

Globalization and its challenges for developing countries: the case of Turkish higher education

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Abstract This paper examines the challenges faced by the Turkish higher education system and exposes the inequities and realities educators in a developing nation must struggle with as they try to find a prestigious spot in the knowledge-production industry. After a brief overview of the literature that illustrates how globalization penetrated into each stage of development of Turkey's modern institutions of higher education, the paper presents a discussion, based on national and international statistics, of the challenges these institutions face as a result of globalization, namely increasing demands for higher education; faculty shortages; the internationalization of higher education; research and knowledge production; and the process of financing higher education.

Keywords Higher education · Globalization · Turkey

Introduction

The aim of this paper is to provide evidence of how the globalizing process of political economy has penetrated into Turkish higher education. Based on existing literature, the author attempts to expose the inequities and realities academic career-seekers in a developing nation confront in their struggle to find a prestigious spot in the knowledge-production industry. The paper begins with a brief overview of the construction of Turkey's modern institutions of higher education and continues with a discussion, based on

national and international data, of how globalization has penetrated into the Turkish higher education system and how Turkish higher education is coping with the related challenges.

As centers of research and development, universities, often referred to as 'knowledge factories', are the main agents of knowledge production and as such play an important role in globalization (The Economist, cited in Gürüz 2003). The rapid advancement in knowledge production that has formed the basis of economic development among nations has undoubtedly been the reason behind globalization, as rapid scientific and technological development, including the revolution in information and communication technology, has encouraged developing countries to keep up with the rapidly growing knowledge economy. Globalization advances as societies become more dependent on information and knowledge (Nerad 2006), thus "minimizing the relevance of national borders" (Guruz 2003, p. 3). These are further challenged by the indirect privatization of higher education, as institutions are forced to broaden their sources of funding to include more financing by students (student fees) and industry (research grants, consultancy fees, etc.) (World Bank 1994, cited in Guruz 2003). This, as Kwiek (2002) argues, undermines a fundamental assumption behind the modern institution of the university, i.e., that the nation-state guarantees education for all through public spending.

Mal-processes such as globalization have been guided by the World Bank, the International Monetary Fund, the World Trade Organization and other international economic organizations. The backlash against globalization draws its force not only from the perceived damage done to developing countries by ideologically driven policies but also from the inequalities inherent in the global market itself (Stiglitz 2002). Doubtless, globalization has placed

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developing countries at an enormous disadvantage when compared to advanced economies, whose greater access to knowledge and technology continues to push them forward. Developing countries have difficulties keeping up with this pace of knowledge production, and as a result, despite improvements, they continue to lag behind.

Inevitably, globalization has penetrated universities, affecting—or ‘infecting’—their governance, which in turn has had a great effect on academic faculty (Stiglitz 2002). Yet in spite of this radical reshaping of higher education by technology, globalization, competition and rising market forces (Guruz 2003), the discussion of globalization, the global education market and privatization as they relate to public universities has been greatly criticized, since these concepts, which regard universities as profit-motivated, commercial institutions, are incongruent with the concept of the nation-state (Timur 2000; Tural 2004).

Simsek (2007) points out three issues currently confronting the Turkish university system: first, providing greater autonomy to universities with regard to spending public funds, while at the same time requiring them to diversify their sources of income, as has been suggested by certain pending legislative proposals; second, redefining the function of the Council of Higher Education, known by its Turkish acronym, YÖK, as an intermediary body responsible for measuring performance and accountability; and third, coping with institutional diversification, specifically, the visible increase in the number of ‘non-profit foundation universities’, i.e., private universities.

The following sections look at certain trends related to higher education, including access to excellent education, research and development opportunities and faculty development and sponsorship.

Turkish higher education

The influence of globalization on modern higher education in Turkey can be traced to 1933 and the passage of Law 2252, which transformed the ‘*Darulfunun*’ (‘School of Sciences’) into Istanbul University (Akyuz 2001; Timur 2000; Tural 2004). This legislation was based, in part, on a report by the Swiss scholar, Albert Malche, who had been invited by Atatürk, the founder of the Turkish Republic, to evaluate the *Darulfunun* in 1932. According to Malche’s report, the existing institution was removed from society and lacked an administrative body (Akyuz 2001). In response to this report, the new law addressed diverse aspects of the higher education system, including its organizational structure, administrative process and academic and research programs (Timur 2000; Tural 2004). In an effort to leave behind the former ‘*Darulfunun* mentality’, the faculty of Istanbul University, which was built upon the school of Higher Engineering, included only 59 of

151 professors from the earlier administration. At the same time, the institution was able to benefit from the inclusion of a number of Jewish academics who were fleeing Germany’s Nazi Regime. Istanbul Technical University (1944) and Ankara University (1946) were both founded in the 1940s. The latter gathered together a number of existing faculties and institutes such as the School of Public Administration (founded in 1936) and the School of Law (founded in 1925) under one roof, whereas the former was founded to fill the gaps in existing disciplines (Akyüz 2001). During this same period, in 1946, Law 2252 was replaced by Law 4936, which disbanded the central administrative body and granted each of these three universities autonomy in governance, including the authority to elect their own rectors and deans from among the university faculty.

