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**How does the lack of autonomy across universities
affect the innovation performance of Turkey?**

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How does the lack of autonomy across universities affect the innovation performance of Turkey?

The innovative strategy requirement in the face of the intensifying competition has brought about the need for qualified labour force and human capital. This requirement can be met solely through an effective education system. TEPAV policy note in February 2008 'Evaluation of Turkey's Competitiveness in the Light of PISA Results'¹ in particular have reestablished the link between education performance and competitiveness making a significant contribution to economic policy agenda of Turkey. And recently announced PISA 2009 results were assessed in comparison with PISA 2003 results with another study by TEPAV.² Continuing from the said study, this note tries to shed light on the correlation between higher education system in Turkey and Turkey's competitiveness.

Innovation is considered as the key to ensuring sustainable development, competitiveness and productivity gains. For a properly functioning innovation ecosystem, all parts of the system should work efficiently and in cooperation. One of the most critical components of the said system is universities. Although the contribution universities make to the innovation performance of a country through the education and research roles they undertake, the structure of higher education institutions has a crucial function on determining the level of the said contribution. Structure of higher education system is commonly assessed in the context of autonomy. This study with this lens seeks to identify the correlation between autonomy and competitiveness, examines country examples with respect to the structure of higher education systems and the contribution to innovation performance and finally sets some points to shed light on the current state of affairs in Turkey.

The correlation between university autonomy and competitiveness

Autonomy comes out to be one of the most important factors to be addressed when analyzing the correlation between universities' performance and their contribution to innovation process. OECD's definition explains university autonomy with eight factors: Owning their buildings and equipment, borrowing funds, spending budgets to achieve their objectives, setting academic structure and course content, employing and dismissing academic staff, setting salaries, deciding size of school enrolment and deciding level of tuition fees.³

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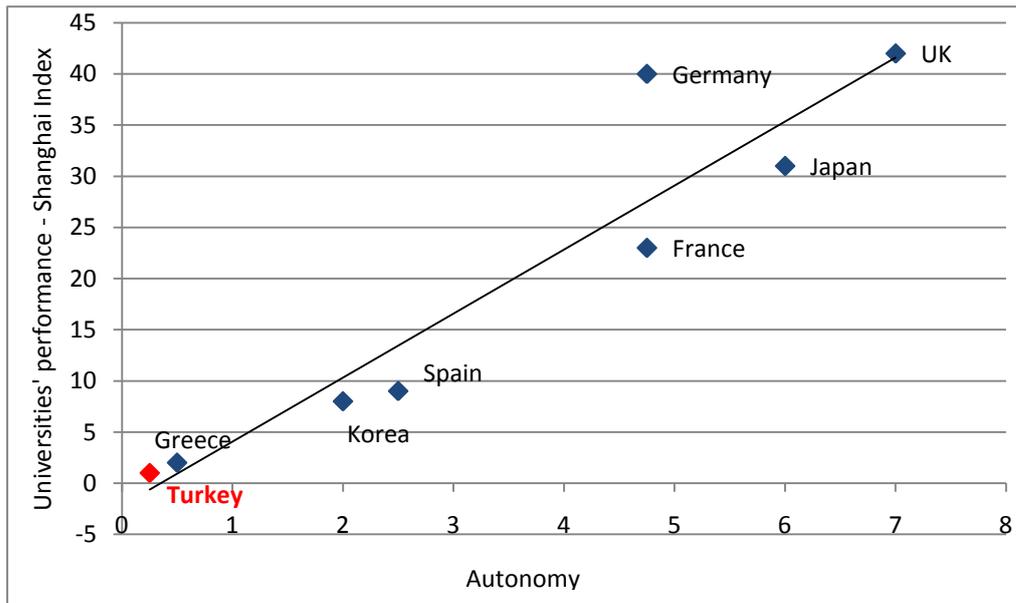
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² http://www.tepav.org.tr/upload/files/1292317950-2.An_Evaluation_of_the_PISA_2009_Results.pdf

³ OECD, Education Policy Analysis, 2003.

In this context, the correlation between university autonomy and innovation performance is assessed for Turkey and others. The evaluation is based on two different innovation indices. First is the Shanghai index which assesses solely the performance of universities and the other is the Global Innovation Scoreboard (GIS) which assesses the overall innovation performance of the country, public and private.⁴ In this study the said indices on the performance of universities and the overall innovation performance of countries were evaluated in association with autonomy⁵.

