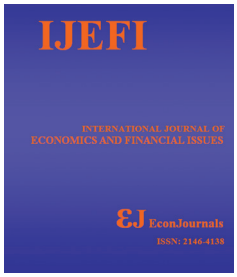

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The Effect of Government Development Expenditures on Unemployment Rate in the Provinces

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ABSTRACT

The most important and significant way of creating employment and reducing the unemployment rate is through government policies, dependent on government development expenditures and the government are trying not only to provide the growth and development substrates of the country but also become effective in reducing the unemployment rate. The main question of this article is that Do the government development expenditures can cause to reducing unemployment rates in different provinces? The present study in term of purpose is applied and in term of nature is causal-correlational with the type of the mixed data Research. The study period is 1998-2013. That in this period all provinces of the country with segregation in two provinces are divided into large and small provinces that are considered as a research population and statistics and relevant information have been obtained from sources of information and the Statistical Center of Iran. In order to analysis data and the estimation of econometrics patterns Excel and Eviews econometric software are used. The results revealed that Government development expenditures have a significant negative effect on the unemployment rate in the province. Also, all logarithmic models on large and small provinces for the government development expenditures on large provinces a negative coefficient 0.049 is obtained which is significant at 5% probability level and in small provinces negative coefficient of 0.07 is obtained which is significant at 5% probability level. So, the results relate to all algorithms models in large and small provinces showed that that the effect of government development expenditure in small provinces is more than the large provinces.

Keywords: Employment, Unemployment, Government Development Expenditures, Panel Data
JEL Classifications: E24, J64

1. INTRODUCTION

Unemployment is one of the largest problems that disrupts the total decisional balance of the society and cause numerous crises in the social, economic, psychological, and political arena. It is obvious that the first effect of unemployment is income reduction and this issue not only effects on the individual but also the whole community. Also, losing the opportunities for economic development, creating the vacuum in the society, removal of the production cycle and dependence on foreign production with reducing the production are other economic consequences of unemployment (Sharifi, 2012). On the other hand, when a person does not work, he will not feel exhilaration and happiness. In fact, works activities are kind of respond to social, economic and psychological needs of a person and unemployment affects the individual from all directions.

With political and security look at unemployment phenomenon, the unemployed can be considered as a stored division of disturbance. Today, there are undeniable relationship between unemployment issue and other political and security components and this matter can have a harmful political and security effects and cause fundamental changes in the national political scene so unemployment is the main thoroughfare of dilemmas and social anomalies and solving it will remove many social, psychological, and economic problems of the society (Shahabadi et al., 2014).

Today, Iran like most countries in the world is facing with issues and problems of standby HR acquisitions in working market that in addition to a waste of human resources has numerous economic and social issues and problems as well. Unemployment is classified as one of the serious obstacles to economic and social progress. So in order to avoid the negative effects of unemployment, reducing

the unemployment rate should be considered as one of the leading development goals in developing countries (Shah and Khani, 2013). In this respect, affecting identifying the unemployment rate and its reduction can be very helpful in making the most appropriate strategy and policy.

According to economic theory, in the current global economic conditions and in particular with regard to the dominant economies at the heart of the global economic system in the event that guiding economic developments in the third World mainly become available for the wealthy and limited section part, necessarily the productive structure of the society focused on trade and service sector and manufacturing capacity will not found necessary extension. It is according to these hints that seem economic development is not possible without the guidance of government. in the other words, the government must be the main trustee of guiding economic sectors in the context of modernizing manufacturing structure of their activities. Hence, one of the basic tasks of government is job creation for all people to reach at the full employment level that it needs investment to create employment opportunities for preparing the necessary grounds of the scientific - technical development for production. So, due to the position of human resource and the government in the economic development process, it can be said that one of the key factors influencing on the level of employment is the proper size of the government (Razini et al., 2011).

One of the major economic variables of the country that governments have more sensitivity to it is the unemployment rate. Thus, to avoid the negative effects of unemployment usually reducing the unemployment rate is one of the main objectives of governments. In this regard, identification of influencing factors on the unemployment rate and reducing it can be very useful in making the most appropriate strategy and policy.

Governments in different ways can act on reducing unemployment rates. One way of creating employment and reducing the unemployment rate is through government development expenditures and governments through their development expenditures can contribute to economic growth and unemployment reduction rate.

In this research, the effect of government development expenditures on the unemployment rate in the provinces in the period from 1998 to 2013 was examined.

2. THE EXPERIMENTAL BACKGROUND OF THE RESEARCH

Qavam (1992) examined how the government development expenditures and money supply effect on unemployment. The results showed that the relationship between government expenditures and the unemployment rate in the economy of Iran is indirect, and the relationship between the money supply and unemployment rate is direct.

