Social Capital and Lifelong Education in the European Union and Turkey

Assoc. Prof. Dr. Bahar BERBEROĞLU
Anadolu University
Open Education Faculty
Eskişehir, Turkey.

Abstract

One of the determiners of the development levels among the countries is the social capital assets they own. Social capital is considered as a very significant infrastructure element in terms of achieving and maintaining the economic development. On the other hand, developments of a country's social capital assets directly depend on the success of the country in lifelong education. In our study, European Union (EU) countries and Turkey were evaluated and compared in respect of social capital assets and lifelong education opportunities. We discovered by means of the variables we considered in our analysis that, Turkey is in a better position than many European countries in social capital. As a result of our k-means cluster analysis we observed that Turkey surpassed some important European Union members substantially. Also European Union members that have the best position in our analysis are the United Kingdom and Germany.

Keywords: Social capital, Lifelong Education, European Union, Cluster Analysis, k-means Cluster Analysis

1. Introduction

Developing production techniques, progress in the technology, increase in the international competition, steadily growing global and regional economic crises and conjuncture fluctuations caused an unemployment problem in developed industrial countries. At the same time developing countries, where investment and education opportunities are more restricted, faced with an increasing unemployment problem because of their high population growth rates. This case appears as a significant social, political and economic problem threatening all the economies in general. As known, over the recent years due to the increase in the tendency for globalization, unemployment has escalated and become a continuously increasing important problem in both of the developing and developed countries. Therefore, it has been the first objective of many countries to decrease or partially eliminate the unemployment (Kayacan & Alkan, 2005). These countries felt the need to develop their social capital by necessity because they noticed while struggling with unemployment that this problem resulted from the attributes of the existing labor force, and saw that development of the social capital could only be achieved with lifelong education.

Moreover, employment area of the conventional factory workers was eliminated when robots began to be used within the computer-aided automation process (Rifkin, 1996). Thus, rapid changes experienced in the world due to the globalization have caused the emergence of new professions. With these professions, a new labor force model has been needed in terms of employment.

Technology is intensively used in these new employment areas in temporal compliance. Accordingly, the 'labor force' or 'workers' of this global period and society must act and develop themselves in line with this fact, because information has become the most significant input of the traditional labor-intensive work now. In the current global period, production of the information of a good has become much more important than its own production (Dikkaya & Özyakışır, 2006).

Extraordinary developments and rapid change in information and communication technologies have caused information explosion and spread worldwide. As a result, as we stated before, our current century is called information age and the societies that adapt themselves to this age are named as information societies. While the information produced in these societies creates new technologies, these technologies enable the information to spread and be shared more quickly and more easily every other day.

In order to become successful individuals in information societies, people must effectively use the lifelong learning opportunities, which are presented in these societies, in every aspect and during their lives. Societies and individuals, who can have access to the information needed for the solution of a problem and adapt this information to their own problems and positions, can maintain their success thanks to lifelong learning, because the understanding which stressed that the knowledge gained by the individuals during the classic learning would be valid, sufficient and used for their whole life has completely disappeared. In the information age, duration of emergence of very significant developments and changes is much shorter than the average human lifetime (Berberoğlu, 2010a).

Particularly industrialization success of the countries is closely related to the fulfillment of the human capital investments, which will create an educated labor force with a high skill level, at a certain speed and efficiency besides the physical capital accumulation (Şenses & Taymaz, 2003).

The concept of lifelong learning is defined as a supportive educational process that increases, improves and strengthens the knowledge, values, skills and understanding adopted by the individuals during their lives, moreover, helps with applying them to the real life. This concept is more explanatory and popular although it can be used in an identical meaning with adult education and continuous education. It is accepted in information societies today that education is not only a service received at certain ages and development periods but has turned into a service received for the whole life.

It is known that the most obvious attribute that distinguishes the information age, which considers the information as the most important capital (social capital-human capital), from the previous ages is the occurrence of continuous change at this age, very quick increase in the information together with this change and rapid loss of actuality in the available information. This case gives the lifelong learning prominence in the information age (Berberoğlu, 2010a).

