The Relationship Between Unemployment and Economic Growth in Jordan and Some Arab Countries

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Abstract: Unemployment is a negative phenomenon in any human society as it adversely affect in different dimensions and directions. In addition, it refers to an economic defect affecting the community structure. Thus, the economic and social dimensions of unemployment increase complexity, consequently lead us to adopt several analyses to understand its nature and impact on the growth. The effects are verified by the presence of causal relation between rates of economic growth and the changing rates of unemployment prevailing in the economy. However, the theoretical analysis does not always confirm this relationship as it focuses on unemployment as economical phenomenon resulting from imbalance in the economic policies of a certain country. The theoretical analysis of unemployment reveals the size of labor employment as a human force associated with the extent of success factors related to economic growth. The present study focused on the relationships between economic growth and change of unemployment rates in some Arab countries with detailed analysis for the case in Jordan. The effectiveness of economic policies aimed at reducing unemployment rates in those countries with average rates of economic growth.

Key words: Unemployment • Economic growth • Jordan economy

INTRODUCTION

Unemployment is a multi-dimensional phenomenon; it is an economic phenomenon showing imbalance in economic activity. Moreover, it is also considered social phenomenon because of its effects on the social structure of societies. The two economic and social dimensions of the unemployment increase its complexity and impose adopting extensive analysis to understand the causes and consequences and to identify the responses to such phenomenon. The economic growth is a goal of the main objectives of economic policy either of monetary or of fiscal policy. The investment leads to achieving rate of sustained economic growth in the national economy and addressing the problem of unemployment. The greater the unemployment rate, the less opportunities to achieve high economic growth as well as the emergence of the negative social aspects [1].

The most important priority of economic policies tends to increase the growth so as to reflect positively on reducing levels of unemployment and, thus, link it with the impact of policies investment to create more jobs by constructing investment programs. So, unemployment is a global phenomenon with the economic and social effects. All countries including developing ones confront this phenomenon, these states move slowly in economic growth whereas affected by population growth with a pattern and shape of the population pyramid, revealing a high rate of dependency [2] and causing the high economic and social cost of unemployment and its relationship to economic growth. Therefore, unemployment is defined as a situation in which the community does not use work force fully [3].

Economic growth is a continuous and integrated process of interaction within interrelations working to increase the production capacity of the national economy continuously, for the long-run, to raise real national income as well as the level of real per capita income [4, 5]. It should be noted that the size of the labor force employed in the economy is part of the yearly gross national product [6]. In addition, it has to quantify the impact of factors affecting economic growth by using a model of economic growth in which work plays an active role in determining the level of economic growth [7, 4].

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Economic and social approaches were used in order to understand and interpret the phenomenon. So, it is easy to find out many of the economic studies trying to understand the phenomenon from this perspective without trying to understand the causal relationships affecting unemployment and how to change it in general, special or typical cases [8].

Based on this analysis, it holds necessary to understand the nature of unemployment to adopt different approaches with focus on analysis of public and private sectors when study this phenomenon. Increasing rates of unemployment in developing countries, especially in the Arab world, confirms this assumption. Economical policies that developed over the past decades did not achieve reduction in the unemployment rates. The World Economic outlook [8] expects the unemployment rates to increase greatly with about 3% annually in the Arab region to reach 25 million unemployed in 2010 [9].

Expectations indicate an ascending future direction in the rates of unemployment despite the positive economic indicators achieved by some Arab countries such as high growth rates, increase of investment rates and low inflation rates [10].

Economical policies that are directed to reduce unemployment rates stem from approaches assuming that unemployment is directly linked with the growth. Any increase in the rates of growth must be associated with low unemployment rates; this is correct economic argument but limited to certain situations, which requires preconditions for growth and the nature of unemployment itself [11]. What support this argument are the standard studies determining the nature of the relationship between economic growth and the size and impact of unemployment, high growth rates, lower unemployment rates and the impact of unemployment high rates on economic growth.

The standard analysis of relevant studies does not indicate a relationship between economic growth and unemployment with a general or unified trend. Besides, it is impossible to lay down a unidirectional relationship between growth and unemployment. The evidence is that although the average growth achieved in the Arab countries was about 5.6% annually in the past ten years, this decrease was not associated almost with tools to reduce unemployment rates between the years 2000 to 2004. So that it fell from 14.9% to 13.4%. Further, the growth rates achieved in some gulf countries have not managed to reduce the high rates of unemployment. It has to be noted that what has been achieved necessitates 7 to 10 years for such reduction about 3% to 5% in the rates of unemployment [12].