Razini et al. (2012) examined the relationship between unemployment and the size of government. The results showed that increased rates of economic growth, the inflation rate and the minimum wage cause reducing the unemployment rate and increased government spending will increase the unemployment rate.

So the government should get steps to divest activities and to reduce its out-sourcing and Fundraising and partnerships with domestic and foreign financial resources pay more to its governance and oversight tasks.

Seidai et al. (2012) and Seidai (2012) in a paper entitled "review the employment and unemployment situation in Iran during the years 1957-2011" look for identification and analyze the current situation of unemployment and employment from 1957 to 2011. As well as it investigates the rate of employment in the economys triple. The results revealed that despite the marked decline in the unemployment rate in some provinces, the unemployment rate in the country (14.6) has a high figure compared to developed countries and its reason is growing population and increasing labor supply and low production capacities.

Shahbazi and Talebi (2013) in a study of with segregation of the provinces investigate the relationship between production and unemployment. In this study, provincial data for the period 2002-2008 has been used in 28 provinces. The results revealed that Okun's law in 10 provinces in the country and have been relatively stable. Okun's law has not been established in 12 provinces and in the rest of the province of the country it does not have sufficient strength. Also, the results reveal the significantly different from the law in different provinces of the country.

Shah and Khani et al. (2013) investigated the effect of governance on growth unemployment in developing and developed countries. In this study, the panel data for the period 1996-2010 is used. The results reveal a significant negative effect on the Governance Indicators (except transparency, accountability and the quality of regulation in developing countries) on a growth of unemployment in both countries is studied.

Christopoulos and Efthymios, (2002), in the collaborative study, used vector autoregression model in order to investigate the effect of the state's unemployment rate. This study was conducted during period 1961-1999 for 10 for ten European countries. The results showed that there is a one-way causality relationship of the size of the government and the unemployment rate. Regardless of the revised issue of causation of the study, they only test the short-term interaction between the time of the governance and the unemployment rate.

Christopoulos et al. (2005), using panel data examine the long-term relationship between the government development expenditures and the unemployment rate according to Abrams curve for the 10 European countries in the period 1961-1999. The results indicate a positive relationship between government size and the unemployment rate is a long-term basis. This relationship is the unidirectional causality from government expenditures on the unemployment.

Feldman (2006) examines the effect of the government's unemployment in industrialized countries. In this paper, in order to evaluate the effects of the economic freedom index ranking in the world for the 19 industrialized countries in the period 1985-2002 has been used. The index divides the economic freedom into government size, the legal system secure property rights, access to money at fair value, freedom to trade internationally, credit act, business, and trade. The size of the government has been formed of the 4 components of government consumption, transfer payments and subsidies, investment in SOEs and marginal income tax rates. After determining the size of the in order to measure the effect of unemployment, the unemployment rate of 5 endogenous variables are used that include the unemployment rate of women, youth unemployment, unemployment among less skilled workers and long-term unemployment.

The results of these study show that government size has a negative effect on reducing the unemployment rate and this negative effect is more in women's labor force and the less skilled and long-term unemployment has also increased. In addition to increasing the share of investment in SOEs and marginal income tax rates as well as reducing the level of government support for vulnerable groups, unemployment is intensifying.

Wang et al. (2007) in a study have measured the effect of government expenditures on unemployment as the effect of government size on the unemployment rate steady Using error correction model and panel data from 20 OECD countries during the period 1970-1990 intervals. The results showed Increasing the government expenditures may lead to rising unemployment. But with considering different criteria for the size of government will leads to different effects. The results also showed that transferring payments and subsidies have considerable effects on unemployment while government procurement has no significant effects on unemployment.

Linzert (2007) examined the effect of macroeconomic variables on unemployment in Germany. The results indicate the direct effect of labor supply shocks and the price on unemployment and the adverse effect of the shock in aggregate demand on unemployment story. The results indicate the lack of significant wage shock and productivity on the unemployment rate in the short-term but in the long-term, it is the main factor in the unemployment rate in Germany.

2.1. The Concepts Definition

2.1.1. Unemployed

Unemployed in economic is said to people that are in the age of working (15-65 years) and looking for work but cannot find a job or income-resource. Children and the elderly because they are not able to work, they are not considered as a part of the active population. Housewives and students if are not job seekers cannot be considered as a part of the active population. The unemployed population is said to the number of unemployed people. Unemployed from the perspective of the Statistical Center of Iran is a person over 10 years that in the week before the census is without definite job and in that week or so after weak is ready to work and in that week and 3 weeks before is searching for a job. As well as those who are start operating next week or are not waiting to return to their previous job they are not unemployed.