Between 1955 and 1957, steady increases in the demand for university education throughout the country led to the founding of Aegean University, Black Sea Technical University and Middle East Technical University (YÖK 2005), the first Turkish campus universities to be based on the American land-grant model. In the 1960s, Turkey’s human resource needs were evaluated in line with a growth and development plan for the Mediterranean Region produced within the framework of an Organization for Economic Cooperation and Development (OECD) project, and, subsequently, Turkish higher education institutions were advised to plan according to these identified needs.

With the passage of Law 1750 in 1973, the administrative autonomy and academic freedom that had been introduced with the 1963 Constitution was abandoned, based on the argument that Turkish academics were not prepared to optimally utilize the academic freedom and autonomy they had been offered (Timur 2000). It should be kept in mind that this period witnessed the spread of radical student movements all over the world, and the political siege of the universities led to a debate between these institutions and the Democratic Party government in Turkey. Simsek (2007) refers to the period between 1973 and 1981, during which time a number of universities were established without any planned attempt to meet actual demands for higher education, as one of “unregulated growth, tumult and chaos.”

Globalization and higher education in Turkey

In the early 1980s, neo-liberal political economies were spreading rapidly all over the world, and Turkish higher education was not immune from this influence. Following a military coup d’état in 1980 and a dramatic change in the Constitution in 1981, new provisions were also made for universities. Law 2547 established the YÖK in order to direct the important activities of higher education

institutions, i.e., planning, organization, governance, instruction and research. This law highlighted for the first time the concept of 'higher education', indicating that universities were no longer 'pure' research institutions, but also dealt with practical, educational needs. In addition, the law provided for the establishment of private universities run by non-profit foundations and for a radical reorganization of higher education institutions in general (YÖK 2005), including, for instance, the transformation of teacher-training institutions into four-year university faculties. Though modified throughout the years, Law 2547 can be viewed as one of the main turning points that drove Turkish higher education institutions into the global higher education market. For instance, following the law's enactment, several loan agreements were signed between the World Bank and the YÖK, in a way transforming the latter into an agent of the global higher education market through its coordination of the activities of higher education institutions in Turkey (YÖK 2005). From a critical point of view, YÖK may be claimed to have become partially a symbol of higher education institutions losing their autonomy and becoming dependent institutions that may raise occasionally debates and issues of government control.

Governance in higher education

Comprised of 22 members excluding the president, the YÖK sits atop the organizational structure of Turkish higher education. It is responsible for preparing short- and long-term plans for the establishment, development, and realization of educational activities of higher educational institutions; evaluating the national and international training of teaching staff to ensure that it is in line with the aims, goals and principles set forth in Law 2547; and efficiently supervising the resources allocated to universities within the framework of YÖK plans and programs (Article 7, YÖK 2004).

In addition to the YÖK, there are two other main administrative bodies governing the field of higher education, namely the Inter-university Council, comprised of the rector and one faculty member elected by the senate of each university; and the Council of Turkish University Rectors, comprised of all university rectors and five ex-rectors. Both these councils are responsible for the coordination and planning of higher education policies. In addition, the minister of national education, as the central government's representative of higher education, can chair meetings of the YÖK but has no right to vote on either YÖK or university decisions (YÖK 2004). Furthermore, in 2007, students at Turkish universities were brought into the university governance process in line with the European University Association's 2007 Lisbon Declaration (Visakorpi et al. 2007) stating that students should be full partners in the

governance of higher education institutions, each of which need to serve its respective communities. In fact, research had shown that students at higher education institutions in Turkey did not consider themselves to be part of the decision-making process (Kuruzum et al. 2005).

Access to higher education

Access to higher education in Turkey is determined by centrally administered meritocratic entrance examinations. All high-school graduates are eligible to apply to the highly competitive, centralized Student Selection Examination (OSS) prepared and administered by the Student Selection and Placement Center (ÖSYM), a body within the YÖK that is responsible for administering university entrance, foreign-language proficiency and other examinations. Certain areas, including the arts and physical education, accept students based on a talent exam in addition to the OSS results, whereas vocational and technical high school graduates can access vocational colleges without entering the exam. With the exception of medical faculties, undergraduate programs comprise four years. In line with the gender balance among university student populations in other countries, women are more likely to be found in the Language and Literature and Health Sciences Faculties and men in the Technical Sciences and Agriculture and Forestry Faculties (Table 1).