Studies conducted by the World Bank confirm that the achieved growth rates and expected ones for the Arab countries are not sufficient to achieve a considerable reduction in the unemployment rates and do not help in creating new job opportunities in subsequent years. The World Bank assumes that the reduction of unemployment rates should be consistent with the achievement economic growth rates (6%-7%) annually in the long-term period.

Objective of the Study: The study defines the relationship between unemployment and economic growth in Jordan and some Arab countries that still need a major scientific effort to understand the aggravation of high unemployment rates.

The Importance of the Study: This study is of paramount importance because it identifies the relationship between unemployment and economic growth and it highlights the relationship in between. The study reveals reality of unemployment in Arab countries, with emphasis on Jordan, through using one analysis which has not been used before, particularly in Jordan. The main idea of this study focuses on utilizing the method of analysis to take advantage of such analysis and to show the relationship concerned to indicate facts compatible with the theoretical basis based on the test of Okun. Thus, it is the first economical study looking at that relationship in Jordan using this test.

Methodology of the Study: The study uses the descriptive analytical method by referring to the references, studies and periodicals, which focused on the subject of this study and it uses Comparison-Simulation Approach [13] to compare countries using the economic model, linked to variables that would be applied to understand the mechanism of unemployment within the economic vision.

Data Sources: The study relied on data from the International Monetary Fund Forum [14], the UN Development Program [15], the Arab Monetary Fund in the Arab League [14] and the Arab Strategy Forum [16].

The Limitations of the Study: The study was based on specific limitations for the purpose of statistical analysis, namely:
**Spatial Limitations:** The data set is given for the following countries: Algeria, Egypt, Jordan, Kuwait, Morocco, Saudi Arabia, Sudan, Syria and Tunisia.

**Temporal Limitations:** The study identified specific years.

**Methods of Analysis:** The study used the application of the law of Arthur Okun, which indicates the relationship between economic growth and rate of unemployment change. Okun [35] considers that unemployment is a declining proportion against the potential or actual economic growth rates achieved by economy. According to this approach, it is assumed that in order to decrease the unemployment rate, the national economy growth rate exceeds the minimum or natural growth limit.

The growth rate is linked with unemployment according to analysis of Okun as shown in following equation (1):

\[ U = a + b (Y - Y^*) \]

This is supposed to determine the natural percentage of unemployment determined by Okun with 3%. On determining the actual growth rate \( (Y^*) \) and changes over time, a model of Okun can be developed through adopting dynamic analysis to get:

\[ Y + \Delta U = \dot{a} + b \Delta \epsilon \]

\( \Delta U \) : The change in the rate of unemployment.
\( Y \Delta \) : The economic growth rate.
\( b \) : Flexibility between growth and unemployment.
\( \epsilon \) : The error rate.

Variables \( \dot{a} \) and \( b \) specify the percentage of natural growth or the actual one which reflects rate of unemployment when declined. If the unemployment rate does not change \( (\Delta U = 0) \) the raw internal gross is growing at the actual rate as shown in equation (2).

\[ Y^* = -\dot{a} / b \]

This is the growth rate needed to maintain the unemployment rate unchanged, which ensures the stability of the unemployment rate. The result indicated that there is a growth rate, ensuring the no change in the unemployment rate. The influence between the growth and unemployment begins when there is a higher growth rate than the actual rate. Here, the link is carried out between the raising rate of growth and declining rates of unemployment, \( b \) refers to the relationship between unemployment and growth and it determines the rate of unemployment change with every change in the unitary economic growth and this is equation (3).

\[ b = \Delta U / \Delta Y \]

**Theoretical Framework and Background:** Attention to economic growth was apparent through consecutive economic schools, focusing on development. The prominent concerns are presented by those of Adam Smith who claim that the increase in economic growth is done by following the principle of labor division and specialization. Karl Marx considered in his theory of Surplus value that capitalists have means of production in a cumulative process [18]. The entrepreneur is the first mover for development to increase the national product [19]. The theory of stages to Resto sets several conditions that must be met in all stages to reach maturity by raising the rate of the National Investment as illustrated by Harwood-Dumar model in economic growth. On the other hand, the vision of Arthur Lewis is regards to shifting the workers from the traditional agricultural sector to the industrial sector in modern societies to achieve economic development [20].