Figure 1. The correlation between universities' performance (Shanghai Index)⁶ and autonomy

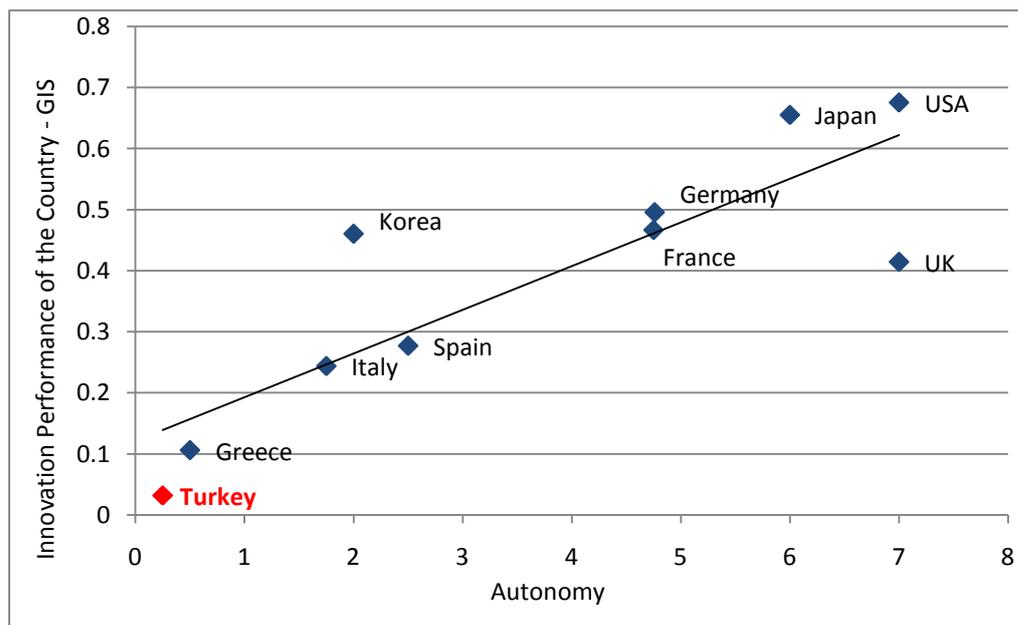


⁴ Shanghai Index is based on the ranking of universities by the number of Nobel prize winner academic staff member and number of faculties, number of publications, number of references and the number of universities in a single county which rank among the first 500 highest scoring university of the world. GIS is based on number of triadic patents, private and public sector R&D expenditures, rate of higher education in the fields of science and technology, share of university graduates in the labour force, size of R&D personnel, number of publications and expenditures on information technologies.

⁵ Autonomy index was based on the eight factors set by the OECD in line with the OECD, Education Policy Analysis (2003) and EUA University Autonomy in Europe (2009).

⁶ Shanghai Jiao Tong University, "Academic Ranking of World Universities". Institute of Higher Education, Shanghai Jiao Tong University.

Figure 2. The correlation between universities' performance⁷ and autonomy



Lessons derived from good practices

The figures above reveal a positive correlation between autonomy and innovation performance of countries. USA was not included in the first figure where the performance of universities was analyzed since the country has a quite high Shanghai Index compared to other countries. The second figure also indicates that USA is beyond other countries with respect to both autonomy and innovation performance. When the factors underlying this are addressed, some characteristics of the higher education system come to fore:

- To begin with, the USA does not have a centralized higher education structure.
- Both public and private universities are governed by the board of trustees and the approval by the ministerial body is not required at each stage of decision making.
- The drop in the share of public finance of higher education expenditures has brought about an intense competition among universities to have research funds and hire successful academic staff. This in turn reinforces the efficient use and productivity of funds.
- USA which gained ground from uniform university structure to university diversification serves as one of the most striking examples of university-industry cooperation particularly with the universities established to meet industrial purposes.

⁷ Shanghai Jiao Tong University, "Academic Ranking of World Universities". Institute of Higher Education, Shanghai Jiao Tong University.

United Kingdom is another country that holds a good position with respect to both autonomy and innovation index. Characteristics of the system in United Kingdom can be summarized as below:

- With some exceptions each university is governed by the board of trustees and state's approval is not necessary during the decision making process. In the United Kingdom, decision making body is the higher education institutions.
- Unlike the USA, in United Kingdom almost 70% of the university finance is carried out by the public sector. However universities tied to the public sector considering source of finance are autonomous with regard to many other issues.
- In United Kingdom majority of the universities are private universities even though they are financed by the state. Particularly after 2005, establishment of profit-oriented universities was encouraged and efforts to this, accomplished a rise in profit-seeking universities. These universities make significant contributions particularly to the commercialization of R&D and tend to work in cooperation with private sector firms.
- In addition to these, universities specialized on a single discipline – particularly on energy, medicine, internet technologies and business administration – which gained importance in the recent years, became more prevalent in United Kingdom beginning with 2006. All of the mentioned factors can be concluded to have vital impact on United Kingdom's innovation performance.

