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Research Paper

Investigating the Impact of National Currency Value Shocks on the Inflation Structure and Unemployment of the New Keynesian Model Using a Dynamically Computable General Equilibrium Approach

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ABSTRACT

The primary impact of shocks is to instigate uncertainty in economic variables. These unforeseeable fluctuations exert influence on all economic decisions made by both the government and the private sector. Additionally, the formation of people's expectations further contributes to the dynamic effects of these shocks on economic variables. Inflation is characterized by a general, disproportionate, and often irreversible surge in prices. This study aims to investigate the dynamics of inflation and unemployment within the framework of the new Keynesian model, utilizing a dynamic general equilibrium approach. Furthermore, the study employs dynamic Computable General Equilibrium (CGE) models to examine long-term relationships that pertain to the decision-making processes of economic entities such as households and investors. The data was analyzed utilizing the proposed practical models. The findings reveal that a currency shock leads to an overall increase in inflation across the country. Notably, the more substantial the currency shock, the more pronounced the subsequent inflationary surge. However, it is important to note that a currency shock temporarily reduces unemployment.

1 Introduction

Iran's economy has been suffering from inflation in recent decades. The high unemployment rate due to the recession has also cast a shadow over Iran's economy. Many researchers consider the dependence of the Iranian economy on the sale of natural resources as the main cause of these problems. While the major share of the country's economic activities is in the hands of the public sector of the economy, currency shocks are considered in the government budget every year. Predicting economic variables has always been one of the most important goals of economic actors, especially macro-stakeholders for policy-making [1]. The exchange rate is one of the key variables in any economic system, and in countries such as Iran, where the bulk of government revenue comes from foreign exchange earnings from oil exports, the exchange rate is much more important. The exchange rate is an important key variable and includes the effects of developments and external relations on domestic economic variables and its impact on these variables is of

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particular importance. Therefore, forecasting the exchange rate in the foreign exchange policy process is very sensitive. Proper implementation of foreign exchange policy and purposeful use of its tools requires identifying the main factors affecting the real exchange rate. Any unexpected phenomenon that has an unpredictable impact on economic variables is considered a shock.

In their classification, we can refer to environmental, external, and internal shocks or supply and demand shocks. Economic instability occurs with the occurrence of various economic shocks and in fact, means the disruption of economic activities [3]. On the other hand, the Phillips curve shows the relationship between inflation and unemployment. This curve indicates that high employment rates are inversely related to high inflation rates. In other words, this relationship is based on the idea that there is a base value for the unemployment rate in which the base value, the inflation rate, tends to be stable. Inflation increases when the unemployment rate is lower than the base rate, and inflation decreases when the unemployment rate is higher than that. The base unemployment rate is called Nairo. Adaptive expectations are one of the most important approaches to the issue of expectations. These types of expectations are defined in terms of "error correction" topics over time. Based on this, individuals will use the past information of a variable to decide its future status in a defined model. Adaptive expectations were first proposed by Cagan [12]. The proposed model was derived from first-order differential linear models. Perhaps the introduction of this method for testing and simple theorem was by conventional econometric methods. In this way, economic entities learn from their past experience in shaping expectations, to become closer to reality over time.

Rational expectations were first proposed by Mouth [18] using all available information and using an optimization method based on the microeconomic framework and after ten years were defined by Lucas and Sargent in macroeconomic models. One of the models that can examine the effect of exchange rate shocks (national currency value) on inflation and unemployment is the general equilibrium model. With the integration of the global economy, the demand for quantitative analysis of the types of shocks worldwide is increasing day by day. General equilibrium models have been widely used as models of policy analysis since the late 1970s. These models, which are very flexible, have a great ability to cover various economic topics, taking into account Walras's law in the markets. The use of these models is seen in a wide range of policy issues such as the choice of development strategies, income distribution, trade policies, structural adjustments, external shocks, tax policies, and long-term growth in developed and developing countries. The main advantage of general equilibrium models over econometric models is that they are not dependent on time series. In addition, a robust micro-framework of general equilibrium models that fully embraces the optimizing behavior of economic agents. Describes, it allows these models to have a stronger analytical basis and, therefore, is preferred over measurement models and data-output models. In general, in equilibrium models, it is considered that the occurrence of an exogenous change (for example, the implementation of a particular policy by changing other variables such as global markets) and thus one of the economic sectors of the whole system can be affected. Studying the results of these changes and their effects on an entire economic system and its various variables is something that is done in the form of solving general equilibrium models.