Keynes is concerned with the role of employment, interest and money in the national economy [21]. Al-Bayati [22] presents theories of economic development and analysis of gross domestic product, based on certain economic indicators. Khalifa [23] sets a proposal for a strategy to hamper unemployment in Egypt to increase employment rates and to expand small businesses based on statistical data for the period 1982 to 2004. Understanding how to cope with unemployment is a crucial point to understand the nature of the relationship with economic variables such as growth, investment, wage rate and inflation rate.

Al-Maghbreh [24] analyzed and evaluated the contribution of investment to economic growth in Jordan during the period 1970 to 1990 and concluding with factors that interfere with each other and link all with changes in economic structure [25]. Al Kayal [26] determined the importance of economic reform programs supported by the International Monetary Fund in light of economic instability experienced in Jordan since the second half of the eighties of the last century. Also, [27] presented an analytical study of the conditions of the labor force in Jordan and its role in economic growth. Economic policies supporting the growth are the same policies to eliminate unemployment [28].
Table 1: The rates of economic growth and unemployment in some Arab countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Algeria</th>
<th>Egypt</th>
<th>Jordan</th>
<th>Kuwait</th>
<th>Morocco</th>
<th>KSA</th>
<th>Sudan</th>
<th>Syria</th>
<th>Tunis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>PIB</td>
<td>T.C.</td>
<td>PIB</td>
<td>T.C.</td>
<td>PIB</td>
<td>T.C.</td>
<td>PIB</td>
<td>T.C.</td>
<td>PIB</td>
</tr>
<tr>
<td>2006</td>
<td>2.0</td>
<td>12.3</td>
<td>6.84</td>
<td>10.92</td>
<td>7.93</td>
<td>14.06</td>
<td>5.26</td>
<td>1.57</td>
<td>7.67</td>
</tr>
<tr>
<td>2007</td>
<td>3.0</td>
<td>11.8</td>
<td>7.09</td>
<td>9.21</td>
<td>8.49</td>
<td>13.1</td>
<td>4.46</td>
<td>1.70</td>
<td>2.71</td>
</tr>
<tr>
<td>2008</td>
<td>2.4</td>
<td>11.3</td>
<td>7.16</td>
<td>8.91</td>
<td>7.61</td>
<td>12.65</td>
<td>4.97</td>
<td>1.67</td>
<td>5.59</td>
</tr>
<tr>
<td>2009</td>
<td>2.38</td>
<td>10.21</td>
<td>4.67</td>
<td>9.45</td>
<td>2.33</td>
<td>12.94</td>
<td>5.19</td>
<td>1.64</td>
<td>4.95</td>
</tr>
<tr>
<td>2010</td>
<td>3.33</td>
<td>10.03</td>
<td>5.15</td>
<td>9.2</td>
<td>3.09</td>
<td>12.50</td>
<td>1.97</td>
<td>1.64</td>
<td>3.15</td>
</tr>
<tr>
<td>2011</td>
<td>3.62</td>
<td>9.8</td>
<td>1.0</td>
<td>9.15</td>
<td>3.25</td>
<td>12.50</td>
<td>5.29</td>
<td>1.64</td>
<td>3.86</td>
</tr>
</tbody>
</table>

Source: International Monetary Fund Forum [14]

Based on the previously stated facts, we conclude that the economical policies supporting growth rates are not the same policies to eliminate unemployment. The general trend in this relationship is to assume a significant correlation between high rates of economic growth and low unemployment rates. The relationship between economic growth rates and unemployment appears through the following simplification:

High Rate of Growth ↔ High Operation Rate ↔ Low Rate of Unemployment: The proportion of high rate of economic growth is identified by the nature of the adopted economical policy. The Keynesian analysis focuses on the recovery policy through demand, the common belief of most economists is that unemployment will be decreased automatically if the economic growth is high, while another liberal view focuses on the supply by supporting the cost-effectiveness and profitability of projects [29]. However, it is noticeable that there is a significant correlation between growth and changing rates of unemployment. High rates of economic growth indicate the need for additional labor to be employed from the surplus of the labor market. On the other hand, recession indicates increases the unemployment rates due to losing jobs [30].

On adopting the comparison between the change in growth rates and unemployment rates for developed countries, it is clear that despite the existence of a correlation between growth and low unemployment rates, the changing rates of unemployment are different [31, 5]. Table 1 shows the rates of economic growth and unemployment in some Arab countries.

Analysis of Economic Growth and Unemployment in Some Arab Countries: What distinguish the economies of Arab countries are unusually high rates of unemployment against the international standards. The majority of Arab countries are known for high rates of unemployment, which is confusing particularly in those countries with financial resources. High unemployment rates are in Sudan with about 13.7 %, Tunisia 13.0 %, Jordan 12.5 %, Saudi Arabia 10.5 %, Algeria 10.0 %, Egypt 9.2 %, Morocco 9.0 % and in Syria 8.4 % for 2010 [32].

