

Knowledge Economy And Effect On Women' S Employment In Turkey

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Abstract

In recent years, information and communication technology has changed remarkable by effect of globalization movement that occurring in the world. This changing also affected world economy significantly at the same time. Nowadays the new economic relations based on information technologies, such as labor and capital have reduced the importance of production factors and information has been the most important elements in the production factors. Continuously variation in technology with the creative power of information causes a change in the employment parallel. The main purpose of the study is to examine how information and communication technologies have changed the direction of the woman's employment. Along with the development of information and communication technologies, computer and communication tools take place of the labor force could be decreased the number of employment, may also increase with the emergence of new business opportunities. Like many other developing countries, Turkey is implementing various projects and taking some steps to adapt and take advantages of benefits of the knowledge economy. With all other economic variables women's employment is also affected by the steps thrown and this response has socially importance. This paper aims to investigate Turkey's harmonization process in the knowledge economy and how knowledge economy impacted on female employment in Turkey and make some assumptions for future.

Keywords: Knowledge economy, Woman's Employment, Unemployment, Turkey's Economy

1.INTRODUCTION

From primitive society to present, highlighted changes in the all life was formed by the accumulation of knowledge. The center of civilization moved from primitive society to agriculture sector by years. Over time, the importance of the agricultural sector has decreased and industrialization replaced of agricultural sector by the improving of technology. After the process of industrialization in the knowledge economy has been the only representative of civilization. According of Toffler, agricultural sector is the first stage of economic development, after that industrialization period took place, in the last stage service economy has emerged (Toffler, 1970).

Knowledge economy is production and services based on knowledge-intensive activities that contribute to an accelerated pace of technical and scientific advance, as well as rapid obsolescence. The key component of a knowledge economy is a greater reliance on intellectual capabilities than on physical inputs or natural resources (Powell and Snellman,

2004). Many sectors have key input for itself. In an agricultural economy land is the key resource. In an industrial economy natural resources, such as coal and iron ore, and labor are the main resources. A knowledge economy is one in which knowledge is the key resource. It is not new how knowledge is important for economy (Houghton and Sheehan, 2000).

Knowledge economy is a revolution for the world's gaining a new dimension to itself. In the whole world all limits are eliminated and economic, cultural and social life became accessible anytime, anywhere by the effect of knowledge economy with information and communication technologies. When developed countries are using possibilities of information and communication technologies in the most effective way, developing countries staying behind the time for catching new technologies. Turkey begins to take a part in the global economy re-integrated micro- and macro-economic changes in this process by the advantages of information and communication technologies. This paper aims to investigate how women employment affected by the knowledge economy and information and communication technologies taking place in Turkish economy. This paper also examines if women employment went up or went down as a result of using knowledge economy in economic activity intensively.

2. Structure of Employment in Knowledge Economy and Literature Review

The new economic relations which based on the knowledge economy is reduced the importance of factors of production such as labor and capital, notwithstanding information has been the most important element for production factors. People needed financial capital in the past but today they needed knowledge, patents, copyrights, information assets, brain power and experience except financial capital (Akolaş, 2000). Technology is changing by the creative power of information this also causes a parallel change in employment. Depending on technological developments, new industries have emerged and nature of the personnel employed has also changed. Information technology and communications sector has controlled market conditions in the present and as a result of this change certified importance of information (Yeloğlu, 2004). This situation leads to change in the qualities of those who were employed. The development of information and communication technologies help people to show their expertise and skills. If a country does not make investment to improve human capital that country will have inequality for using information and communication technologies in the global world.

Developments in computer and communication technologies are forcing businesses to follow the development in perspective of cost, time, quality and service issues (Şahin, 2010). When they are following this development they are also changing the quality of their employment. The increasing prevalence of information and communication technologies are increasing demand for qualified people and also decreasing demand for unqualified people.