2.2. Types of Unemployment

1. Frictional unemployment: It occurs in the time between two employments in the time of changing jobs.
2. The seasonal unemployment: When there is no demand for working in the certain seasons; for example, it occurs in some teachers who can teach in the summer or farmers and construction workers.
3. Hidden unemployment: When the person is doing kind of job and has the source of income, but his work does not have a positive effect on the economy.

2.3. Development Expenditures

The expense that spent to increase production capacity and increasing of the fixed assets and usually end in each case and economically is revenue maker known as development expenditures that are done with the aim of enduring assets or capital fixed. In terms of the time, these payments are not permanent; they begin with starting investments and end by the end of the investment. Such as dam construction - iron smelting production - petrochemical plant.

2.4. Research Hypotheses

- Hypothesis 1: The government development expenditures have a significant negative effect on the unemployment rate in the provinces.
- Hypothesis 2: The effect of the government development expenditures on large provinces is more than the small province.

3. RESEARCH METHODOLOGY

The aim of this study is applied and in term of nature is causal-correlational. In this study, all the provinces in the period 1998-2013 to distinguish between large and small provinces were considered as population it should be noted that in this study, large or small provinces have been identified according to their population. This means that provinces are populated are in one group and sparsely populated provinces were in the next group. Also according to the information related to this study were collected in the period 1998-2013 is a combination of research data. The information obtained from organizations and statistical agencies. In this study, the econometric models fit the data panel to assess the effect of each factor on the province's unemployment rate was used. Due to the mixed nature of the data using traditional statistics, such as Dickey Dickey-Fuller and Fuller is not well suited. So, in this study in order to evaluate the stability, statistics such as Levin, Fisher, and Boys have been used. In order to analyze the data Excel and Eviews econometric software will be used.

3.1. Model Presentation of the Research

In this study, in order to investigate the effect of government development expenditures on unemployment rates in the provinces of the country the regression model was used.

$$U_{it} = \alpha_{0j} + \alpha_{1j} Govern_{it} + \varepsilon_{it} \quad (1)$$

The used variables in the (1) are as follows:
U_{it}: The unemployment rate of the provinces - the unit = percent.
$Govern_{it}$:The government development expenditures variable with segregation the provinces - the unit = Million Rial.
ε_{it}: The disorder.

It should be noted that in model 1, Here the index i in the sense that the provinces are concerned sections and subscript t the time of the years 1998-2013 are included.

4. RESEARCH FINDINGS

In this study, to evaluate the stability, statistics such as levin, fisher, and boys were used. The results are shown in Table 1 have been reported in the following.

The results show that the variable unemployment rate of provinces in examined time has stability but the government development expenditures variable with segregation the provinces is in first difference with segregation of provinces is not stationary. So, the stability of this variable is investigated in the first difference (Table 2).

According to the variable of unemployment rate in provinces in the stability level and the government development expenditures variable with segregation the provinces is in first difference need to first test the convergence of these two variables. Therefore, in the following, it is possible to pay to the relationship between these variables. According to the type of data Pedroni test is used to test convergence of variables. The results of this test have been reported in Table 3.

The results of Table 3 approved the correlation between variables. Therefore, in the following, it is possible to pay to the relationship between these variables. According to the combined data first need to test examined model the panel type or pool type. In Table 4, using two models Limer we investigate the excellence effects of pooled and panels models.

Limer test results in the Table 4 show that the null hypothesis that indicates the equality of individual effects is rejected. So a model for the all logarithmic models in large provinces is on panel's classification, not the pool. Therefore, in the next step need to compare the fixed and random effects model. For this comparison the Hausman test is used that the results have been reported in Table 5.

The findings of Table 5 show that null hypothesis that indicates the excellence of random effects model on the fixed effect model is not reject able. Therefore, these models are used to investigate the effects of variables.

4.1. The Estimation of all Logarithmic Models and Analysis of Results in all Provinces

As it can be seen Table 6, in this model, for the variable of government development expenditures with the segregation of province negative rate of 0.06 has been achieved. The negative sign of this variable is consistent with the considered hypothesis and the obtained coefficient has interpretation and is significant at the 5% level. Meaning that with the assumption of the equal situation, an increase of 1% in this variable can lead to 0.06% reduction in the unemployment rate in the provinces of the country. Due to the statistics R^2, the explanatory variables explain 0.088 of the dependent variable.

