

Jordan Higher Education Export and Circular Migration

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Abstract. Jordan had to contend with many challenges that evolved from both regional and international political instability in the Middle East region. The reflections on economic developments were substantial. Meanwhile, Jordan government emphasis on education derives from its policy that developing human capital is essential to achieve economic development. This article illustrates the role of temporary out-migration of Jordanian students as a potential source of highly skilled human capital, which contributes at a latter stage in improving the quality of Jordanian higher education institutions. Burgeoning Jordanian higher education services provision is identified together with associated questions relating to the causes and economic considerations to this expansion. Key issues to higher education demand projections over the next twelve years are also addressed. Finally, the potential competitive market forces in delivering higher education services are pointed out.

Keywords: *Human capital, Higher education export, Circular migration, International students, Jordan*

1. Introduction

Jordan is classified by the World Bank as a lower middle income country and has limited natural resources. During the decade of the 1990`s of the last century and till now, Jordan has been affected by different regional political instability. As half of Jordan's exports, and a quarter of its imports, are with its Arabic neighboring countries, therefore, frequent regional turmoil had great diverse effects on the economy. As a consequence, Jordan has witnessed an increase in its trade deficits after losing Jordan's number one provider of oil, that is Iraq and increasing in the oil prices. These constraints combined with increasing Jordanian government spending - while no remarkable domestic revenues were available - have all resulted in consistently a trade deficit. Jordan tried to sustain its deficits through unpredictable amounts of aid from foreign aids and though fluctuating work remittances. Moreover, Jordan's development choices are constrained by its weak natural asset coupled with high unrest situation in the region and high unemployment rates, meanwhile

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Jordan has long realized that human capital is the major potential asset for the country and has traditionally received a high priority among the goals of successive Jordanian governments.

Jordan has started investment in its human capital assets since 1950`s, through the temporary out- migration of Jordanian students to achieve their higher education degrees from different distinguished universities worldwide. Afterwards, those Jordanian students return back to Jordan as circular migrants to serve into different Jordanian universities. Consequently, Jordanian higher education institutions have managed during the last fifty years from developing a favorable regional reputation of its Higher Education Institutions (HEIs), and started to attract international students from Arabic and neighboring countries. In addition, many political instability balances in the region, especially after the Gulf war in1990, US-Iraq war in 2003 and the unrest situation in the West Bank have all resulted in a steadily increasing demand on Jordanian higher education services.

The Jordanian government has encouraged the improvement of its higher education sector as moving from higher education as development assistance to an export commodity (de Wit and Knight, 1999). In 2000, Jordanian private and public partnerships have launched “Jordan Initiative 2020”¹, under which a target number of increasing the demand on Jordanian higher educational services to 100,000 international students by the year 2020. Today, higher education in Jordan compares favourably with those of other countries with the same, and even higher, income levels, and international students contribute with more than 2% of Jordan’s GDP and every student spends annually what is equivalent to the income of one Jordanian family. Despite this success, still Jordan’s higher education institutions have to confront challenges in a fierce competition among higher education markets.

¹ JV2020 led by Jordanian Business Associations, with support from Ministry of Planning, Ministry of Higher Education & Scientific Research Ministry of Industry, Ministry of Tourism and other government authorities.

This article is structured as follows. In section 2 an overview of Jordanian economy serves as a starting point; section 3 presents major trends in Jordan human capital investment. Section 4 briefly analyzes the rapid development of Jordanian higher education institutions. Section 5 focuses on the economic contribution of higher education exports to Jordanian economy. In Section 6 it describes the Jordanian policy in achieving the desired higher education export growth. Finally, in section 7 market oriented challenges facing Jordanian higher education sector are identified.