Toffler stressed "the technology is feeding itself in three stages, the first one is creativity and the second one is practical applicability, last one is diffusion of technology to society. (Toffler: 1970). It may take certain time for work force to conform to changes in the employed labor force. Developments of internet and information technologies are named as the new economy in the 1990s in America. Then labor productivity has increased in EU and unemployment rates remained low compared to previous years (Freeman, 2002).

Women workforce in the service sector was 92% and male workforce was 74% in 2008 in the world. In addition to woman workforce more than male workforce in service sector, male

workforce more than female workforce in science, engineering and technology sectors (www.wrc.org.uk. Accessed 04/26/2012). Employment rate of female labor in the agricultural sector went down to 42.2% from 50% in Turkey between the years 2004 and 2011. At the same period employment rate of male labor in the agricultural sector moved to 18% from 21%. Employment rates of male in the industry sector raised up to 31% from 28% despite of fact that female employment rate went down from 16% to 15%. When the service sector is examined we show that female employment increased from 33% to 42%. Male employment in service sector remained around 50% at the same period (<http://www.tuik.gov.tr>. accessed: 26.04.2012). Atik and Tombak (2012) examined women employment in knowledge economy and employment structure in turkey compared to US, Japan, EU, BRIC countries. They figure out that women employment could not take enough place in knowledge economy, women mostly work in agriculture sector in Turkey. Atik and Altinparmak (2010) tested contribution of knowledge economy to employment in Turkey compared with 27 EU countries. As a result of analysis, female labor force more employed then male labor force. According to the paper contribution of knowledge economy to employment is about 28,7 in 2008. Freeman (2002) tested relationship between earnings per hour and computer usage in the early 2000's. he found positive relationship between variables. Yeloğlu (2004) compared Turkey with EU countries about variables of knowledge economy and changing in years between 1995 and 1999. He figured out Turkey similar to North European counties about knowledge economy. Arslan (2010) investigated the relationship between woman employment and knowledge economy. They used panel data analyses to test relationship between the years 2000 and 2009. According to results, significant relationship has been identified between the variables. In addition it has been found long term causality from knowledge economy to woman employment.

3. Employment Structure of Women Labor Force

In the late of 1970's economy began to liberalization by the effect of development in the computer and liberal views. at the beginning of the 1990s new media, digital networks and information and communication technologies replaced of electronic age. This innovation brought by the knowledge economy leads people to do all transactions through a virtual environment. The internet users and ratio between total population and internet users in Turkey are given in following table comparison with other countries.

Table 2. 1. Internet Users and Population Statistics for 2011

Countries	Estimated Population in 2011	Internet Users	Ratio of Total Population
USA	313,232,044	245,203,319	78.20%
Japan	126,475,664	99,182,00	78.40%
Germany	81,474,834	65,125,000	79.90%
France	65,102,709	45,262,000	69,50%
Italy	61,016,814	30,026,824	49.20%

Spain	46,754,824	29,093,984	62.20%
Turkey	78,785,548	35,000,000	44.00%

Source: <http://www.internetworldstats.com/top20.htm>

Some countries where highest numbers of internet users are given in the table above. Turkey ranked 10 from 20 countries in 2011 also Turkey ranked 11 from 20 in 2010. The woman internet users in Turkey are shown in the table following over years.

Table 2. 2. Internet and Computer Using Rates for women in Turkey between 2004 and 2011

Years	2004	2005	2007	2008	2009	2010	2011
Numbers of Internet Users	6,1	5,6	20,7	26,6	28,0	31,7	35,3
Numbers of Computer Users	8,2	8,0	23,7	28,5	30,0	33,2	36,9

Source: <http://www.tuik.gov.tr>

After 2005 woman internet users are increased rapidly. It is reached 35,3% in 2011. In the same way numbers of woman computer users are increased rapidly. It is reached 36,9% when it was just 8,2% in 2004.