Results

The following sections report on the five main challenges the author came across in examining the traces of globalization and its influence on Turkish higher education ranging from increasing demand of higher education and its outputs to global rankings as proxy indicators of quality.

Table 1 Gender distribution of Bachelor's-level students among subject fields

Fields of study	%	
	Female	Male
Language and literature	60.9	39.1
Mathematics and natural sciences	44.5	55.5
Health sciences	56.5	43.5
Social sciences	42.5	57.5
Applied social sciences	45.5	54.5
Technical sciences	22.7	77.3
Agriculture and forestry	29.5	70.5
Arts	53.6	46.4
Average	42.6	57.4

Source: Tural (2004)

Challenge 1: Increasing demand for higher education

Statistics show a dramatic increase in Turkey's population over the years, from 27.8 million in 1960 to 35.6 million in 1970 and 70.6 million in 2007 (Tuik 2008). In order to keep up with the demographic pressure and meet the human resource needs of a growing market economy, the number of universities has also increased rapidly. From only *one* university in 1933, the number of universities had increased to 12 by 1973. That same year, Anadolu University was established as the first Turkish university to offer distance higher education, and it has since become known as the second-largest provider of 'mass higher education' internationally. By 1984, the number of Turkish higher education institutions had increased to 28, including the first private 'foundation' university, and by 2003, the number had multiplied to 79, 53 state-run universities, and 26 private ones (YÖK 2005). In 2007 alone, five additional private and 17 additional state universities were founded. It is essential to note that policy reports name private universities as "foundation universities" and they are non-profit institutions (Law 2809, 1983). Foundation universities, based on Act 2809, have to share at least 15% of their student population with full-paid scholarship.

In terms of student populations, Kaya (1984) reports that between the years 1923 and 1982, the higher education student population increased 66 times for males and 232 times for females. Overall, during that time period, the higher education student population increased from 2,914 to 1,942,995, the number of graduates from 321 to 288,819, and the number of faculty from 307 to 82,096 (ÖSYM 2008). This uncontrolled growth has led to multiple problems, such as variations in admissions criteria (Simsek 2007), incomplete infrastructure at the new universities and a general lack of academic staff, indicating that Turkish higher education starts educational reform initiatives from a very disadvantaged position in the global arena.

Well-proven higher education institutions are most advantageously placed to attract the top-scoring students entering the OSS exam, thereby sustaining their 'elite' role in higher education. A recent estimate suggests that no more than one-fifth of students currently in higher education will be at the core of the knowledge economy, with the remainder forming a subordinate social layer (Neave 2002). No doubt, the likelihood of lowering quality and outcomes is one reason why universities are reluctant to increase their capacities, with another reason being the faculty shortage, as discussed in the section below.

Although the Internet and other new forms of communication and social mobility have brought about some new possibilities in industrial society, globalization still seems to be one way of reproducing social stratification (Aktay 2002). The need to assess school quality by outcomes in the

international arena provides an important incentive for measuring child achievement in international examinations such as the Trends in International Mathematics and Science Study (TIMSS), Progress in International Reading Literacy Study (PIRLS) and Programme for International Student Assessment (PISA), and in turn, these figures reflect the probability of students' access to higher education (Berberoglu and Kalender 2005; Caliskan 2008). Although the numbers indicate differences in regional access within Turkey, Berberoğlu and Kalender highlight that the achievement gap among regions is largely due to the huge differences among schools and school types at the primary and intermediate levels. The authors also emphasize that the difference among regions in Turkey is relatively small statistically, suggesting that school quality at lower levels affects the quality of higher education as well. As Martini (2005) states, the differences in programs and course offerings among universities are compounded by the inequality of access among different groups of society. Thus, enhancing equity and equal opportunities for quality education in universities is arguably one of the major challenges to improving Turkish higher education. As stated in the 2008 Turkey Progress Report, Turkey is at an advanced stage in implementing the higher education reforms outlined by the Bologna Process; nevertheless, it needs to continue its efforts toward the implementation of national qualifications (UNDP 2008). Only by implementing huge educational reforms such as unification of school types, or social reforms such as minimizing the income gap, may enable Turkey to compete as an equal in the international arena.

Challenge 2: Faculty shortage

As the previous section highlights, the increase in population and global social change brought about an increase in the demand for access to higher education as a means of raising living standards. This increase in demand has led to a similar increase in need for academic personnel, which has come to represent one of the greatest challenges to higher education in Turkey. In what may be attributed to the country's younger history of higher education, the number of academicians in Turkey is lower than in other European countries. Statistical reports indicate a serious faculty shortage, with a student–teacher ratio as high as 1 faculty member per 42 undergraduate students in language and philology faculties and 1 per 72 in the applied social sciences (YÖK 2005). Not only are such huge ratios likely to reduce the quality of teaching and research outputs across the system (Dundar and Lewis 1999), without making the investments needed to increase human resources, the pressure on those currently in the system will eventually cause them to leave as well, thereby creating

further difficulties in terms of research and development. While increased demand for education has been addressed through the recent expansion in the number of universities to 85 public universities and 30 'foundation' universities (YÖK 2008), university budgeting policies have undergone only limited changes in addressing shortages in faculty. This disparity is likely to impact negatively on learning outputs and place increased burdens on faculty members.