2. Jordan economy: a background

Jordan is assessed by the World Bank as lower middle-income country². The GDP per capita growth for the periods (1970–79), (1980–89), (1990–2003) registered averages of 11.1%, 0.1% and 0.7 respectively (World Bank, 2008). In 2009, the GDP per capita registered 5,300 US\$³ and the inflation rate has steadily increased and fluctuated around 14% in 2008⁴ especially after the war on Iraq in 2003 through the increased liquidity in the Jordanian market brought by Iraqi migrants. The unemployment rate has been more or less stationary between (13-15 %) (The World Bank,2010; Guégnard et al., 2005). The incidence of poverty increased during the last decade of the twentieth century from 3% to 12% (Masri,2004:5) and reached 21% in 1992 and 33% in 1997 (Hassan and Al-Saci, 2004). The Jordanian economic system is regarded liberal and market oriented, one of the milestones of openness is Jordan's accession to the World Trade Organization (WTO) in 2000. Rather the government continues to play a large economic role in development planning, as a financier and as the largest employer: employing an estimated of 50% of the Jordanian work force (MOP *et al.*, 2004). Jordan has limited natural resources, only 6% of its total land area is arable (Hassan and Al-Saci 2004; Bahl and Syed 2003; Viorst, 1995). The availability of water is among the lowest in the world (Al-Halasa and Ammary, 2006) reaching 200 cubic meters

² The World Bank, 2010, URL: <http://data.worldbank.org/country/jordan> ,01.10.2010.

³ The World Factbook (2010): Middle East Jordan. URL: <https://www.cia.gov/library/publications/the-world-factbook/geos/jo.html> , 01.03.2010

⁴ Central Bank of Jordan: Inflation in Jordan. URL: <http://www.cbj.gov.jo/>, 02.04.2010

of renewable water per capita per year (Ham *et al.*2003:20), below water poverty line of 1000 cubic meters per capita per year (ESCWA,1999). Moreover, Jordan imports its oil needs mainly from Iraq and often at concessionary prices, rather since the war on Iraq in 2003, Jordan has imported oil primarily from Saudi Arabia and other gulf countries.

Jordan has been affected with vulnerabilities and sources of unrest situation from neighboring countries. After the end of the Iraq-Iran war in 1988 and the fall in world wide oil prices, regional trade and transit activity were suppressed. As a consequence, the Jordanian government had increasingly turned to borrowing to sustain national growth and to counter the gap in its budget deficit. In 1988, soaring debt and diminishing currency reserves led to a crisis and to a significant devaluation of the Jordanian Dinar. In 1988, Jordan's total external debt has climbed to more than 190% of GDP and Jordan becomes one of the most heavily indebted countries in the world (CBJ, 2005).

Jordan has witnessed a mass returnee of over 350,000 Jordanian migrants (Van Hear, 1995) from Kuwait and other Gulf states as a result of the gulf war in 1990/1991. The US-invasion to Iraq in 2003 made Jordan to loose number one of its oil suppliers, which is Iraq, combined with increases in oil prices world wide and Jordan's loss of subsidized oil from Iraq have great diverse effects on the Jordanian economy, as half of Jordan's exports and quarter of its imports are with its disturbed neighboring countries. The result was, a five billion Jordanian Dinar (equivalent to a seven billion dollar in current prices) registered as Jordan's trade deficit in 2005 (CBJ, 2006).

Foreign aid to Jordan has surged in 1980s registering 1.289 million US\$. Rather the partial loss of the Iraqi market, the relapse of the peace process with Israel in 1994 and the continuing heavy debt burden of Jordanian budget still over 100% of GDP has dominated the first years of the 21st century by a climate of uncertainty, accordingly, the pace of local and foreign investments in Jordan has been low and the real economic growth has, at best, matched the population growth. An obvious sign of ripening statehood, is the declining

importance of foreign aid to Jordan from 1.298 billion US\$ in 1980 to 289 million US\$ in 1990 and 319 US\$ million in 2002(DOS, 2002; CBJ, 2003). Remittances flow from Jordanians working in the Arabic Gulf region is a significant external source of funding. Worker remittances reached 1.4 billion US\$ in 1980 constituting 20.1 % of GDP, while in 1990 has dropped to 583 million US\$ (12.4% of GDP) following the Gulf war 1990/1991 and the returnee of Jordanians working in Kuwait and other Gulf countries. Again remittances have increased to 1.6 billion US\$ in 2000 amounting to 21.8% of GDP which was one of the highest proportions in the world (CBJ, 2003). Remittances then witnessed steady state pace where by 2003 and 2005 triggered 2 and 2.5 billion US\$ respectively (Tab.1). Remittances can help in alleviating credit constraints and working as a substitute for development finance (Giuliano and Ruiz-Arranz, 2005); rather the geopolitical conditions in the Middle East region could have an adverse effect on this source of foreign currency.

