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THE MAJOR ROLE OF EDUCATION, EDUCATIONAL LEVEL AND LIFE SATISFACTION. A COMPARISON BETWEEN GREECE AND TURKEY

Abstract

In this research, Greece, a European Union Member State since 1981, and Turkey, an Associate Member since 1963, are examined, analysed and compared regarding the differences between education levels and life satisfaction. This paper is a continuation of a previous paper, titled: "Cross Cultural Dimensions of Cultural Capital: A Comparison Between Greece and Turkey"[1]. As an introduction, a general overview of current Turkish and Greek economies is given. Gross domestic expenditure on R&D (GERD) of Turkey based on sectors and based on sources of funds is given in the graphics. Total GERD spending is basically located in the higher education sector in Turkey. The number of scientific publications has increased since 2000. Another R&D indicator is the number of patent applications, showing that the technological level of the country has considerably increased in Turkey. According to the results of the research, statistically there are differences between the two countries as regards education and life satisfaction factors of cross-cultural dimensions ($p<0.05$). Education levels are higher in Greece. Greek participants seem to be more satisfied with education, accommodation, health and social life.

Keywords: crossculture, Greece, Turkey, European Union, education, life satisfaction

1. Turkey

Turkey, one of the newly-developing economies of the world with current population of 75 million (TÜİK), lately realised the contribution of industrial design to the government policies for a sustainable development (Tezel 2011: 99). The industrialization period in Turkish history, a period characterized by Turkish own

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[1] Özçobanlar, Mehmet Ali (2015), 'Cross Cultural Dimensions of Cultural Capital: A Comparison Between Greece and Turkey', *Canadian Social Science Journal*, Canadian Academy of Oriental and Occidental Culture (CAOOC), Vol. 11, No. 4: 15–27.

patterns of production, was affected by the policies of the Customs Union with the EU (Tezel 2011: 99). Export subsidies and export-led growth of Turkey was fuelled by a devaluation period. The Customs Union Agreement, signed between Turkey and European Union in 1996, was aiming to the abolition of duties on all industrial products by both parties, excluding agricultural products and processed food. One of the results of this agreement was a kind of structural transformation in the trade between Turkey and the EU and the rise of the share of manufactures to a totally dominant position (Karabağ 2011: 1349). Agricultural products, including processed foods, were not included in the deal. As a result of this agreement, Turkey's production has increased into a completely dominant position. A structural transformation in trade between Turkey and the EU has also taken place (Karabağ 2011: 1349).

After the Customs Union, the issue of integration, as a focus point for the national development due to the unstable economic and political situation, has deteriorated, and more attention was paid to the industrial innovation, research and development divisions of the area (Tezel 2011: 99).

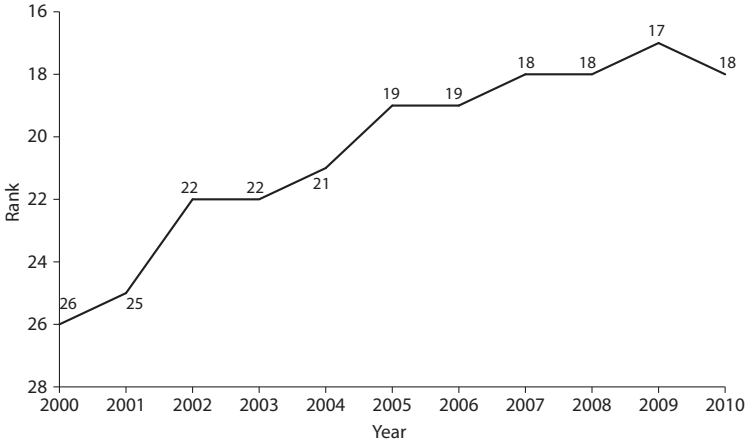
Despite the financial crisis that struck again Turkey in 2001 and despite a somewhat erratic performance, the average long-term growth remained strong resulting to the quadrupling of GDP from 1970 to 2005. During the same period there was also an increase in tertiary education, especially in engineering and science – for example the number of PhD students in mechanical engineering almost doubled between 2000 and 2010 (Karabağ 2011: 1349).

A country's level of development in science and technology R&D as an indicator (GERD) can be evaluated using the gross domestic expenditure. According to the OECD report, GERD and 9.6 billion USD in Turkey in 2010 constituted 0.84% of GDP. Annually between 2005 and 2010 GERD grew by 10.7% and were affected by little economic shocks. In 2004, the Turkish Research Area (TRA) implementation and public R&D budgets gave an impetus; the government's commitment to continuous STI and business R&D expenditure will quickly recover after the crisis. In 2010, the industry funded 45% of GERD, government and higher education funded 50% (OECD 2012: 396).