Given the issues raised and also considering the new approach that exists in the model of inflation and unemployment of new Keynesians, the researcher in this study seeks to answer the question that the impulses of the national currency on the structure of inflation and unemployment of the new Keynesian model What is the effect of a dynamic computable general equilibrium approach? Depending on the research topic, the researcher has evaluated several related internal and external articles. Svensson and Woodford [20] discuss in detail the effects of economic policy implementation on targeting projected inflation, and conclude that instead of predicting short-term and long-term inflation, they create a system

that warns of large inflation deviations. It is more useful. They have also acknowledged that it is important to identify the causes of these major deviations. Mitra [15] also used statistical data of various economic indicators of India, among the various variables affecting inflation, by combining genetic algorithms and time of neural networks, after identifying the most important variables with appropriate time intervals, has designed an inflation warning system for the Indian economy. The obtained results show the proper performance of the system so that in all cases the system has issued the correct signal. In this regard, Rousta et al. [2] in a study entitled The study of the effect of indirect taxes on income distribution, in the framework of the DCGE model, stated: This model is known today as one of the best tools for studying shocks and economic policies. In this study, in order to investigate the mentioned issue, three general scenarios 1- Imposition of import tax; 2- Import exemption from tax; 3. Subsidy payments to imports have been simulated and the effect of these policies on personal distribution and functional income distribution has been calculated. The results show that indirect taxes change the redistribution of income to the detriment of urban households and also improve the distribution of income. Subsidizing imports also alter income redistribution to the detriment of rural households and increases inequality.

The scenarios applied in relation to the functional distribution of income also show that, firstly, the scenarios of tariffs and tax exemptions for imports reduce capital income more than labor income, and secondly, subsidies reduce labor income and increase capital income. Using micro-data, especially prices of goods and services, the researchers showed evidence of price stickiness. In one of the first studies in this field, Taylor [21] concluded in his study that there is sufficient evidence of price inflexibility with an average adjustment frequency of about one year. This study provides evidence for price stickiness in the new Keynesian patterns. Studies by Bils and Klenow [10] based on studies of the frequency of price changes for the 350 commodities in the US Consumer Price Index show that the average price adjustment time is 4 to 6 months. However, a study by Nakamura [19] for the United States and the use of commodity data in the CPI showed that this time was 8 to 11 months, regardless of changes in selling prices. In this context, some studies have examined how an exogenous monetary shock affects macroeconomic variables. However, in the event of an exogenous shock, its long-term effect on prices and wages is adjusted and the economy returns to its natural equilibrium. Next, some economists have studied the effect and importance of the role of money in economic fluctuations, and the results of their work confirm the importance and impact of money on economic fluctuations [13]. The main assumptions and components, the new Keynesian models mentioned, were developed in the 1970s and 1980s simultaneously with the RBC models. But most of the new Keynesian models used in those years were static models or included dynamic equations that were not derived from the abbreviated form of equilibrium conditions and from an optimization process. The emphasis of the above models, instead of introducing and considering the basics of microeconomics, was on introducing discussions about stickiness and finally showing that money is not neutral.

2 Presented Research

Computable general equilibrium models are generally based on Valrasy's general equilibrium theory. Given the complex nonlinear constraints of economic systems, mathematical and computational analysis in computable general equilibrium models helps the researcher to understand the key features of the system. In addition, the numerical and computational analysis makes it possible to examine the effects of exogenous shocks and policy [1-12]. In fact, the purpose of this section of the modeling literature is to transform the structure of Valerian's general equilibrium from a single expression and image of economics to a real model in economics. Dynamic CGE models examine how different policies affect prices, output in different sectors, and economic well-being. In general, dynamic CGE models consist of a set of intermittent or

dynamic equations and a set of one-period or static equations. One-period equations form a static CGE model that shows the state of the economy in each period [13-17]. The dynamic part of the model is a set of time equations that show the decisions of economic agents over time. In dynamic CGE models, the dynamic part is optimized compared to the static model and the time path of control variables is obtained. Dynamic CGE models model long-term relationships related to the decisions of economic institutions such as households and investors. Entering the inter-time preferences of households and the inter-time decision-making of firms in relation to investment makes it possible to obtain the optimal time path of decision-making variables [18-22]. Therefore, dynamic CGE models can be used to obtain the long-term growth path of the economy, especially the time path of consumption and optimal savings of the whole economy in the long run. The structure and framework of an interim temporal CGE model can be shown as Equation 1:

$$\begin{aligned} &F\ 1t\ (Zt) = 0 \\ &. \\ &. \\ &F\ ht\ (Zt) = 0 \\ &F\ h+1t\ (Z0+ Z1+\ldots+Zt+1) = 0 \\ &. \\ &. \\ &F\ h+m\ (Z0+ Z1+\ldots+Zt+1) = 0 \end{aligned} \tag{1}$$