In this study, we wanted to examine the concept of social capital in Turkey and the EU considering the social capital, education and lifelong learning relationships in the globalizing world. First of all, we touched upon the concept of social capital in the EU, and then, conducted non-hierarchical cluster analysis with the considered variables by adding Turkey into our dataset. Accordingly, we evaluated the superiority of the countries to each other in clusters. We supported our analyses with the discriminant analysis. In Conclusion section, country comparisons and superiorities were enriched with graphics.

2. Social Capital and Lifelong Education

The idea which supports that education and teaching accelerated the economic growth by increasing the efficiency of the labor force through the development of skill and productivity capacity of the human resources, and the economic growth enhances the human development by increasing the health, educational and social expenditures through the income increase has gained significance (Grant, 1968; Çolak, 2010).

Continuation of the life of a living being firstly depends on its adaptation to the environmental conditions and the ability of re-adaptation to any kind of change that may emerge under these conditions. Giving appropriate reactions to the differentiating environment and adaptation to differentiating conditions is only possible with continuous learning. As for all the living beings, giving appropriate reactions to the changing conditions, learning how to adapt to the environment and obtaining new information continuously is a basic necessity for humans to maintain their lives. Thus, humans and other living beings cannot live for a long time without learning how to make use of their environment to fulfill their basic needs.

As known, people had to make decisions during their lives within the history on how to live and how to maintain their lives, because the most important difference separating humans, biological beings, from the other living beings is their social and cultural qualification. All the problems encountered by the individuals during their lives have been solved on the basis of these decisions. Undoubtedly, living quality and welfare of the people has definitely depended on the rightness of the aforementioned decisions. Because the most basic condition for making right decisions is to have correct information, lives of people must be filled with the concepts "continuously obtaining information and learning" so that people can reach the desired life quality. The most important means to provide the services of continuously obtaining information and learning, which are necessary for the individuals to have the life styles they desire, is the lifelong education. Education is generally defined as "the process of reinforcing the human personality" and "the investment in the human capital (social capital)".

Objective of obtaining information and learning can be fulfilled when education is sustained formally in a planned way at schools or informally in the individuals' environment of residence. However, informal education has a continuous characteristic while people generally benefit from the classical formal education in a certain time of their lives. But lifelong education can be considered as the complement or continuation of formal education systems (Berberoğlu, 2010a; 2010b).

Considering the expressions Social Capital or Human Capital again, these concepts were firstly used by Adam Smith within economics in the 18th century, started to gain great significance as of the mid-20th century as an economic concept and began to carry the name Social Capital without changing its meaning. Economists have stressed the importance of the labor force, education and specialization for achieving universal economic goals such as increase in the welfare and economic growth in a country since the first day. Therefore, they have started to use the concepts "human capital" and "social capital" instead of the expressions like quality of labor force or qualifications of labor force by adding the word "capital", which is usually considered as the rarest and most significant production factor, to the concept of labor force. The reason behind the general acceptance and significance of these concepts, which we discussed in terms of differences and completion of each other has been the emergence of a skill and ability stock (capital) that could bring high yield in the long term within economy as a result of the investment made in the general and professional education of the labor force.

Concepts of human capital and social capital are sometimes thought and considered equal. It is because the aforementioned concepts complete each other and cannot be distinguished easily. However, the following differences appear when attention is paid to the details of these concepts.

First of all, it is seen that the object of the human capital is individuals, that is, labor force, and the object of the social capital is the level of the relationship within the labor force. Similarly, source of the human capital is schools and lifelong learning, but the source of the social capital is the social values and communicational opportunities besides education. Moreover, duration and quality of the education is used for the assessment of the human capital while factors like behaviors, values, participations, memberships and confidence level are used for the assessment of the social capital. Interaction is direct in the human capital but complicated in the social capital. As a result of all these differences, developments, in other words, improvements in the human capital directly enables an increase in the income and efficiency within the economy, and indirectly influence the labor health and civil activities positively. Increases in the social capital enhance the social commitment and economic success of the labor force (Karagül & Masca, 2005).