The faculty shortage is most dramatic in the applied sciences and is growing rapidly among the technical sciences and mathematics and natural sciences faculties (YÖK 2005). This may be a result of doctoral students in these areas finding other government research and development centers such as TUBITAK and the private sector more attractive in terms of satisfying not only their interests with regard to research and development but their desires for higher living standards as well. Although YÖK regulations require research assistants to be hired to contribute to university R&D processes, there is evidence that research assistants are likely to teach in undergraduate levels and face many problems besides their research responsibilities (Tuzgöl-Dost and Cenkseven 2007); in fact, they had been employed as teaching assistants (Erk 1989) in order to make up for faculty shortages, especially the research assistants in social science and engineering departments had been more likely involved in the production of undergraduate teaching than in research (Lewis and Dundar 1995).

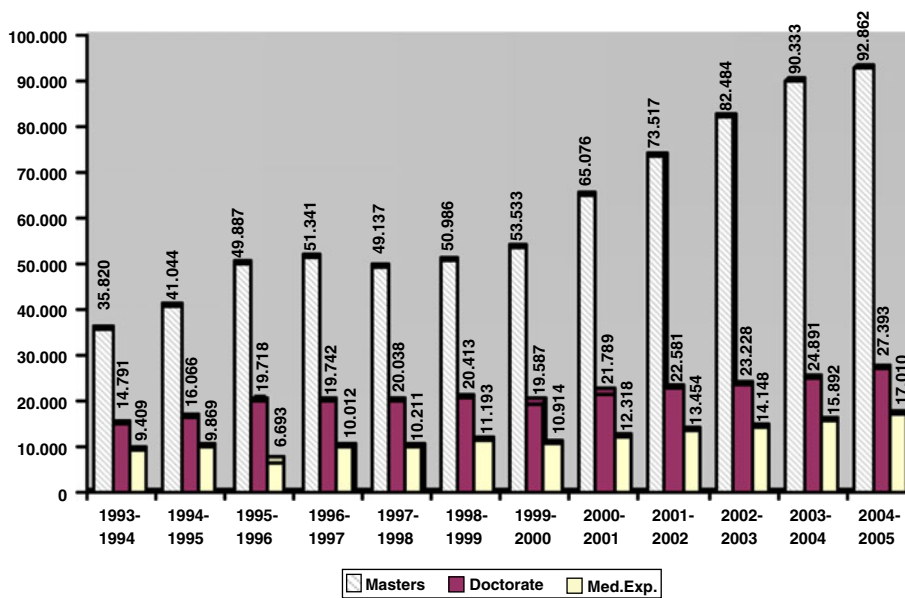
The need to increase the number of academic staff has led Turkish higher education to become a customer in the global market. In 1987, the YÖK initiated a policy of providing scholarships for research assistants to complete their postgraduate and doctoral studies abroad before returning to teach at the institutions that had hired them. These graduate scholarships were financed by the Ministry of National Education as well as the YÖK, with 50% of students going to the United States, 40% to the UK, and the remaining 10% spread throughout a number of different countries. However, as of 2005, 19% of the 3,745 research assistants hired under this program had yet to finish their studies and return to the universities that employed them (YÖK 2005).

While the annual cost of educating a doctoral candidate at a prestigious Turkish university is about \$3,000 per student, it is closer to \$30,000 per student for those sent abroad (YÖK 2007). Not only has the cost of training academic human resources been very high, as the above figures indicate, the process clearly entails the risk that research assistants who are sent abroad will choose to remain as 'skilled workers' in the country where they have been educated rather than return to their country of origin. Among the reasons graduate students have given for choosing to remain in their host countries are better

research and development opportunities, fewer teaching hours, more time for research and better living standards (Güngör and Tansel 2005). Sadly, nearly 40% of all adults with higher education have left Turkey, and such 'brain drain' has been shown to lead to declines in productivity (Spring 2008). Ultimately, despite considerably huge educational investments in the development of faculty, social policies have fallen short to retain the brainees in their country of origin and are easily attracted by developed or economic-wise powerful nations.