Where F 1t and F ht are the number h + m of the derivative function h The first equation represents the time equations in different time periods that relate the variables over time. One of the important issues in dynamic CGE modeling is the assumption of economic actors' expectations and intermediate decision mechanisms. Dynamics may be based on the assumption of static expectations or the assumption of fully predictable economic actors. In this study, the statistical population is the Iranian Economic Research and sampling has not been done. Due to limited access to information and figures, a period of 30 years (from 1988 to 2018) has been used in this study, which includes year to year. The present study is applied research. The collection of research information is in the form of a library. After compiling the research literature by taking notes, the researcher went to the library of the Central Bank of the Islamic Republic of Iran and collected the required research data. Then, with the help of proposed practical models, the data were analyzed. The following variables were used to examine inflation and unemployment in each structural period:

A) Consumer price index in the tradable sector of the Iranian economy: The food, beverage, and tobacco subgroup was selected as the representative of the tradable sector of the Iranian economy. D- Consumer price index in the non-tradable sector of Iran's economy: The housing subgroup was considered a representative of the non-tradable sector of the economy. E-Money: The initial definition of money and the broad definition of money were selected as the representative of the money supply in the Iranian economy in two parts of the research (price and income approach), respectively. In this research, the Phillips curve model is used:

$$W_t = a + bU_t \tag{2}$$

In this equation, Wt is the percentage of wage change rate and Ut is the percentage of the unemployed labor force. The relationship is expected to be completely nonlinear. The inflation spiral has also been used. The inflation spiral is usually thought of as a two-equation model that explains one wage rate change equation

and the other price change rate equation. The main shape of the helix is that the rate of change in wages is explained by the rate of change in prices and some other factors, and similarly, the change in prices is determined by the rate of change in wages and some other variables. The two equations are best expressed in Dix-Mirks work, which is in the form of relation (3):

$$Wt=\alpha 1+\alpha 2Pt-i+\alpha 3Dt-j+\alpha 4Qt+e1t \; ; \; Pt=\beta 1+\beta 2Wt-k+\beta 3Mt-1+\beta 4Qt+e2t \quad (3)$$

Where W is the percentage change in wages, P is the percentage change in prices, D is the index of labor pressure-demand, Q is the percentage change in per capita output, and M is the import price. The presence of k, j and i indicates the existence of two breaks in the relationship, $e1$ and $e2$ are disturbing sentences. On the other hand, in this research, all equations are expressed in the form of four blocks commodity prices and production, institutions, and constraints.

2.1 Block Prices

Price equations are considered a key component of the CGE model. Fig. 1 shows how producer prices change and convert to the price of the final product. To produce a unit of goods, several activities are performed. So to get the price of a unit of goods (PX) we have to combine the prices of different activities. Goods are either supplied or exported at PX prices. The price of composite goods is also obtained from the interaction of domestic demand prices and import prices. In this study, we assume that the domestic economy is a small part of the global economy and the domestic market price does not affect the global price. Hence, the domestic economy acts only as a recipient of world market prices in terms of imports and exports. Therefore, export (PE) and import (PM) prices are assumed to be exogenous.