Today, social capital (human capital) is defined in general terms as the combination of the knowledge, skills, learning, which people gain through general and professional education, and their natural talents and abilities. This concept is mostly approached in the narrow sense by the microeconomic units and these units see the concept of human capital as the sum of the knowledge, skills and talents of the labor force which affect the performance of a firm or a certain sector directly.

As known, a significant proportion of the labor force has formed a new and big labor mass, which we can call information workers, by shifting from the industry (manufacturing) sector to the employment areas that develop as a result of the settlement of the information economy in most of the developed countries over the last 20-30 years. Success of the labor force, which is employed in this developing information economy sector, and accordingly the countries that have adopted the information economy largely depends on their social capital. In other words, economic success of the labor force and countries has become directly dependent on the education, qualification, skills and talents of the labor force (Berberoğlu, 2010b).

Consequently, especially developed and developing countries make an effort to raise their goal of increasing their social capitals perpetually. Aforementioned countries considers the lifelong learning as the most significant way of achieving a goal and make decisions considering the concepts of social capital and lifelong learning while regulating all of their economic policies and managing their economies.

3. Social Capital of European Union and Turkey

EU acknowledged the 'White Paper' which was prepared at Brussels Summit in 1993 and determined the new strategy in order to overcome the problems like the increase in unemployment generally in all of its members, decreases in its growth rates and the decrease in its competitive power against the USA and Japan. White Paper was prepared for taking measures like giving importance to the professional education across the Union, increasing the effectiveness of the labor markets and re-regulation of work hours to prevent the unemployment.

Besides, it was foreseen here to determine a strategy on increasing the share of the physical capital instead of decreasing the labor cost for the purpose of enhancing the competitiveness of the EU and accordingly to give significance to the Research and Development(R&D) activities (Tuzcu, 2002; Sağlam, Özüdoğru & Çıray, 2011). The statement 'Unemployment is the most significant cause of poverty itself' was included in the declaration presented by the Economic and Social Council, the European Parliament and the Committee of the Regions in 2000.

Thus, the EU focused on the goal of increasing the employment in the field of social policy. The purpose of this declaration can be summarized as enabling a humanitarian living quality and standard for everyone in an active and healthy society. Aging of population, deep technological changes, change rate of the industry and globalization cases must be taken into account for the achievement of these goals of the EU. For this purpose, new strategic goals, 'which would make Europe gain more quality, create more employment, have larger social integration and have the competition power and dynamic information economy that would achieve sustainable economic growth', were determined in the declaration. In case of the achievement of the goals foreseen in this declaration, the goal for Turkey to become a member of the EU will mean adaptation to globalization, integration into the contemporary world and being in the front line in terms of development (Kayacan & Alkan, 2005).

In Lisbon 2000, the objective of the EU was clearly expressed as 'having a competitive and dynamic information-based economy, enabling sustainable development including more social adaptation by creating more quality jobs' (European Commission, 2000).

2001 European Employment Guidelines state 'Agreement on a new organizational structure which includes flexible working regulations, is efficient and competitive, builds the necessary balance between flexibility and security and increases the attributes-quality of the jobs'. These guidelines presented three objectives:

- Improvement of employability and lifelong education,
- Flexibility and security or flexicurity,
- Mobility in the labor market, adaptation to innovations and change.

Moreover, member states will ease the adaptation of the workers and establishments to the change, consider their flexibility and security needs and explain the social parties-partners their key roles in this sense. Member states will take the precautions which affect the employment of the groups that have difficulty in entering the labor market and dynamics of the labor market, restrict the employment laws, develop the social dialogue and support the social responsibility of the establishments and the other appropriate precautions (Çakır, 2009).

Besides, the EU accepted the 'Employment Policy Manual' in 2005. It was stressed in this manual that the economic growth of the EU depended on higher skills of the labor force and improvement of the educational level and skills of the labor force was important. Therefore, the manual aimed at the determination of high-quality learning standards by the member countries of the Union and fulfillment of these standards, an increase in the educational opportunities at every level, enabling young people to select the flexible learning opportunities and non-separation of the educational system from the labor market (Vorkink, 2006).

