmadi,A.M.,(2005), "Financial Policies of the government ", elections, preferentially people, a set of symposium papers about economy and elections, Economy's Research Institute of Tarbiat Modarres University,PP.73-89.

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