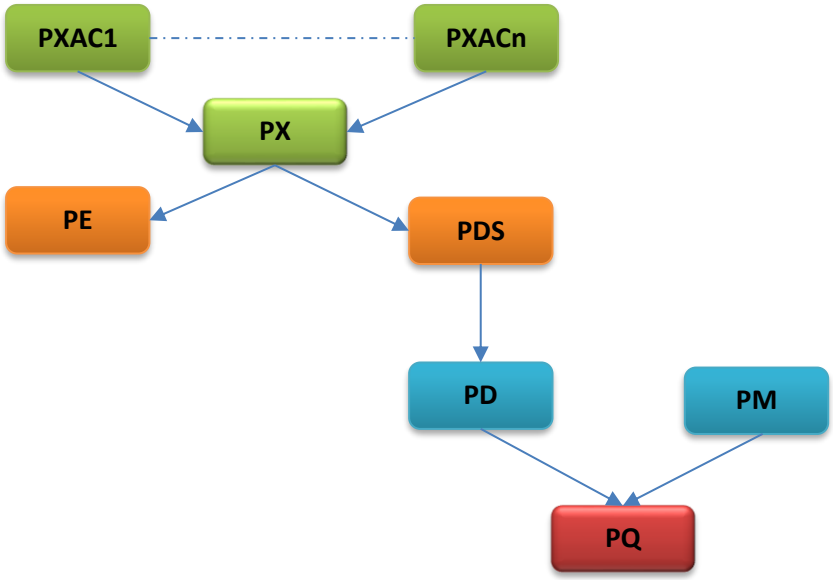

Fig. 1: Relationships and the Evolution of Prices

Therefore, according to the exchange rate (EXR), the world export price (pwe), the world import price (pwmc), and the import goods tariff rate (FC) the prices of imported and exported goods in terms of domestic currency are:

$$PM_c = pwm_c.(1+tm_c).EXR$$
$$PE_c = pwe_c.EXR \quad (4)$$

By shifting the focus of the debate from supply to demand and consumption and taking into account transaction costs, the domestic market demand price (PD) is obtained. Also, from the combination of domestic prices and import prices, the price of composite goods (PQ) is obtained and finally, the sales tax is added to the price of composite goods to obtain the final market price [5].

2.2 Production Block

In this research, the production function is a two-step function. Generate a function with constant coefficients of value-added and intermediate inputs. If we show the total output with QA and the total intermediate costs with QINTA and the value-added with QVA, we have:

$$QINTA_a = \text{int}\, a_a \cdot QA_a \quad (5)$$

Where QA a QINTA activity field output. a is the intermediary cost of the field of activity a and int a is the intermediary cost per unit of output. For added value, we also consider the following production function:

$$QVA = iva.QA \quad (6)$$

That iva is value-added per unit of total output.

2.3 Block of Economic Institutions

Institutions in this model include households (urban and rural), companies, government, and the outside world. Household income consists of the supply of factors of production directly (supply of labor) and indirectly (supply of capital) and transfers from other institutions. Transfers from the outside sector to households are made in foreign currency. In fact, all transfers are from the external sector to domestic institutions and production factors are in foreign currency. Households spend their income on direct taxes, savings, consumption, and transfers to other institutions. The amount of direct taxes and the savings ratio depend on the choice of contexts that we consider for the government balance and the investment savings balance. The amount of income that remains after deducting the savings tax and transferring it to other institutions is consumed. Household consumption includes two types of goods.

- Goods offered in the market (market goods)
- Goods produced by households themselves (household goods)

The price paid for market goods includes sales tax and shipping costs, while the price of household goods is the same as the production price of goods.

2.4 System Constraints Block

In this section, there are restrictions in the Iranian economic system. These equations are outside the decisions of economic agents but are needed to maintain equilibrium in the economy. The following equation shows the equilibrium condition in the market of production factors. According to this equation, the economic equilibrium in the market of production factors is established by the equality of the total demand for production factors with the total supply of QFS production factors.

$$\sum_{a} QF_{fa} = QFS_{f} \tag{7}$$

Also, in order to balance the commodity market, the supply and demand of composite goods are equalized based on the following equation.

$$QQ_{c} = \sum_{a} QINT_{ca} + \sum_{h} QH_{ch} + qg_{c} + QINV_{c} \tag{8}$$

In the above equation, QQ is the supply of composite goods, and qge, OH ch, Z QINT a and QIN are, respectively, intermediate demand, household demand, government demand in the base year, and investment demand for composite goods.