Since 2011, a new Ministry of Science, Industry and Technology (MoSIT) is responsible for STI policy design, implementation and co-ordination of R&D and responsible activities. The Scientific and Technological Research Council of Turkey (TUBITAK) and Turkish Academy of Sciences (TUBA) are affiliated to the Ministry. Evaluation policy has been reinforced and an interministerial co-ordination board has been set up to review all R&D, innovation and entrepreneurship support schemes under the presidency of TUBITAK (OECD 2012: 398).

Regarding the data are given by Turkish Statistical Institute (TurkStat) in between the years 2002–2011, gross domestic expenditure on R&D (GERD) based on sectors is in total GERD spending is basically in higher education sector. On the other hand, government sector spends the least among other sectors given such as business enterprise sector and higher education sector. Another point is that spendings of all sectors on GERD is increasing. According the following data by TurkStat, gross domestic expenditure on R&D (GERD) based on sources of funds is in between 2003–2011 the distribution of sources for GERD shows an increasing trend. In addition, it is also shown that the contribution of foreign sources, including FDI, has the smallest proportion in source distribution (in year 2003 – 148 million current purchasing power parity (PPP) in USD and 376 million current PPP USD in 2011). However, government (1.009 million current PPP USD in 2003 and 3.247 million current PPP USD in 2011) and industrial contributions (973 million current PPP USD in 2003 and 5087 million current PPP USD in 2011) are higher than higher education contributions (in 2003, 665 million current PPP USD and 2.314 million current PPP USD in 2011). In 2008, the effects of the global crisis only had a small effect on industry. On the other hand, contributions from government and higher education still continued. This means that the country has a strong political structure, and that makes the country feasible to live in. The gross domestic expenditure on R&D (GERD) as a percentage of GDP is 0.53 % in 2002 and 0.84 % in 2011. Similarly to the sources of GERD, the percentage of GERD in GDP has been increasing since 2002. In 2011, the ratio got close to double. Similarly to this increasing trend, the number of scientific publications also increased, as shown in the Figure 1.

Figure 1. The Rank of Turkey With Respect to Scientific Publications



Source: Thomson's ISI Web of Science (TUBITAK ULAKBIM).

According to Thomson's ISI Web of Science reports and TÜBİTAK ULAKBİM (a national organization on scientific research and development), Turkey has a substantial position with respect to scientific publications, the number of which has increased year by year since 2000. In Turkey, TÜBİTAK gives a monetary award for a researcher publishing articles in SCI or SCI-expanded journals. In addition, universities also give different awards for publications. Another R&D indicator is the number of patent applications showing the technological level of the country and there is a serious increase in the number of patent applications to TPI. The number of applications in domestic patents in 2002 is 1460 and 4067 in 2011. Although GERD rates of foreign sources are not dominant, there is a significant number of foreign patent applications to TPI (6154 patent applications in 2011). Similar to other indicators, numbers of patent applications for both domestic and foreign ones are increasing.

During the crisis of 2009, the United States allocated 217 million USD to TUBITAK through various grant programmes to support STI actors. TUBITAK's main funding vehicle, Industrial R&D Projects Support Program, some technology areas (IT, biotechnology, environment-related technologies, advanced materials) increased by 10% due to the grant. A new small business innovation and research support programme was implemented in 2012 (OECD 2012).

The National Science and Technology Human Resources Strategy and Action Plan (2011–2016) aims to increase R&D personnel, foster a research culture, and develop researchers' skills, mobility and employability. The National Science, Technology and Innovation Strategy (2011–2016) (UBTYS) aims to strengthen national R&D and innovation capacities in order to upgrade the industrial structure towards high-technology industries. GERD should reach 3% of GDP by 2023. The Turkish Industrial Strategy Document and Action Plan (2011–2014) and several sector-centred plans reinforce this targeted approach and the priority of the business sector (OECD 2012: 396).

2. Greece

It is commonly accepted that the euro zone's crisis started with the difficulties faced by the Greek government due to rolling over maturing debt in 2009, which proved contagious to other euro zone economies, such as Portugal, and then spread to Spain and finally, to Italy. The Greek government sought assistance from the European Union (EU) and the International Monetary Fund (IMF) that resulted in rescue programmes featuring significant financial support, but with mandatory imposition of very severe austerity and structural-change measures. The combined EU, European Central Bank

(ECB), and IMF rescues were based on the assumption that a dramatic reduction in government deficits was the solution. But this "solution" tends to slow down growth, increase unemployment, reduce savings, and hence increase the burden of private sector debt. The idea is that this will reduce government debt and deficit ratios. However, as will be shown from the evidence, this did not work due to impacts on the domestic private sector. The question that should be asked, then, is whether this imposed policy mix was wise (Papadimitriou 2012: 3–4).