In this sense, lifelong learning and open and distance education doubtlessly have a very special significance and even appear as a single means. The Employment Package, which came into effect in April 2012 within the scope of the European Employment Strategy, is a series of political documents examining how the EU employment policies and the other policy spaces supporting a smart, sustainable and extensive growth cross each other. This package defines the possible fields where the EU has the most job opportunities and the most effective ways to be used by the EU countries for creating more jobs. It is aimed to accelerate the job formation in the economy, to put information-communication technologies which are rich in work and potential sectors such as green economy and healthcare services into operation and to prompt the EU funds for job formation with the Employment Package (Cengizçetin, Uludağ & Bozkurt, 2014- 2015).

Besides the European Employment Strategy, some other projects are implemented in the EU countries to increase the employment. Projects for young people stand out among the projects of certain groups, which have trouble in employment, aiming at increasing the employment. The Rosetta Plan in Belgium, New Method in the GB, AVE (Advanced Vocational Education) in Sweden, JUMP (Jugend Mit Perspective) - The German Immediate Action Program for Education in Germany and New Services New Jobs Program in France can be given as examples for the projects regarding young unemployed people.

Apart from these, projects were implemented for women like Supporting the Female Entrepreneurship in Sweden and Prevention of Gender-Oriented Digital Discrimination in the Field of Employment and Skills in Germany. There are Inserjovem and Reage Attempts in Portugal and Qualification Gaining Centers in Belgium to provide the workers with qualifications (Ministry of Labor and Social Security, European Union Coordination Department, 2008; Eser & Terzi, 2008).

Another significant factor in sense of human capital is the brain drain. EU is quite interested in the developing countries which experience brain drain, because brain drain is a sign of economic and political recession according to the EU. The problem of brain drain in the candidate countries of the EU is an important factor which disrupts the development of these countries. The EU policy related to the migrants from developing countries generally prevents the unqualified labor force. However, it is open to specialized and talented labor force. While brain drain occurs from countries like Yugoslavia, Albania and Romania, Germany has usually been a country open to the brain drain (Şimşek, 2006).

4. Variables Considered in Our Analysis

There are 29 countries in our analysis. These are Turkey and the EU member states. Hence, countries that were included in the analysis were put in order as follows: Belgium (B), Bulgaria (BG), Czech Republic (CZ), Denmark (DK), Germany (D), Estonia (EST), Ireland (IRL), Greece (GR), Spain (E), France (F), Italy (I), Cyprus (CY), Latvia (LV), Lithuania (LT), Luxembourg (L), Hungary (H), Malta (MT), Netherlands (NL), Austria (A), Poland (PL), Portugal (P), Romania (RO), Slovenia (SLO), Slovakia (SK), Finland (FIN), Sweden (S), United Kingdom (GB), Croatia (CR) and Turkey (TR). The values of the variables used in our analysis are the values calculated for the year 2014.

In our analysis, we firstly dealt with the following variables which we considered in relation to social capital:

- lfsijhha: Population in jobless households-annual data
- unerta: Unemployment rate by sex and age groups-annual average, %
- uneltua1: Long-term unemployment by sex- annual average, % (Long - term unemployment in % of active population)
- uneltua2: Long-term unemployment by sex- annual average, % (Long - term unemployment in % of unemployment)
- lfsisupagea: Supplementary indicators to unemployment by sex and age groups- annual average, 1 000 persons and %
- lfsisupedua: Supplementary indicators to unemployment by sex and educational attainment level- annual average
- lfsisupnata: Supplementary indicators to unemployment by sex and nationality- annual average
- unenba: Unemployment by sex and age groups- annual average, 1 000 persons
- lfsiacta: Population, activity and inactivity – annual averages (Active population)
- lfsiempa: Employment (main characteristic and rates) – annual averages (Employment rate (20 to 64 years))
- rlfsiempa: Employment (main characteristic and rates) – annual averages (Total Employment (resident population concept)) (EUROSTAT, http://ec.europa.eu/eurostat/data/database)

5. Methodology and Application

In our study, non-hierarchical k-means cluster analysis, which are among the multivariate statistical analysis techniques, were used. Cluster analysis is an objective method developed to evaluate the structural features of the observations (Kalaycı, 2008). In the analysis, inter-cluster heterogeneity and intracluster homogeneity reach the maximum level. While the members of a cluster present similarity among each other, they don't resemble the members of the other cluster (Nakip, 2006).