Another point that attracts attention is that Japan and South Korea have a weak performance in the first figure which shows universities' performance on the basis of Shanghai index but a stronger outlook in the second figure which reveals the overall innovation performance on the basis of GIS index. It can be concluded that this mainly stems from the ever increasing and important role of the private sector in the said countries in both R&D activities and innovation:

- It is identified that the share of private sector in S. Korea's R&D expenditures rose from 30 percent in 1970s to 75 percent.⁸ The current share of private sector in Japan is 74 percent. Also in Japan the majority of the higher education institutions are private universities which are run like firms.
- In Japan private universities enjoy high autonomy and important steps have been taken to improve the autonomy of public universities which used to not benefit from significant level of autonomy. Particularly in 1999 some state-owned higher education institutions were

⁸ Arslanhan, S. and Kurtosal, Y., To What South Korea Owes Success in Innovation? Implications for Turkey. TEPAV Policy Note, September 2010.

separated from the state and furnished with higher autonomy. Later in 2003 these universities were incorporated and earned legal entity along with the National University Corporation Law and a series of regulations accompanying this Law.⁹

Countries including United Kingdom, USA, Germany, Japan and France do not have a Higher Education Board similar to that in Turkey. Universities which enjoy high autonomy are responsible for the management themselves; so there is no superior board on top of universities as it is in Turkey. In other countries, such structures are generally responsible for the management of funds allocated to the universities and for the determination and monitoring of performance criteria for university funds. Furthermore, there have been established quality assessment units working in cooperation with the boards responsible for regulating funds. In Turkey on the other hand, university research funds are distributed by The Scientific and Technologic Research Council of Turkey (TUBITAK) and thus unlike other countries management, fund allocation and quality assessment authorities of universities function separately.

As different country examples suggest, autonomy and efficient functioning of universities are crucial but not sufficient for ensuring country's innovation performance. Institutional structuring, cooperation with the private sector, efficient execution of R&D processes in line with needs and focuses and securing of value added through commercialization of R&D are of significant importance in determining the innovation performance of respective countries.

Turkey's approach and some remarks

The figures above do not depict a favourable outlook for Turkey. In Turkey, university autonomy is highly weak and even inexistent in some cases and Shanghai and GIS indices disclose a puny innovation performance.

In Turkey, The Council of Higher Education (YOK) sets the academic staff and research associate quotas for both public and private universities. In public universities academic staff is assigned by the rectors while in private universities selection and evaluation of academic staff, and the posting of the selected staff for approved academic titles are executed by the academic organs of universities. In the assigning of instructors and in determining the principles of employment both public and private universities are obliged to abide by the rules set in relevant laws. Opening of new faculties, institutes or departments within universities are decided through YOK's submission of its recommendations to the Ministry of

⁹ Oba, J. Higher Education in Japan, Research Institute for Higher Education, Hiroshima University, Japan, 2005.

Education. Furthermore, curriculum, minimum course hours and durations, internal and external transfers, tuition fees and quotas are set by the YOK and regulated by laws. Rectors are selected among the 6 candidates selected by the academic staff of the university three of which is elected by YOK and recommended to the President. It is the President's decision to select one of the three recommended candidates as rector. This system is and seems to remain to be frequently debated. In private universities board of trustees can select the candidates but requires YOK's opinion in favour.

Furthermore, Turkey is one of the few countries who still use line-item budgets as payment method to universities. In many countries, universities have the right to allocate the budget across expenditure items and universities are allowed to use the budget surplus for different purposes including research activities through a separate fund to be established. In Turkey such practices are not allowed. Concerning OECD's autonomy ranking which also includes the mentioned factors, Turkey ends up being among the countries where universities enjoy lowest levels of autonomy.

Another important aspect is that in Turkey higher education is a subject covered by the constitutional provisions. With the said provisions profit-oriented universities are banned and it is guaranteed that rectors will be selected by the President and that private universities will be subject to the same provisions with public universities on academic structuring, research and academic staff members.

Turkey should be aware of the worldwide trend to give up the uniform university structure towards self-management of universities. Positive correlation between autonomy has been realized not only by developed but also by emerging economies like India and China which have been making important attempts to improve the autonomy of universities. The need for altering the current growth and industrialization strategy for Turkey is vivid. Turkey is in need of a properly functioning innovation ecosystem in order to both overcome the middle-income trap and improve competitiveness. Universities are one of the most critical components of this ecosystem. For a properly functioning system, research roles of universities should be highlighted, productivity should be increased and the ruptures in the R&D chain should be halted to rapidly overcome impediments to rapid commercialization. To fulfil these, the higher education system must be restructured in line with needs.