4.2. The all Logarithmic Model in Large Provinces

Given that the consideration of the province segregation is based on the effects of large and small provinces in this study provinces

Table 1: Investigation of stability of variables during the period 2013 - 1998

Variable	Levin statistics	Probability level	Boys statistics	Probability level	Fisher statistics	probability level	Results
The unemployment rate of provinces	−2.94	0.0016	−2.88	0.0019	85.53	0.0067	The stability in the level
					155.03	0.0067	
Construction expenditure of government in each province	−0.74	0.2285	2.20	0.9862	73.24	0.9999	The absence of stability at the level
					69.44	8612.0	

Table 2: Investigation of stability of the government development expenditures with segregation the provinces in first difference in the period 1998-2013

Variable	Levin statistics	P level	Boys statistics	P level	Fisher statistics	P level	Results
Construction expenditure of government in each provinces	3.97	0.0000	−6.94	0.0000	160.81	0.0000	The stability in the first difference
					263.73	0.0000	

Table 3: Investigation of the convergence of variables in the model

Variables	Statistic value Pedrony	P	Result
Construction expenditure of government and unemployment rate in each provinces	−0.679	0.809	The existence of convergence among the variables

were divided into two parts and again a model were estimated one time for the large provinces and again for small provinces that in order to give better answer all logarithmic models is used that the results are as follows:

First in Table 7 Limer test was used to select the appropriate model.

Limer test results Show that the null hypothesis that indicates the equality of individual effects is rejected. So a model for the all logarithmic models in large provinces is on panel's classification, not the pool. The results of Hausman test to compare the fixed and random effects model in large provinces have been reported in Table 8.

The findings of Table 8 show that Null hypothesis that indicates the excellence of random effects model on the fixed effect model has been rejected. Therefore, the fixed effects model is used to investigate the effects of variables.

4.3. The Estimation of all Logarithmic Models and Analysis of Results in Large Provinces

In this model, for the variable of government development expenditures with the segregation of province negative rate of 0.049 has been achieved (Table 9). The negative sign of this variable is consistent with the considered hypothesis and the obtained coefficient has interpretation and is significant at the 5% level. Meaning that with the assumption of the equal situation, an increase of 1% in this variable can lead to 0.049% reduction in the unemployment rate in the large provinces country. Due to the statistics R^2, the explanatory variables explain 0.54 of the dependent variable.

Table 4: Limer test (Chow) to select the appropriate model

Employed statistics	Statistic value	Degrees of freedom	P
Cross-section F	15.61	27.419	0000.0
Cross-section Chi-square	311.94	27	0000.0

Table 5: The results of Hausman test for comparison of fixed and random effects

Employed statistics	Statistic value Chi- square	Chi-square d.f (degrees of freedom)	P
Cross-section random	3.53	1	0.0599

4.4. The all Logarithmic Model in Small Provinces

First in Table 10 Limer test was used to select the appropriate model.

Limer test results Show that the null hypothesis that indicates the equality of individual effects is rejected. So a model for the all logarithmic models in small provinces is on panel's classification, not the pool. The results of Hausman test to compare the fixed and random effects model in small provinces have been reported in Table 11.

The findings of Table 11 show that Null hypothesis that indicates the excellence of random effects model on the fixed effect model has been rejected. Therefore, the fixed effects model is used to investigate the effects of variables.

4.5. The Estimation of all Logarithmic Models and Analysis of Results in Small Provinces

In this model, for the variable of government development expenditures with the segregation of province negative rate of 0.07 has been achieved (Table 12). The negative sign of this variable is consistent with the considered hypothesis and the obtained coefficient has interpretation and is significant at the 5% level. Meaning that with the assumption of the equal situation, an increase of 1% in this variable can lead to 0.07% reduction in the unemployment rate in the small provinces country. Due to the statistics, the explanatory variables explain 0.47 of the dependent variable.

5. DISCUSSION AND CONCLUSION

In this study, after investigating a critical analysis of the stability and convergence of variables, the relationship between these variables was investigated and after using tests Limer (Chow) to select a suitable model and Hausman to compare fixed and

Table 6: Results of model estimation of all logarithmic models in all provinces

Variable		Coefficient		Standard deviation	T statistic	P
Intercept		3.32		0.133	24.973	0.0000
Logarithm of construction expenditure of government in each provinces		−0.06		0.009	−6.580	0.0000
R^2 statistics	0.088	Modified statistics R^2	0.085	F=43.05 P (0.0000)		D.W=1.11

Table 7: Limer test (Chow) to select the appropriate model in the large provinces

Employed statistics	Statistic value	Degrees of freedom	P
Cross-section F	20.25	8.134	0000.0
Cross-section Chi-square	114.12	8	0000.0