To cope with the faculty shortage while minimizing the risk of 'brain drain', new reforms have been established to help support urgently needed domestic solutions. In one such move, Law 2547 was amended to allow newly established universities to hire Ph.D. candidates at prestigious universities as research assistants before they have completed their degrees. In order to more quickly meet the demands of the market, the State Planning Institute began funding a Faculty Development Program (OYP) in which prospective faculty are enrolled in an intensive, fast-track Master's Doctorate program. University departments educating these future academics are provided with certain incentives, such as reductions in their undergraduate student populations and additional funds for research. It makes one question, when the novice faculty return to their home universities after their fast-track faculty development program in the prestigious universities in Turkey, will they be able to adapt themselves to the culture of universities they start teaching and do research. Or will they be hit and trapped in a bottleneck with the huge student population, long teaching hours, little income and pressure by the management for more R&D.

Yet, further investment in doctoral students needs to be a priority if Ph.D. candidates are to be accepted as potential faculty members. Lewis and Dundar (1995) provide evidence that, with the exception of engineering faculties, the average cost of educating doctoral candidates is much higher than that of educating undergraduates (Lewis and Dundar 1995), and they suggest that research universities need to reform their budgets to focus on postgraduate education, which should be financed by the state for public good. This need has been well-addressed by the Turkish Academy of Science's Integrated Doctorate Program (TUBA-BDP), which increased the number of its sponsored students by 22% from 2005 to 2006. However, as Table 2 shows, whereas the number of Master's students grew significantly between the 1989–1999 and 2004–2005 academic years, the increase in the number of students in Ph.D programs over the same period was comparatively small. These figures suggest that newly established universities still face challenges in meeting the current demands for instructors with doctoral degrees. Moreover, in order to meet the challenges for the future, existing

Table 2 Numbers of students enrolled in postgraduate, doctorate and medical programs at Turkish Universities by academic year (1993–1994 to 2004–2005)

Source: Data taken from ARBİS-TUBİTAK (2005) databases

doctoral programs need to be evaluated in terms of their suitability for a knowledge society.

Challenge 3: Internationalization of higher education

Since 1999, Turkey has taken important steps to respond to the demands of the European Union's Copenhagen Criteria (Sozen and Shaw 2003). With the adoption of the EU-Turkey Association partnership in 2001, Turkey increased its efforts to fulfill the criteria for EU membership, taking measures that have not only had an effect in the political arena, but on educational policy as well. For instance, serious reforms to higher education have been undertaken as part of an acceleration in the internationalization of higher education in line with the 1999 Bologna Declaration (Capan and Onursal 2007). Areas of reform include student participation in university governance (Kuruuzum et al. 2005), approval of the European Credit Transfer System (ECTS) (Visakorpi et al. 2008) and accreditation (Akduman et al. 2001). To level-up higher education in Turkey and gain an international reputation, in 1997, the YÖK, together with the World Bank and the British Council, undertook a feasibility study for establishing an accreditation and quality assurance system in Turkey within the framework of a joint project entitled Developing a Resources Allocation Mechanism for Turkish Higher Education (Akduman et al. 2001).

Despite accreditation 'success stories' and the slow but steady pace of internationalization, rather than receiving

international students, Turkey remains among the top sending countries. The majority of international students being educated in Turkey are from Middle Eastern or Central Asian countries (OECD 2004), and figures for 2006 showed the overall number of international students to have shrunk in comparison with previous years (OECD 2006). Compared to domestic students, foreign students generate more income for the institutions that host them, thus encouraging institutions to become more active in the international education market. Rui-Yang and Vidovich (2002) urge universities to respond actively to the internationalization process by adapting their educational offerings in order to attract foreign students. A Turkish example of this is the change in the teacher-education curriculum made in 1999 as an outcome of a World Bank-funded national education development project on pre-service teacher education that brought Turkish teacher-education programs in line with the elite teacher-education programs in Europe (Grossman et al. 2007). In a study measuring the attitudes of teacher-educators toward changes in Turkey as an EU-candidate nation (Grossman et al. 2007), teacher-educators expressed a sense of responsibility for ensuring that the changes brought about by the project were institutionalized into the system, as well as a belief that their participation in education reform was essential for its institutionalization.

It is important to keep in mind that cultural issues may interfere with global expectations with regard to the topical content of national curriculum. In this regard, a study by

Şentürk (2008) found that education faculties encountered certain difficulties related to the globalization process, such as developing multi-cultural and interdisciplinary programs, implementing interactional and multi-dimensional teaching and learning, and teaching skills that facilitate global interactions and relations. However, authors like Beerkens (2003) argue that by engaging in international networks, universities may be losing part of their national identity, substituting it with a global identity or a local or regional identity not their own. It can be understood from Beerkens (2003) that the internationalization of a curriculum should not be about seeking a global identity per se, at the expense of the host country's national identity; rather, the national curriculum should help international students to develop positive relationships with the hosting country.

