# An investigation on seasonal changes of urban population employment in Iran

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#### **Extended** abstract

#### Introduction

Cities are considered as the engines of economic growth and social development; they are also the key nodes of capital accumulation, reinvestment in new sectors, and focal points of the development of specialized services (Daniels, 2004). The employment aspect is easily overlooked in urban development strategies (Van Empel, 2008). The experience of industrialization in developed countries indicates that increase of employment in economic sectors have been one of the important indicators of economic growth (Zarra nejad and Montazer hojjat, 2004). It is necessary to understand the economic structure of cities planning in all levels including urban, regional and national, and land use analysis (Farhodi and Mohammadi, 2006). Employment is one of the most important channels through which economic growth can be translated into poverty reduction and less income inequality (Herman and Georgescu, 2012, 407). In this way, the study of workers of triple economic sectors is of great importance; the identification of each sector in the structure of worker population of regions is useful to economic planning for their future development (Ghafari et al., 2011). Regarding the importance of this matter, this paper attempts to study periodic changes of urban population employment in economic parts in 24 seasonal periods since spring 2005 to spring 2011. This study also makes a comparative analysis of employment situation of the provinces of Iran and finally explore the employment relationship among different economic sectors.

## **Theoretical foundations**

Historical structure of economic sectors about employment contributions indicates a decrease in agriculture and industry and an increase in service sector; this evolution has mostly began since 1950 and accelerated in recent decade; so that the employment share of service sector in the economy of developed countries in recent years has been 60-70% in average. Iran has also experienced this event and observed an increase in the employment rate of service sector and a decrease in agriculture and industry (Ghavidel and Azizi, 2008). However, as the result of

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globalizing economy and expansion of service sector, the employment rate of this sector has been largely developed and the economic structure of developing countries has been changed. The trend of transition of employment from agriculture sector to industry and then to service sector caused more attention to service sector, so that agricultural foundations are decreasing while service foundations are increasing (Mirzaei and Aghajani, 2009).

Employment and its related indicators show population economic quality, so that many savants in development and economic science count the employment indicator as measurable pulse of economic health or stagnation (Ghafari et al., 2011). However, it is necessary to observe indirect employment besides direct employment of different economic sectors (Esfandiari and Tarahomi, 2009). Employment is central to urban poverty reduction and that inclusive social dialogue is a first step in tackling this (Van Empel, 2008, 181).

## Methodology

To explore employment situation and give clear view of vicissitudes trends of the provinces during the studied period, the assessment of provinces employment changes has mainly carried out in comparison with the changes in national level. For this purpose, we used the third part of shift-share model to determine the economic situation of a province in comparison to national level. This paper also considers the relations among economic triple sectors. The analyses were done by Shift-share model, descriptive statistics, Pearson correlation coefficient and cluster analysis. The graphs of the trend of employment indicator changes in economic sectors and the maps of spatial distribution of provinces were represented.

#### **Results and Discussion**

To clarify economic situation of the provinces of Iran, the shift-share indicator of economic sectors, named C in this study, including agriculture ( $C_a$ ), industry ( $C_i$ ) and service ( $C_s$ ) was calculated for each province in different seasonal periods during 2005-2011. In agriculture sector, in four periods Tehran has had maximum amount of C<sub>a</sub> among all provinces. The province of Hormozgan has gotten the highest amount in another three periods. At next stage, each of provinces of Lorestan, Khorasan-e Jonubi, Mazandaran, Sistan and Baluchestan, Qom and Ardebil have experienced maximum amount of Ca in the two periods. The minimum rate of this indicator has had frequencies in some provinces; so that the minimum value of  $C_a$  is to the province of Guilan in the four periods; Tehran in three periods and each of provinces of Khuzestan, Kohkiluye & Boyerahmad, Golestan, Ilam, Khorasan-e Jonubi and Kermanshah have experienced the minimum rate in two periods. In industry sector, the most frequency of maximum amount of C has belonged to Hamaden and Hormozgan which got the maximum rate in the three periods in comparison to other provinces. The provinces of Ilam, Khorasan-e Jonubi, Kermanshah and Kordestan have experienced the highest C<sub>i</sub> in two periods. The province of Hamadan experienced the maximum rate in three periods and the minimum rate has same frequencies. Each of the provinces of Khorasan-e Jonubi, Ilam, Kohkiluye & Boyerahmad, Kerman, Bushehr, Fars, Kordestan and Sistan & Baluchestan have gotten the minimum amount of  $C_i$  in two periods. In service sector, the provinces of Semnan and Kordestan in three periods, and Kohkiluye & Boyerahmad, Hamadan, Azarbayjan-e Sharghi, Kerman and Fars in two periods have gotten the max amount of employment indicator. The min amount of C<sub>s</sub> was gained for Kohkiluye & Boyerahmad and Kerman in three periods, and Zanjan, Khorasan-e Jonubi and Ilam in two periods.

The result the correlation coefficient between  $(C_a)$  and  $(C_i)$  shows that in 14 provinces this correlation is weak and negative; there is medium and negative correlation between  $(C_a)$  and  $(C_i)$  in 6 provinces; for 9 provinces is weak and positive and finally, for one province is medium and positive. The coefficient of correlation between  $(C_i)$  and  $(C_s)$  has different condition; so that, in 10 provinces there is strong negative correlation between  $(C_i)$  and  $(C_s)$ , in 16 provinces it is negative and relatively strong, in two provinces this correlation is weak and positive, and in two provinces this is medium and negative. The coefficient of correlation between  $(C_s)$  and  $(C_s)$  and  $(C_s)$  and  $(C_s)$  and  $(C_s)$  and in two provinces the coefficient of correlation between  $(C_a)$  and  $(C_a)$  an

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in provinces of Iran are as follows: it is weak and negative in 12 provinces, relatively strong and negative in 4 provinces, medium and negative in 11 provinces, and finally it is weak and positive in three provinces.

## Conclusion

The repetition of getting max and min amount of economic indicators specially in same seasons of different years, the continuous increasing and decreasing trends of employment rate of a region in different economic sectors in comparison to national level, the strong positive or negative correlation between employment rate of different economic sectors in some regions, the high changes of domain in employment rate in different seasons, and the spatial distribution of different economic indicators in country are the main issues studied in this paper. It is necessary to consider these issues in economic planning for regions.

To obtain deeper understanding about economic situation of regions in the way of more effective planning of employment and production, following issues would be useful:

- Permanent employment, incomplete employment and informal employment in each of the economic sectors

- The causes and factors affecting growth or decline of the position of regions in each of economic sectors in comparison to national level

- Transfer of human force from one sector to other, and analysis of its causes and effective factors

- Inter-regional and intra-regional transfer of human force in different economic sectors

- The effect of time necessities on the periods of activeness and stagnation of different economic activities

Keywords: economic sectors, employment, Iran, seasonal periods.

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