11 variables related to social capital, which were obtained from the website of Eurostat and constitute the data set including 28 EU countries and Turkey, were subjected to an analysis with the non-hierarchical k-means technique. In this analysis, cluster number was determined as k=2, 3, 4 and repeated 3 times.

The fact that the number of clusters needed to be 3 or 4 was identified with the formula k = (n/2)1/2. But when k=4, it was realized that this wouldn't be the correct cluster number as a country (Germany) remained alone. Therefore, the ANOVA table within the analysis conducted with k=3 is given below:

Table1: ANOVA table that belongs to all the variables

	Cluster Mean Square	df	Error Mean Square	df	F	Sig.
lfsiacta	1768571552.676	2	10454932.542	26	169.161	.000
lfsijhha	9.538	2	6.720	26	1.419	.260
lfsiempa	186.133	2	34.713	26	5.362	.011
unerta	29.919	2	28.853	26	1.037	.369
unenba	18718813.751	2	400197.319	26	46.774	.000
uneltua1	11.369	2	16.719	26	.680	.515
uneltua2	33.110	2	216.330	26	.153	.859
lfsisupagea	3.900	2	3.373	26	1.156	.330
lfsisupedua	2461271.204	2	47767.267	26	51.526	.000
lfsisupnata	3426014.720	2	62343.352	26	54.954	.000
rlfsiempa	1467185919.105	2	9544785.046	26	153.716	.000

It is seen when above-stated Table 1 ANOVA table is checked that the variables lfsijhha, unerta, uneltua1, uneltua2, lfsisupagea were insignificant by 5%. Also it has a high correlation between the variables rlfsiempa and lfsiempa. So we exluded rlfsiempa variable. When we excluded these insignificant variables from our analysis, the resulting ANOVA table appeared as follows:

Table 2: ANOVA table that belongs to Significant Variables

	Cluster MeanSquare	df	Error MeanSquare	df	F	Sig.
lfsiacta	1768571552,676	2	10454932,542	26	169,161	,000
lfsiempa	1467185919,105	2	9544785,046	26	153,716	,000
unenba	18718813,751	2	400197,319	26	46,774	,000
lfsisupedua	2461271,204	2	47767,267	26	51,526	,000
lfsisupnata	3426014,720	2	62343,352	26	54,954	,000

Thus, these 5 variables are statistically significant by 5%. According to these 5 variables, the correct clustering emerges as follows:

Table 3: Countries and Their Clusters

CLUSTER (k=3)	Number of Cases in Each Cluster	Countries
1	5	E, F, I, PL, TR
2	22	B, BG, CZ, DK, EST, IRL, GR, CR, CY, LV, LT, L, H, MT, NL, A, P, RO, SLO, SK, FIN, S
3	2	D, GB

We find 0.114>0.05 when we apply the Kolmogorov-Smirnov test to the distance values in order to understand whether the cluster distances were distributed normally. This points at the normal distribution of the distances. We use the discriminant analysis in order to realize whether the correct discrimination has been obtained according to the non-hierarchical k-means technique, that is, whether the clusters have been formed correctly. So the clusters were classified correctly by 100%.