Fortunately, during the last decade, internationalization of the substance of teaching, learning and research has become more important than debates on curriculum content (Kehm and Teichler 2008). Emphasis needs to be placed on teaching the communication, math, problem-solving, critical-thinking, interpersonal and lifelong-learning skills that the rapid production of knowledge has made more important than specific course content (Spring 2008; World Bank 2003). In a recent study, Akar (2008) found that prospective Turkish university teachers felt themselves well equipped to cope with rapidly changing knowledge and able to develop innovative curricula in their subject areas but were still concerned about how to teach in line with new, student-centered active-learning approaches.

A major challenge in the internalization process has been the promotion of intercultural-friendly curricula in programs offered both for hosted and domestic learners (D'Andrea and Gosling 2005). One example of empowerment in Turkey is the establishment of English as the medium of instruction at several Turkish-state universities, including Middle East Technical University (1956), after World War II. At the same time, the establishment of English-medium education and an American education system at Turkish-state universities represent the first traces of globalization within Turkish higher education. At present, the majority of private universities in Turkey are also English-medium (22), and one institution, Galatasaray University, is French-medium.

Challenge 4: Research and knowledge production

Global communication systems such as the Internet have weakened national boundaries and allowed for the rapid dissemination of knowledge. Online databases have made it possible to quickly access infinite amounts of information. As technology has accelerated the circulation of knowledge, so have academicians been caught in the landslide of global competition (Altbach 2006). As higher education has

become global, argues Goodall (2006), so have league tables, as rankings have become benchmarks of excellence, both nationally and internationally. In 2003, the Institute of Education at Jia Tong University (SJTU) produced the first global league table in order to assess how Chinese universities compared with other institutions. (For information on ranking criteria, see <http://ed.sjtu.edu.cn/ranking.htm>.) Fifty-two universities in the United States were unevenly spread across the top 100, along with 37 European Universities (11 in the UK, 7 in Germany, 4 each in France and Sweden, 3 in Switzerland, 2 in the Netherlands and 1 each in Austria, Denmark, Finland, Norway, Italy and Russia) and 11 universities from the rest of the world (5 in Japan, 4 in Canada and 2 in Australia) (Goodall 2006).

As far as Turkish universities are concerned, the Academic Rankings of World universities placed Hacettepe University at 410 out of 500 top-ranked universities in 2005 (ARWU 2005) and Istanbul University at 473 out of 500 in 2008 (ARWU 2008). With regard to overall ranking, although Turkey's place may be considered disappointing when compared to its population density, yet it is essential to note that there has been a steady increase in the number of publications by faculty members from Turkish universities appearing in journals covered by the ISI Web of Science Index. For instance, while Turkey was ranked 40th in 1990, it moved up to 21st place in 2003 and to 19th place in 2005 (ISI Web of Science, cited in YÖK 2005). In 2005, the growth ratio in knowledge production was 4.3 for Turkey, compared to China (4.2), Korea (3.9), Thailand (3.2), Portugal and Hong Kong (3.0), Mexico (2.7), and Brazil (2.6), respectively, in referred journals indexed in SCI, SSCI and AHCI (YÖK 2006).

University rankings have been published in popular newspapers in Turkey for the benefit of external stakeholders and society at large as a means of presenting Turkish universities as centers of research and development participating in the global market. In order to keep apace and compete with this market, in 2005, the YÖK renewed its policies with regard to the appointment and promotion of academic staff. The new policies have encouraged academicians to publish in journals listed by the SSCI or other relevant indexes, and, as noted earlier, has helped Turkey to raise its place in the rankings. However, requiring faculty members to write and publish in internationally indexed journals in turn increases the demand for English (Kırkgöz 2007), yet based on a study with 2,570 faculty members Tuzgöl-Dost and Cenkseven (2007) found that about one-fourth of them complained about their foreign-language proficiency in realizing those publications. In addition, because English has become the language of research and non-English-language work is being published less and cited less (Marginson and van der

Wende 2007), the teaching of English has become a fixture in most national curricula (Spring 2008).

With regard to rankings, Altbach (2006) considers the problem to be one of practice rather than principle, and questions whether or not the quality of a single institution or a nation's academic system as a whole can be adequately expressed by quantitative factors such as amount of external funding, number of articles or books published by faculty members and library resources as proxy indicators of quality. He argues, significantly, that statistical counts of published articles can indicate neither their quality nor their impact. Furthermore, the use of citation counts as measures of excellence automatically prioritizes the citation of material published in English over material published in other languages.

One essential move forward in the Turkish higher education system is that publications are no longer the sole requirement for obtaining tenure; rather, the inclusion of indicators such as student course evaluations as part of the academic promotion process may be considered a good marker of valuing quality in higher education. Nevertheless, in the increasing national and international competition among universities for funds, prestige, and knowledge production (Currie 1998), Turkish academics are doubtless at a disadvantage as a result of workloads in terms of teaching Tuzgöl-Dost and Cenkseven 2007, research and knowledge production. In addition to these, another main concern is the economic constraints the Turkish academics face, especially among the Turkish academics in state universities compared with private or foundation universities Tuzgöl-Dost and Cenkseven 2007. Consequently, all limitations referred above may result in finding academic work less attractive for doctoral candidates, and they may not want to become tenured in higher education despite its social reputation.