Employment, on a seasonally adjusted basis, slowly increased from its trough of 3.6 million people in February 2013, only to fall below this figure again in October 2013. The ranks of the unemployed increased by 84,128 individuals over the same period, raising the seasonally adjusted unemployment total to an all-time high of 1388.631, with a significantly higher unemployment rate for women (31.3% in 2013Q3) than for men (23.8%). The largest increase in jobs between the first and the third quarter of 2013 was in the "accommodation and food service activities" sector, with a gain of 50.800 salaried employees; however, the same sector showed a decrease of 1.900 employers over the same period, which may reflect an increase in the average size of surviving firms (these latter figures are not seasonally adjusted). It is important to note that this employment category, which includes tourism — a crucial economic sector — shed 9.300 jobs between 2012Q3 and 2013Q3 (Papadimitriou 2012: 3–4).

3. Statistical Approach

In this research, two factors were related to cross-cultural dimension; Education and Life Satisfaction was developed. Cross-cultural dimension factors and findings were compared between Greece and Turkey. The research is restricted to two factors of cross-cultural dimensions, and two countries: Greece and Turkey. Quantitative approach is restricted to data of Eurofound UK Data Archive Study Number 7316 – European Quality of Life Survey, 2011–2012, "Third European Quality of Life Survey Questionnaire". They are given below.

4. Education

Variable Edu5 used in the analysis was derived from the question Q48 ("What is the highest level of education you completed?"). The original variable of nine categories

was recoded, so that the number of subjects in particular categories is more equal, but also to make the comparison between Greece and Turkey possible, as in Greece there are no subjects in the category "literate without a diploma".

The first cross-cultural dimension issue of the research is education. The distribution of education levels of participants was given in the Table 1.

Table 1. The Difference Between Education Levels

	Greece		Turkey		p
	n	%	n	%	
Primary education unfinished	15	1,5	205	10.1	<0.05
Primary school	257	25.8	763	37.7	
Primary education			119	5.9	
Gymnasion – 3 grades of secondary education	152	15.2			
General Lyceum-High School – 6 grades of sec. edu.	279	28.0			
Technical-Vocational Lyceum-High School	57	5.7			
Institute of Vocational Training	39	3.9			
Higher Technical Educational Institutes	77	7.7			<0.05
Jr high school/ Vocational school at junior			245	12.1	
High school/Vocational school at high school level			473	23.3	
Training schools			69	3.4	
University/Technical University	92	9.2	146	7.2	
Postgraduate studies- Masters degree	25	2.5	4	0.2	
PhD	4	0.4	1	0.0	
(Completed education abroad)			1	0.0	

Source: own work.

According to Table 1, it can be seen that Greece has more educated people than Turkey. The difference between the two countries is statistically significant ($p<0,05$). In fact, there are different types of educational institutions. In Greece, the national education system is more stable than in Turkey. Turkey has been adopting different national education systems in recent years. However, there still remain very serious problems which must be solved. Thus, it may be argued that Greece has more qualified human capital than Turkey.

5. Life Satisfaction

Variable Y11_Q30 is an interval level variable measuring overall life satisfaction by asking respondents: "All things considered, how satisfied would you say you are with

your life these days?". The answers are measured on a 10-point scale where 1 means "very dissatisfied" and 10 means "very satisfied".

For the life satisfaction dimension, the "all things considered, how satisfied would you say you are with your life these days?" question was asked to participants and they were asked to evaluate their current situation based on 10-point scale. The means and difference analysis results were given in the Table 2.

Table 2. Life Satisfaction Differences

All things considered, how satisfied would you say you are with your life these days?	Greece			Turkey			P
	N	X	SD	N	X	SD	
Q30	1001	6.17	2.01	2023	6.66	2.43	0.000

Source: own work.

In overall evaluation, it was shown that Greek participants have a lower life satisfaction level (6.17±2.01) than Turkish participants (6.66±2.43). The difference analysis results were also statistically significant ($p<0.05$). Life satisfaction also affects job satisfaction. There are many researches focusing on this issue. Thus, it may be argued that Greece has less satisfied human capital than Turkey.

Table 3. Satisfaction With Accommodation

Country		N	Mean	Std. Deviation	t	P
Q40d Your accommodation / How satisfied are you? (scale 1 to 10)	Greece	1003	7.11	1.958	1.97	0.049
	Turkey	2025	6.94	2.738		

Source: own work.

In the research, participants were asked whether they are satisfied their accommodation or not. Results of the analysis of answers given to the question were shown in the Table 4.

As seen in the Table 3, Turkish participants are not as satisfied with their accommodation as Greek participants. The difference between two participant groups is statistically significant ($p<0.05$). Thus, it may be argued that Greek participants have more life quality and satisfaction than Turkish participants. Hence, accommodation has an important place in life quality and satisfaction.