Data from Table 1 confirm that if the growth rate is linked with low rates of unemployment in the Arab countries, the relationship is negative between the growth rate and unemployment rates in most Arab countries. These countries are known with high rates of unemployment, yet achieve positive growth rates, but the correlation between the rate of economic growth and low rates of unemployment is strong.

The question rises here; why the growth rate does not affect largely on unemployment? Perhaps the reason behind this is the nature of the growth achieved in these various countries. Oil-exporting countries such as Saudi Arabia and Algeria are fully known with economic growth rates of about 2.0 to 4.0 %. In some years, particularly in 2008, Saudi Arabia achieved economic growth with 4.23 %, while the unemployment rate in the period between 2006 and 2010 was not less than 10.0 %. The available figures for each country refers to fluctuations in unemployment rates over the past years in many Arab countries, especially among the youth sector, which constitutes 62% of the unemployed in 2008 in Morocco, 72% in Tunisia, 75% in Algeria.

Statistics of unemployment rates in Arab countries show that the Arab countries with the lowest income have unemployment rates greater than the rich Arab countries, except for Saudi Arabia, Libya and Algeria.

Finally, the high rate of economic growth and low unemployment rate do not confirm the existence of a strong relationship between growth and unemployment. Although the growth rate is positive but it is impossible at this stage to reduce unemployment significantly. Probably, the main reason is due to the restructuring of the economy, which relies heavily on growth in oil sector within these states, which, despite its importance, does not create jobs in large numbers [33].
Causes of Unemployment in the Arab Countries: High unemployment rates in the Arab societies can be attributed to economic, social and political reasons. In addition, it can also be attributed to internal or external causes [34]. The most important causes of unemployment in the Arab countries would be summarized in the high population growth rate, increasing from 218.239 million inhabitants in 1990 to 326.112 million people in 2007 [14]. In addition, the most prominent manifestation of the failure in economic development plans is the reliance on foreign loans (for non-oil producing countries) and the lack of systematically economic planning in which there is no match between the educational programs in most Arab countries and the application of policies aiming to open economy in addition to the shift towards privatization programs that have led to abandon large numbers of employees in private and public sector enterprises. Besides, the unsuitable distribution of local resources is considered another important reason of unemployment in Arab world.

The Relativity Impact of Economic Growth on Unemployment Rates: The difference in the nature of the growth achieved and its impact on unemployment is what makes economical policies in developing countries fail to reduce unemployment rates although growth rates were fairly high. The economic growth is regarded as a quantitative change occurring in two directions: one associated with an increased labor productivity, which usually does not lead to the creation of additional jobs and the other direction is linked to an increase of jobs, which reduce the unemployment rate according to the nature of the growth achieved. In fact, growth which is associated with increased productivity cannot lower the high unemployment rates.

Standard Analysis and the Law of Okun: The standard Analysis was based on applying Okun coefficient in equation (1), adopted in this study. The results of the values of this coefficient, the natural growth rate and the necessary growth rate through applying equations (2, 3) respectively as shown in Table (2).

Based on Table (2) data, Figure (1) provides us with an explanation to the needed percentages to reduce unemployment rates.

Figure (2) explains the indicators of the required growth percentages to reduce unemployment rates based on Table 2.

Table 2: The required growth percentages to reduce unemployment rates by 1% based on both equations and my calculations

<table>
<thead>
<tr>
<th>Country</th>
<th>Coefficient Okun (b)</th>
<th>The natural growth rate</th>
<th>The required growth rate (based on equations)</th>
<th>The required growth rate (based on my calculations)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algeria</td>
<td>-3.8</td>
<td>2.788</td>
<td>.073</td>
<td>3.684</td>
</tr>
<tr>
<td>Egypt</td>
<td>-1.75</td>
<td>5.391</td>
<td>.017</td>
<td>8</td>
</tr>
<tr>
<td>Jordan</td>
<td>-2.37</td>
<td>5.45</td>
<td>.012</td>
<td>5.90</td>
</tr>
<tr>
<td>Kuwait</td>
<td>-0.527</td>
<td>2.675</td>
<td>.056</td>
<td>-26.56</td>
</tr>
<tr>
<td>Morocco</td>
<td>-1.99</td>
<td>4.67</td>
<td>.015</td>
<td>7.035</td>
</tr>
<tr>
<td>KSA</td>
<td>-3.04</td>
<td>3.541</td>
<td>-2.009</td>
<td>3.953</td>
</tr>
<tr>
<td>Sudan</td>
<td>-1.61</td>
<td>7.343</td>
<td>.018</td>
<td>8.695</td>
</tr>
<tr>
<td>Syria</td>
<td>-1.52</td>
<td>4.573</td>
<td>.019</td>
<td>9.21</td>
</tr>
<tr>
<td>Tunisia</td>
<td>-2.78</td>
<td>4.085</td>
<td>.010</td>
<td>5.035</td>
</tr>
</tbody>
</table>