Table 4: Classification Success of the Clusters

			1	2	3	
Original	Count	1	5	0	0	5
		2	0	22	0	22
		3	0	0	2	2
	%	1	100,0	,0	,0	100,0
		2	,0	100,0	,0	100,0
		3	,0	,0	100,0	100,0

6. Conclusions

5 social capital variables we obtained in our research are as follows:

- **lfsisupedua**: Supplementary indicators to unemployment by sex and educational attainment level- annual average
- **lfsisupnata**: Supplementary indicators to unemployment by sex and nationality- annual average
- **unenba**: Unemployment by sex and age groups- annual average, 1 000 persons
- **lfsiacta:** Population, activity and inactivity – annual averages (Active population)
- **lfsiempa**: Employment (main characteristic and rates) – annual averages (Employment rate (20 to 64 years))
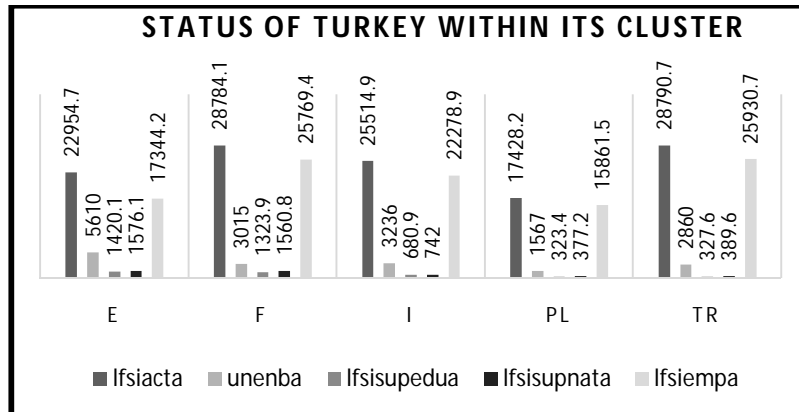
According to these variables, the EU members that have the best position in our analysis are the United Kingdom and Germany. They are followed by Spain, France, Italy, Poland and Turkey, which is proceeding towards candidateship for the EU. We realize it from the cluster distances.

Table 5: Distances between Final Cluster Centers

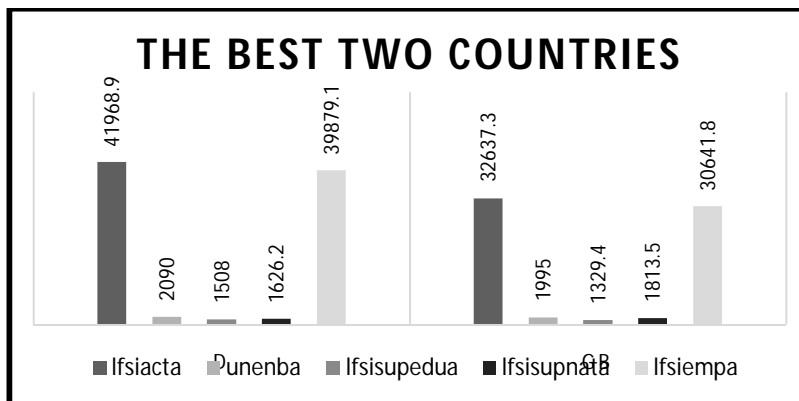| Cluster	1	2	3
1		28392,810	18775,826
2	28392,810		46928,158
3	18775,826	46928,158	

The second cluster indicates the lowest group. The lowest cluster includes 22 EU countries: Belgium, Bulgaria, Czech Republic, Denmark, Estonia, Ireland, Greece, Croatia, Cyprus, Latvia, Lithuania, Luxembourg, Hungary, Malta, Austria, Netherlands, Portugal, Romania, Slovenia, Slovakia, Finland and Sweden.

Figure 2: Status of Turkey within its Cluster

In Figure 2, Turkey has the lowest values after France in its class in terms of the data related to Unemployment and the highest values according to the active population labor values. Especially in case of labor force between the ages 20 and 64, Turkey is observed with the lowest values. However, Turkey has a good position compared to many countries in the EU in respect of the discussed variables.

Figure 3: Status of the best: Germany (D) and United Kingdom (GB)

It is observed in Figure 3 that the United Kingdom surpasses only Germany as per the variable 'lfsisupnata: Supplementary indicators to unemployment by sex and nationality- annual average'. Germany has higher values than the United Kingdom when it comes to the other variables. Population is a very significant variable in case of social capital. Because Germany ranks at the top and closely followed by the United Kingdom, they both rank in the best country group.

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