Table 8: The results of Hausman test for comparison of fixed and random effects in large provinces

Employed statistics	Statistic value Chi-square	Chi-square d.f (degrees of freedom)	P
Cross-section random	5.47	1	0.0192

Table 9: Results of model estimation of all logarithmic models in large provinces

Variable		Coefficient		T statistic	P
Intercept		3.11		13.20	0.0000
Logarithm of construction expenditure of government in each provinces		−0.049		−2.95	0.0036
R^2 statistics	0.54	Modified statistics R^2	0.51	F=18.02 P (0.0000)	

Table 10: Limer test (Chow) to select the appropriate model in the small provinces

Employed statistics	Statistic value	Degrees of freedom	P
Cross-section F	66.13	284.18	0000.0
Cross-section Chi-square	62.189	18	0000.0

Table 11: The results of Hausman test for comparison of fixed and random effects in small provinces

Employed statistics	Statistic value Chi-square	Chi-square d.f (degrees of freedom)	P
Cross-section random	12.14	1	0.0005

Table 12: Results of model estimation of all logarithmic models in small provinces

Variable		Coefficient		T statistic	P
Intercept		3.46		22.54	0.0000
Logarithm of construction expenditure of government in each provinces		−0.07		−6.10	0.0000
R^2 statistics	0.47	Modified statistics R^2	0.43	F=13.51 P (0.0000)	

random effects and finally the random effects model was used to investigate the effects of variables and the results are as follows:

The most important hypothesis was that the government development expenditures have a significant negative effect on the unemployment rate in the province. In all logarithmic models in the whole province, the government development expenditure of province the negative coefficient of 0.06 has been achieved. The negative sign of this variable is consistent with the considered hypothesis and the obtained coefficient has an interpretation and it is significant at the 5% level that means with the assumption of equal other situation, an increase of 1% in this variable can lead to reduced 0.06% in the unemployment rate in the provinces of the country. Thus the first hypothesis regarding the significant negative effect of government expenditure on the unemployment rate in the province was approved.

The second hypothesis of this study was that the effect of government expenditure on large provinces is more than the small province. Therefore, given that the provincial effects have been considered with the segregation of large and small provinces in this study, provinces were divided into two parts and this model was estimated once for the large province and again for the small province that in order to the model gives a better answer all the logarithmic model is used. In all logarithmic models in the large province, for government development expenditures variable due to the segregation of the provinces the negative coefficient 0.049 has been achieved. The negative sign of this variable is consistent with the considered hypothesis and the obtained coefficient has interpretation and is significant at the 5% probability level. Meaning that with the assumption of an equal situation, the increase of 1% in this variable with 0.049% reduce the unemployment rate in the province in the large provinces and in all logarithmic model in a small province for government development expenditure variable with the segregation of the provinces the negative coefficient 0.07 has been achieved. The negative sign of this variable is consistent with the considered hypothesis and the obtained coefficient has interpretation and is significant at the 5% probability level. Meaning that with the assumption of the equal situation, an increase of 1% in this variable can lead to 0.07% decrease in unemployment rate in small provinces of the country. The results of all logarithmic models in large and small provinces showed that the effect of government expenditure in small provinces is more than large province and the second hypothesis is not confirmed.

Based on the conducted studies in this research the following items can be proposed:

The results suggest the different patterns of unemployment in the provinces of the country. In other words, firstly examine the average unemployment rate in the country during the studied period showed that the unemployment rate in some of them is more and in others is less than the average for the country. On the one hand, existence or absence of fluctuations in the unemployment rates suggests that also, the provinces have had different experiences in this respect. In this connection, it is suggested that the policies and programs adopted by the government to reduce unemployment rate are considered with regard to the special features of each province. Paying attention to the specific properties and parameters can lead to increasing the effectiveness of adopted policies of each province to reduce the unemployment rate.

Other results revealed the affectability of small provincial is with government expenditure in reducing the unemployment rate. This issue shows that different patterns are dominant on the

unemployment rate of populated and sparsely populated provinces of the country. Therefore, it is necessary that this issue should be considered in the adopt policies of reducing the unemployment rate in the large and small province. For example, in provinces such as Kurdistan, Kermanshah, and Ilam the unemployment rate is much higher than the national average that according to the size of these provinces the use of slight budget increase can give more effect in reducing the unemployment rate and thus the entire country. But reducing the unemployment rate in provinces such as Tehran, Mazandaran, and Khuzestan require a further increase in the development budget.

Finally, with regard to little more affectability in government expenditure in reducing the unemployment rate, the government in adopting policies increases the development budget of the small provincial that is effective in reducing the unemployment rate.

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