The source: on applying the equations and calculations made by the researcher based on literature

Fig. 1: The needed percentages to reduce unemployment rates
This shows the need to achieve the growth of approximately 3% for some countries in order to reduce the unemployment rate by 1% for these countries. Although there are problems in the labor markets in general and unemployment in particular, these indicators since 1980s show clear evidence that unemployment rate increase over time as shown in Table (3).

Analysis of Unemployment in the Arab Countries: What distinguish the economics of Arab countries are unusually high rates of unemployment against the international standards. Arab Labor Organization states that current situation of unemployment in Arabic countries is the most dangerous in the world. It indicates also that the Arab economies must invest about $ 70 billion to raise their economic growth rate from 3% to 7% and create five million jobs, to reduce unemployment rates and to make them within the acceptable rates (Figure 1).

Astonishingly, the countries with high rates of unemployment are those with positive growth rates. As a result, it would be argued here that the relationship between the increase of economic growth rates and low unemployment rate is not strong as confirmed by theoretical analysis. Thus, the relative relationship between growth and unemployment appears more apparent in the economies of Arab countries.

But why the growth rates do not affect largely on unemployment?. The reason behind this might be the nature of the growth achieved in these various countries; the oil-exporting countries such as Algeria and Saudi Arabia have growth rates of about 5% to 6%, while unemployment rates there were stable in the periods (1999-2002) and declined in the period (2003-2005). However, the percentage remains fairly weak.

The Relationship Between Growth and Unemployment:
It is noticeable that a significant correlation exists between growth and changing rates of unemployment. High rates of growth indicate the market need for additional labor to be employed from the surplus of the labor force. On the other hand, financial recession increases rates of unemployment due to job loss. It has to be highlighted that there is a weak relationship between the growth rates and unemployment rates; if economic growth gets increased by, for example, 2.0 %, it does not mean that the unemployment rate gets decreased by 2.0%. It is found that the same rates of economic growth do not have the same impact on unemployment in all countries.

The Relationship Between Growth and Unemployment, a Case of Jordan: As for the relationship between growth and unemployment in Jordan, like some Arab countries it suffers from the abnormal rise in the unemployment rate, consequently affecting development and openness in the Jordanian economy. Analyzing growth rates and unemployment for Jordan shows the direction of the high growth rate and relative decline in the unemployment rate in the period (2006-2011).

According to the available data on growth rates for the period (2006-2011) and unemployment for the same period, the following findings given in Table 4 are introduced by adopting simple model of Okun.
Changing rates of unemployment shows that the natural growth rate for the Jordanian economy is about 5.90% which is the required ratio to keep the current unemployment rate constant. On the other hand, the Jordanian economy growth rate must achieve up to 8.49% to reduce unemployment rate in Jordan; for year 2011, it was 12.50% whilst the proportion of unemployed males was 10.4% whereas for females was 21.7%.

**Growth Rate of GDP:** Table (5) shows the GDP of Jordan at market prices estimated by the IMF. Notice that the figures reported are in millions of JD.

**CONCLUSION**

It is important to highlight the relationship between unemployment and economic growth, which reveals the available opportunities for developing the economy. It also reveals the social development and who to deal with efficiently and effectively to contribute to increasing economic growth rates. The high rates of economic growth and the decline in the unemployment rate do not confirm the existence of strong relationship between growth and unemployment. Despite the rate of growth is positive, it is not possible at present to reduce unemployment rates significantly in some Arab countries such as Algeria due to restructuring the Algerian economy which relies heavily on growth in the hydrocarbon sector, which despite its importance does not create jobs in large numbers. For Jordan, the finding of this study does not apply across years.

It is recommended to separate policies of support growth and policies of reduction unemployment rates. That is because the first policies are dependent on government spending, while the second ones on encouraging investment to create job opportunities.

**REFERENCES**