3 Analysis of the Results

The following table summarizes the results of the generalized Dickey-Fuller and Phillips Prone stationarity test for the research variables:

Table 1: General Dickey-Fuller Stationarity Test Result

Variable	Statistics at the level	Statistics in difference	Result
Currency shock	0.57(0.71)	-4.73(0.000)	I(1)
Unemployment	0.38(0.65)	-6.69(0.000)	I(1)
Inflation throughout the country	1.11(0.86)	-3.31(0.000)	I(1)

Table 2: Phillips Peron's Stationarity Test Result

Variable	Statistics at the level	Statistics in difference	Result
Currency shock	2.44(0.99)	-9.97(0.000)	I(1)
Unemployment	0.005(0.50)	-6.31(0.000)	I(1)
Inflation throughout the country	5.14(1.000)	-5.45(0.000)	I(1)

The numbers in parentheses are significant levels

The null hypothesis in the generalized Dickey-Fuller test is based on the non-significance of the studied variables and the hypotheses can be written as follows

H0: The variable under consideration is not stationarity.

H1: The variable under consideration is stationarity.

To reject the null hypothesis, a significance level of less than 0.05 is sufficient, as shown in the table above. Due to the anonymity of the variables at the level, the co-integration test is summarized in the following table. Due to the fact that the study used the generalized Dickey-Fuller's stationarity test and Philips Prone, the generalized Dickey-Fuller and Phillips Prone statistics were used to detect co-accumulation in the Paterno test.

Table 3: Parasite-Granger Coagulation Test (Pedrony)

Statistic	Obtained value	Significant level	Result
generalized Dickey-Fuller	-3.97	0.000	Confirmation of accumulation
Philips Prone	-6.71	0.000	Confirmation of accumulation

The table above shows that with both generalized Dickey-Fuller and Phillips Prone indices, aggregation is confirmed, and of course, the use of the Phillips Prone test is much more appropriate in developing countries such as Iran due to external shocks to variables. Is. The results of the table above also show the accumulation of the studied variables, so the estimation can be done at the level. Regression model fitting: First, the Chow

test is used to determine whether the panel method is more efficient in estimating the model or the integrated data method.

Table 4: Chao Test Results for The Regression Model

Statistic	Degree of freedom	Significant level	Result
2.28	(28,228)	0.000	Use the panel model

Hypothesis zero in the Chaw test (F-Limer) is based on not using the data panel (ie using integrated data). As can be seen in Table 4, the significance level of the Chao test is calculated to be less than $\alpha = 0.05$, so with 95% confidence, the possibility of estimating the model using the panel method is confirmed. Given that the null hypothesis of the Chow test based on the width equation was rejected, the Hausman test is used to determine the presence of fixed effects or the presence of random effects.

Table 5: Hussman Test Results of Regression Model

Statistic	Degree of freedom	Significant level	Result
0.000	3	1.000	Unknown

Hypothesis zero in the Hausmann test is based on not using the fixed effects method (ie using the random effects method) and to reject the null hypothesis and confirm the use of fixed effects, the significance level must be less than 0.05. However, if the significance level of the Hussman test is calculated = prob = 1,000, the Hausman test is not able to distinguish between fixed and random effects. Therefore, another criterion must be used to choose between fixed and random effects. As can be seen in Table 5, the significance level of the Hausman test is calculated = 1,000 = prob, so the Hausman test is not able to distinguish between fixed and random effects. The following table summarizes the ability of random effects to explain the model:

Table 6: Ability of Random Effects in Explaining the Data Panel Model

Amount of random effects ability	The degree of disability of random effects	Result
0.13	0.87	Use fixed effects

Given that according to the table above random effects less than two-tenths of the changes are able to explain, so in estimating the fixed effects are used. The results of model estimation by panel method using fixed effects are presented in Table 7.

Table 7: Results of Data Panel Regression Model Fitting

Response variable = currency shock			
Independent variables	Regression coefficients	t-test statistic	Significant level
Fixed value (α)	3.81	2.88	0.004
Inflation throughout the country	0.94	26.71	0.000
unemployment	-20.59	-2.29	0.020
Significant level: 0.000 Determination Coefficient: 0.92	F-statistic: 96.23 Durbin-Watson Test: 1.92		

Durbin-Watson Test: One of the important assumptions of the classical linear model is that there is no autocorrelation or serial autocorrelation between the perturbation components that enter into the

community regression function. The most popular serial correlation test is the Durbin-Watson test, which assumes that there is a correlation between each error and the error before it. The Durbin-Watson test function is defined as follows:

$$d = \frac{\sum_{i=2}^{N}(e_i - e_{i-1})^2}{\sum_{i=1}^{N} e_i^2} \approx 2(1-\hat{\rho}) \quad (9)$$