Challenge 5: Financing

The financing of higher education is based on strong state involvement at the level of the educational institutions. Each individual university, together with the YÖK, negotiates its own budget with the Ministry of Finance—and with the State Planning Organization, regarding the separate lump-sum OYP investment budget—and both these budgets are required to contain very specific, line-item earmarks (Guruz 2003). Overall, 87% of higher education financing is provided by general government budget appropriations, 8% by institutional resources (tuition and fees) and 5% through revolving funds generated by various public services provided by faculty members (continuing education, specific research projects). Of the student-generated income (tuition, fees), according to a 2004 YÖK report, only 27% is directly spent on education, with the rest allocated to highly subsidized meals, accommodations, health services and extra-curricular activities.

Although the proportion of overall state spending on higher education in Turkey is higher than the average for OECD countries*—where 59% of university income comes from the state budget, 35% is university-generated and 4% is student-generated—the total amount of public investment in higher education based on GDP is much higher in most other OECD countries—the average is 4.7%—compared to Turkey, where it is only about 0.8% (YÖK 2005). Higher education R&D spending in Turkey is also very low when compared with other countries; when looked at in terms of purchasing power parity, the figure amounts to close to \$10 million in Turkey, compared to \$50 million in Germany and \$150 million in the EU as a whole (ARBIS-Tubitak 2005). Furthermore, in Turkey, the higher education sector accounts for a much greater share of R&D expenditure than the private sector. For instance, in 2001, R&D spending by the higher education sector was 1.2 trillion YTL, compared to only 641 million by the private sector. In 2005, these figures increased to 2.1 trillion YTL and 1.3 trillion YTL, respectively (TÜİK AR-GE Statistics 2007).

Globally, there has been an overriding trend of serious cuts in public expenditure for higher education (Altbach 2006). Turkish-state universities have been no exception, and university rectors have been compelled to seek new sources for R&D funding. For example, in the early 2000s, a number of English-medium universities in Turkey embarked on the first dual-degree programs with an international university, the State University of New York (SUNY) (YÖK 2005). This program may be considered an example of weakening public control and furthering inequities in higher education, since students with lower exam scores than students entering the standard Turkish degree program can enter this program but have to pay additional tuition different from what is paid by mainstream public universities. Another recent trend is that an increasing number of public as well as foundation universities have established cooperation with private industry to build the knowledge economy through research and development. Among these joint efforts, the largest is the 'techno-polis' located on the campus of Middle East Technical University, which facilitates such private and public R&D cooperation.

Discussion and conclusions

Globalization, if properly shaped and fairly run, with all countries having a voice in the development of those policies that affect them, could create a new global economy in which growth is not only more sustainable and less volatile, but one in which the fruits of this growth are equitably shared (Stiglitz 2002). However, in its current form, globalization can be regarded as a means of maintaining existing international inequality between nations and world regions (Kehm and Teichler 2008). As the demands of rapidly growing populations attracted to higher

education increase dramatically, developing countries struggle to catch up and do better in the knowledge-production market. Rather than view the standards being imposed on universities and academics as one of a number of possible methods of comparison, as Currie points out, they are implemented based on an understanding of “globalization as a regime of truth” (1998, p.2). Based on the available statistics and existing literature, this paper provides evidence that Turkish universities and academics are struggling to cope with several challenges directly related to the globalization process.

First of all, it must be acknowledged that privatization has become the mantra of the day everywhere (Tilak 2006), and higher education in Turkey is no exception, as is evidenced by the increase in the number of foundation universities. Since the 1980s, successive Turkish governments have attempted to solve certain problems related to increased demands for higher education by promoting the growth of foundation universities and facilitating mass education through distance learning. Although this has addressed issues of quantity, issues of quality and of the impact of expanded higher education on society are concerns that have yet to be dealt with; rather, the outputs of mass education are likely to inhibit equal competition in the global market. Yet, more scientific evidence is needed to be collected to prove this argument.

Turkish universities need to address two major issues that represent challenges to their development. First, the quality of education must be enhanced at the primary and intermediate levels to remove the existing inequities by region and school type. Second, universities themselves must adopt curricula that include multi-cultural perspectives as well as teaching and learning environments that can have an impact on societal and international issues. Simply internationalizing educational content may remain ineffective if lifelong-learning skills are not integrated into the instructional process. Faculty development should also address higher education teaching methods and disseminate new knowledge regarding the learning and development processes of both host and visiting university students. Faculty promotion policies need to be revised to consider the difficulties and inequalities Turkish academicians experience on multiple fronts, including teaching credentials, student–faculty ratios and financing of research and development opportunities.