Another question related to life quality is social life. In the next table, answers to the satisfaction with social life and their difference analysis results are given.

Table 4. Satisfaction with Social Life

Country		N	Mean	Std. Deviation	t	p
Q40g Your social life / How satisfied are you?	Greece	1001	705	2.107	8.54	0.000
	Turkey	2019	6.26	2.855		

Source: own work.

Similar to satisfaction from accommodation, Greek participants also have a higher satisfaction level with their social life than Turkish participants. According to difference analysis, the difference between participant groups was significant ($p<0.05$). It may be argued that social life in Greece is more satisfying than in Turkey.

6. Life Satisfaction Component

Variable C_lifesat – life satisfaction component – is a principal component derived from a set of interval level variables measuring, on a scale from 1 to 10, one's satisfaction with different aspects of life, where 1 means "very dissatisfied" and 10 "very satisfied". The following aspects were measured: Q40a – education; Q40c – the present standard of living; Q40d – accommodation; Q40e – family life; Q40f – health; Q40g – social life. The variable Q40b was excluded from the analysis, as it evaluates work-related satisfaction and therefore is applicable only to these respondents who are in employment, which would not fulfil the aim of the further factor analysis. Similarly, the variable Q40h was not included in the analysis, as it does not evaluate life satisfaction on the personal level.

Table 6. Life Satisfaction Component Differences

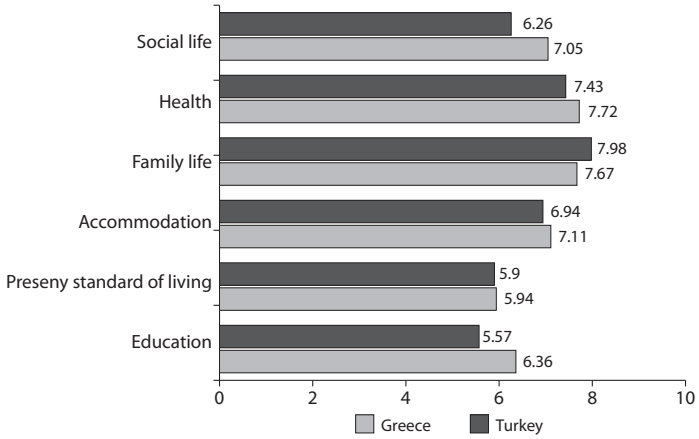
	Greece			Turkey			P
	N	X	SD	N	X	SD	
Q40a-education	1002	6.36	2.17	2005	5.57	3.09	0.000
Q40c-present standard of living	1001	5.94	2.07	2016	5.90	2.78	0.735
Q40d-accommodation	1003	7.11	1.96	2025	6.94	2.74	0.398
Q40e-family life	1001	7.67	2.01	2024	7.98	2.30	0.000
Q40f-health	1002	7.72	2.20	2026	7.43	2.59	0.200
Q40g-social life	1001	7.05	2.11	2019	6.26	2.85	0.000

Source: own work.

For the life satisfaction component, six questions were asked to the participants. In the Questionnaire, Q40a, Q40c, Q40d, Q40e, Q40f and Q40g were related to the life satisfaction dimension. The following aspects were measured: Q40a – education; Q40c – the present standard of living; Q40d – accommodation; Q40e – family life; Q40f – health; Q40g – social life. Answers given to the question and analysis results were shown in the Table 6.

Table 6 shows that there are statistically significant differences between Greek and Turkish participants based on education, family life and social life satisfaction ($p<0,05$). On the other hand, satisfaction levels for the present standard of living, accommodation and health did not show a statistically significant difference ($p>0,05$). These distributions were also shown in Figure 2.

Figure 2. Life Satisfaction Component Differences



Source: own work.

As seen in Figure 2, satisfaction levels of the Greeks are higher than those of Turkish participants in general. The most extreme differences are seen in education and social life. On the other hand, family life satisfaction is higher in Turkish participants. In general, it may be argued that Greeks are more satisfied than Turks.

Conclusions

The importance of education cannot be disregarded in social and economic life. Different educational systems in the Member States and candidates for the membership in the European Union, such as Turkey, and educational policies always remain an

essential matter in the forefront of discussions. In fact, there are different types of educational institutions. In Greece, there is a more stable national education system than in Turkey. Turkey has been adopting different national education systems in recent years. However, there some very serious problems still remain and must be solved. Higher education is one of the pillars of development, in Turkey scientific publications increase and there is a serious increase in the number of patent applications to TPI. There are sharp differences between the two ancient societies; Greece and Turkey while two of those countries were living together for over 400 years. Therefore, The European Union Member States and Turkey have to begin to work together more excessively on the common challenges in their educational system. They should make their effort explicit to improve the quality of education. The countries in Europe must develop their educational systems according to common sense for the wellbeing of their citizens.

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