An extraordinary score of the d-test function is that it is obtained based on the estimated residuals normally calculated in regression analysis. If the d calculated from the above equation is outside these critical values, it can be decided whether there is a continuous positive or negative correlation. According to the relation, the function d is approximately equal to ¬ with two ¬equals ¬ (ρ-1). Since 1≥ ρ ≥ is 1- it can be concluded that: 4 ≥ d ≥ 0

Table 8: Model Autocorrelation Decision Areas

Evidence of negative self-correlation	No decision	There is no evidence of autocorrelation	No decision	Evidence of positive autocorrelation
4 4-dl	4-du	2 du	dl	0

According to Table 8, by calculating the statistic of the Durbin-Watson, by specifying the position of the statistic, the null hypothesis can be rejected or accepted. Considering that in this study the statistic of the Durbin-Watson is equal to 1.92, the regression model lacks the problem of serial autocorrelation. Then, to know the normality status of the fits of the fitted model, the Jark-Bra test and histogram diagram are used. Jark statistic is for a statistic with chi-square distribution and degree of freedom two. If this statistic is less than 5.7, it can be concluded that the desired statistical distribution is normal according to the chi-square table. Jark uses the following formula to check for normality:

$$JB = n\left\{\frac{(Skew)^2}{6} + \frac{(Kurt-3)^2}{24}\right\} \quad (10)$$

where:
SKEW: Skewness coefficient
KURT: Kurtosis coefficient
N: Degree of freedom

Table 9: Jark test Results for The Model

Regression model waste	Statistic test	Significant level	Result
	19827.5	0.000	Abnormality of model waste distribution

According to the statistical distribution of chi-square in the Jark test assuming zero is based on the normalization of the regression model waste and considering that the significance level is less than 0.05, it is concluded that the model waste is not normal. As can be seen in Table 9, the significance level of the Jark test is calculated for less than α = 0.05, so with 95% confidence, the waste distribution is not normal. Fig. 2 presents the waste histogram of the data panel regression model.

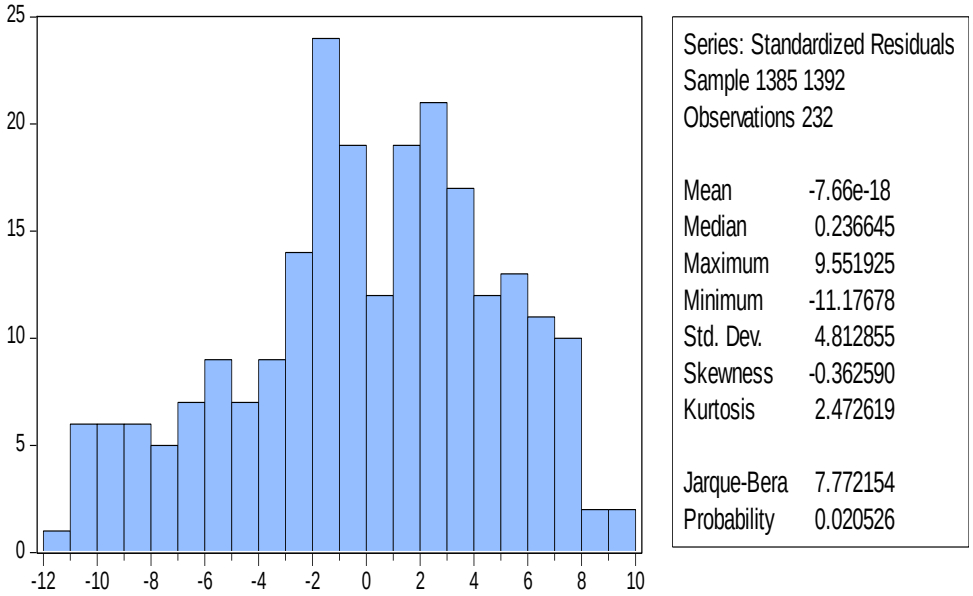

Fig. 2: Residual Model of Data Panel Regression Model

As can be seen in Fig. 2, the waste of the regression model is not symmetrical and bell-shaped, and this also indicates the abnormality of the waste distribution of the regression model of the data panel. Despite the abnormality of the waste, the significance of the F-statistic and the relative symmetry of the waste distribution shown in the diagram above indicate the accuracy of the estimate. Therefore, the model has no possible statistical problems. The following table examines the impact of various factors on currency shocks:

Table 10: The Effect of Different Factors on Currency Shock

Variable	Effect on currency shock	significancy
Inflation throughout the country	0.94	***
unemployment	-20.59	***

***: Meaningful with more than 99% confidence

The model is also fitted with simultaneous consideration of exchange rate shock and oil shock:

Table 11: Results of Regression Model Fitting with Oil Shock

Answer variable = exchange rate shock			
Independent variables	Regression coefficients	t-test statistic	Significant level
Fixed value (α)	-1.43	-0.89	0.36
Inflation throughout the country	0.73	13.44	0.000
unemployment	0.006	0.07	0.94
Iranian oil prices	0.09	3.24	0.001
Significant level: 0.000		F-statistic: 96.64	
Determination Coefficient: 0.92		Durbin-Watson Test: 1.86	

Oil prices are even positively affected by the currency shock.

4 Conclusion

Inflation is rising across the country with currency shocks. The stronger the currency shock, the stronger the consequent increase in inflation. But unemployment is temporarily reduced by a currency shock. Increasing the budget deficit is a side effect of currency shock policies. This vicious circle has been repeated many times by governments in the Iranian economy. In presenting economic and financial plans and programs, we refer less to past experiences and, once the works of past plans have been replicated, we repeat the programs that we have already experienced the bitter consequences of. The experience of currency shocks in the past by previous governments and the current government shows the bitter fact that it has increased the rate of inflation after the currency shock. Now, it has had a direct effect on increasing inflation. Now, in response to the main research question, what effect do the shocks of the national currency value have on the structure of inflation and unemployment of the new Keynesian model with the approach of the dynamically computable general equilibrium method? It should be noted that according to the analysis, the first effective currency shock was related to the construction government, and as a result of this shock, the inflation rate increased by 49% in 1974. The second currency shock occurred during the reform government. This currency shock also increased single-digit inflation in this period in 1984 by 26%. The third currency shock occurred in the government of Mehrvarzi. Despite a 12 percent drop in inflation during this period, the inflation rate again sharply reached 34 percent in 1992. The fourth currency shock occurred in the second term of the Tadbir Wamid government in early 1997.

The issue of the single exchange rate and the bitter experience of 4,200 Tomans became key in the twelfth government. This currency shock was another of the most influential currency shocks on the inflation rate at the highest rate since the Islamic Revolution. Although the real inflation rate was not published after the exchange rate changes through the official channels of the Central Bank, etc., in unofficial studies, the inflation rate has been estimated above 50%. The sudden change in the official price of the currency has always gone through this vicious cycle. When no action is taken to reform the structure of the administrative and budgetary system of the country, budget expenditures are always increasing and the tax structure of the country is not efficient enough and domestic production is faced with a lack of new investments and reduced productivity of capital and manpower. And economic growth is in the process of cross-sectional passive policies. How can we get past the confusing and complex path that results from the implementation of economic and fiscal policies from time to time? It must be acknowledged that the chronic budget deficit has been a factor in encouraging early income to offset the budget deficit. This budget deficit has played an irreplaceable role in increasing liquidity and then its impact on inflation. However, the change in the exchange rate, while stimulating other inflationary variables, by directly affecting the prices of imported and domestic goods and the reference of the price level of goods and services based on it, directly affects the inflation rate and intensifies the inflation rate relative to the exchange rate change rate.

It is against the national currency. The bitter experience of paying cash subsidies should be taken into account, and lessons should be learned from past experiences, and avoid unnecessary trials and errors that have caused great damage to the country so far. It would not be surprising if this plan was put forward by political men. But it would be far-fetched for an economist to propose a cash subsidy, knowing the costs involved in raising the exchange rate and its consequences. According to the results of this study and how the variables react to changes in production factors, several executive proposals will be presented:

1. Reducing fluctuations in the price index of consumer goods and services by reducing inflation expectations, which requires the government to gain the trust of economic actors and the public. In fact, public distrust of government policies has led to the opposite effect, even if the government pursues a policy to reduce inflation.

2. In order to prevent the increase of government expenditures and thus the possibility of controlling the growth of liquidity, the implementation of contractionary monetary policies (through open market operations) is proposed by the Central Bank.
3. Policies to increase production and supply: One of the things that can increase production is to increase the productivity of factors of production in different sectors of the economy, and the government should limit unproductive activities.

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