Global rankings have been shown to push academic faculty in non–English-speaking nations to publish in English—and in internationally accepted journals. In this regard, policies should be designed to solve the problem of English and other foreign-language acquisition at the primary and secondary levels, ensuring that prospective faculty in all areas develop multilingually so that they may struggle with the demands of R&D rather than language deficits. Doubtless, to level-up as a nation, it is essential to

promote interdisciplinary synergy in order to compete in the knowledge economy. At the same time, knowledge discovered must be harnessed and delivered so as to serve the economic and social needs of society (Magrath 2000). By supporting the sound educational and social policies required to feed R&D processes, policymakers will ultimately help raise Turkey’s rankings in the global knowledge economy. Moreover, cooperation between universities and external stakeholders such as industry and public research centers should be increased in order to support R&D for knowledge production.

The internationalization of higher education has made a positive contribution to higher education in Turkey, both in terms of developing prospective faculty and attracting university students from foreign countries, even if the numbers of foreign students have been less than expected. As countries are drawn into the internationalization process, they become more interested in examinations, such as the PISA, that allow for cross-national comparisons of educational quality in terms of curriculum and instruction and achievement (Wiseman and Baker 2005). To cope with the faculty shortage, internationalization has been a positive yet expensive means. The current implementation of Faculty Development Program (OYP), a fast-track integrated doctoral program, is consequently likely to have a positive impact on stopping the brain drain to other well-developed countries and meeting faculty shortage in the Turkish context with less financial cost compared to the earlier implemented doctoral programs abroad. Nevertheless, more research needs to be conducted to shed light on the satisfaction and the needs of novice faculty in the universities as they started to teach and conduct research.

In order to compete in the global knowledge economy, universities themselves need to establish strategic plans that ensure a fair and equal race for their stakeholders at the national level, let alone in the global market. Simply put, well-run, modern universities must have mission statements, ‘visions’ and clear strategic plans (Hambleton 2006) if they are to participate in the global market. Recently, policies dealing with educational equity have started to be reframed as issues of excellence, and vice versa (Wiseman and Baker 2005). Achieving both excellence and equity in higher education must begin with ensuring equal access to quality primary and secondary education, regardless of socioeconomic background. Nevertheless, there is evidence that there is an achievement gap due to school quality as measured in international examinations such as PISA (Akar et al. 2009) and this ultimately is likely to influence opportunities to access to higher education (Berberoglu and kalender 2005; Caliskan 2008).

Differences in school quality are compounded by inequality of access by different groups within society (Martini 2005). Inappropriate education policies can

manifest themselves as unequal educational opportunities (Martini 2005), as in the current situation, in which well-off students are able to access higher education that offers elitist education, whereas those who could not afford to pay for private education are destined to compete among the far greater numbers of students with similar scores applying to state institutions, or compete to receive higher scores to be on a scholarship in foundation universities. Therefore, it is suggested that sound policies need to be implemented to encourage foundation universities to offer more scholarship opportunities to high-achieving students and the state need to equalize the financing of state universities and ‘non-profit foundation’ universities.

Being in a developing country, Turkish universities need to address two major issues that represent challenges to their development. First, the quality of education must be enhanced at the primary and intermediate levels to remove the existing inequities by region and school type. Second, universities themselves must adopt curricula that include multi-cultural perspectives as well as teaching and learning environments that can have an impact on societal and international issues. Simply internationalizing educational content may remain ineffective if lifelong-learning skills are not integrated into the instructional process. Faculty development should also address higher education teaching methods and disseminate new knowledge regarding the learning and development processes of both host and visiting university students. Faculty promotion policies need to be revised to consider the difficulties and inequalities Turkish academicians experience on multiple fronts, including teaching credentials, student–faculty ratios and financing of research and development opportunities.

In sum, this paper has presented the Turkish higher education system as an example of how higher education in a developing country is challenged by the globalization process. While the author recommends that future comparative and empirical studies delve more deeply into the issue in other developing countries in Asia and Eastern Europe, the available literature already provides clear evidence of inequalities in the competition of knowledge production between Turkey and other countries. In spite of this, globalization has been an impetus for developing countries like Turkey to keep pace with more advanced economies. In establishing tenure regulations and other promotion criteria as part of the effort to increase the reputation of Turkish higher education institutions, YÖK decision-makers need to reconsider the challenges facing faculty at Turkish universities. Only by alleviating the current faculty shortage, raising income levels of academicians, reducing teaching loads, increasing R&D funding and allowing more autonomy in the governance of universities, without discriminating between public and private institutions, can Turkish higher education achieve

steady growth and offer greater contributions to the knowledge economy.

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