Table 2. 3. The Relationship between Education Level and Computer Usage For Woman in Turkey

Years	Not Graduated	Elementary School	Secondary School	High School	Faculty
2004	0,3	0,4	6,0		26,2
2005	0,4	1,2	16,9		64,9
2007	0,3	5,3	30,1		82,4
2008	1,2	7,1	38,3		85,5
2009	1,3	9,3	47,1		86,7
2010	1,6	10,6	48,5	68,2	89,9

Table 2.3. showed that women who do not graduated from any school used computer almost zero percent but this rank reached just 1.6 percent in 2010. Women who graduated elementary school use computer more than not graduated ones but increased from 0.4% to 10.6% in six years. For the secondary school level almost half of women used computer in 2010. For high school level we could not find more data but table showed that 68,2% of women used internet graduated from high school. This rank is reached high level for the woman who graduated faculty. It was almost 90% in 2010. That is quite sure number of woman who use computer increased after 2004 rapidly.

Table 2. 4. The Relationship between Education Level and Internet Usage For Woman in Turkey

Years	Not Graduated	Elementary School	Secondary School	High School	Faculty
2004	0,2	0,2	3,6	8,3	22,6
2005	0,2	0,3	9,8	27,1	57,9

2007	0,2	3,9	23,3	49,1	80,7
2008	0,8	5,9	35,6	57,0	85,1
2009	1,1	7,7	43,5	62,4	85,8
2010	1,1	9,6	46,2	66,4	88,8

Table 2.4. showed that Turkey has same characteristic for Computer and internet usage for woman. Both of table almost have same ranks. Woman who graduated from faculty using internet more than 80% after 2005.

The use and access of women to information and communication technologies is lower than in men. Reasons for this problem;

- Low level of literacy rate and educational level
- Women have less time because of her role in society
- Woman have less financial resources in society
- Geographical location: women are living in rural areas more than men in developing countries.

Traditionally, the sectors separated such as agriculture, industry and services.

Table 2. 5. Female Employment Rates in Agriculture-Industry-Service Sector

Years	Agriculture	Industry	Service
2004	50.8	16,1	33.1
2005	46.3	16,6	37.0
2006	43.6	16,4	40.0
2007	42.7	16,1	41.2
2008	42.1	15,7	42.2
2009	41.6	15,3	43.1
2010	42.4	15,9	41.7
2011	42.2	15,2	42.6

Woman labor force in agriculture was 50.8% in 2004. Then woman labor force decreased by 8 percent over years and it was 42,2% in 2011. Woman labor force in industry did not change much. It was on the line between 15-16%. Woman who worked in service sector increased by 9 percent at the same period and reached to 42,6 in 2011. This table also showed 8 percent loss in agriculture moved to service sector for women employment.

3.1.Result

In recent years, the technological developments have led to a new social and political dynamics. Activities of the economic units are faster and cost effectively with effect of information and communication technologies. Information is a today's most important

production factor. Source of value creation in the knowledge economy are education, information technology and science.

Knowledge economy moved location of business areas to virtual environment based on technology. As a result of this, the way of employment has also changed using. Using information became more important than using physical strength to employee. In this case government must generate some policies for individuals to adjust them to conditions that knowledge economy brought. Women's employment is an issue that needs to be emphasized even more important. Women, non-governmental organizations to adapt to these improvements in technology, the state has to undertake the activities. It is important problem for developing and underdeveloped countries that women were left out of the labor force. Woman in society mostly has not and has no money for developing her personal skill. this issue important especially for their competitive strength against male workforce in knowledge economy. Woman work force mostly employee in agriculture sector and woman work force increased in the last decade in turkey but still so far from developed countries. Government should make policies to increase using of information technologies. Otherwise it could be so hard for the woman change their work sector and employee in knowledge sector. Government also leaves some budget for developing personnel skills. At the same time woman adopt herself to technology age to employee in knowledge sector. Developing countries should follow new technology age's requirement and adopt it to economy for catching developed countries.

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