Table 1: Remittances to Jordan (in constant 1995 US\$) and their Share to GDP

Years	Remittances (million US\$)	GDP (million US\$)	% GDP
1970	62	2,559	2.4
1980	1,468	7,318	20.1
1990	583	4,692	12.4
2000	1,633	7,475	21.8
2003	2,006	10,182	20
2005	2,511	12,611	17
2008	3,157	21,205	15
2009*	3,118	22,910	14

Source: Central Bank of Jordan (Different Years): Annual report.

* Preliminary.

The contribution of different Jordanian economic sectors shows that services and industry⁵ play a significant role in development (Tab.2). Hence, increasing exports of both service and manufactured sectors can be an important source for sustaining Jordan’s economic development and in solving its pernicious trade deficit.

⁵ Textiles and mineral resources like potash and phosphate

Table 2: Contribution of Jordanian economic sectors (1986-2008) as percentages of GDP

Economic Sectors	1986	1996	2006	2008
Agriculture	6.3	3.8	2.7	2.9
Industry	24.4	26.1	31.7	34.1
Manufacturing	10.6	13.8	20.7	20.5
Services	69.3	70	65.6	63.0

World Bank, (2007, 2009): Jordan at A glance.

The widening of trade deficit can be narrowed through a dramatic change in the growth differential between imports and exports, with import growth slowing markedly and exports growth rising significantly (Mann, 1999). Increasing exports of manufactured goods and services are confronted with the increased competition from more efficient imports, which means that some local industries will not survive. The high population growth rate Jordan which stands at 2.2%⁶ leads to high employment challenges and an even higher population growth rate in the region mean that employment opportunities in the region may not be as readily available a few years from now. Service sector exports can help to solve Jordan's modest endowment with financial resources, as the country is still to a great extent dependent on education and student mobility as a potential source of highly skilled workers. That means relying on the growth of its human capital in the course of achieving an independent and sustainable development of its economy.

3. Investment in human capital and circular migration

Education is clearly an important element of the broader notion of skills or human capital (Webster, 1993), and combined with training represent the most important contributors to human capital formation (Becker, 1993). Jordan scored many achievements in the field of education during the past few decades. Universalization of education (Sekhar, 2007; Mehta, 2003) that resulted in the rise of literacy rate to 93% of total population in 2008 (UN, 2009) has been one of the major achievements. Moreover, education is in the government forefront priorities in different social demand agenda, resulting in

⁶ Department of Statistic(DOS)- Population Projections URL:
http://www.dos.gov.jo/sdb_pop/sdb_pop_a/index3_o.htm, 12.10.2010

relatively high participation rates in the various educational cycles. The percentage of the population with formal education to total population constituted 52.1% in 1979, went up to 78.7% in 1994 and 85.3% in 2004 (Al-Khaldi, 2006). Moreover, tertiary education Gross Enrollment Rates (GERs) increased from 2.1%, 13.1%, 45% and to 58% in the years 1970, 1985, 1999 and 2007⁷ respectively.⁸

Jordan has already started investment in its human capital since 1950s; with the increased numbers of Jordanian students migrating abroad to achieve their higher education degrees and returning back to Jordan as a positive circulated migrants to serve into different Jordanian universities. Studying abroad is a part of a deliberate immigration strategy from the perspective of both Jordanian government and for many Jordanian households, who allocates their labour resources across different activities so as to maximize the family utility function. Higher education in Jordan is largely provided by the state; therefore current endowments of educated Jordanian are clearly heavily influenced by past educational policy of the Jordanian government. Table 3 illustrates the mobility of Jordanian students to different universities inside and outside Jordan during the period from 1954/69 until 2008/2009 at all higher education levels. Between 1954 and 1969; an estimated 36,500 Jordanian students received their higher education degrees from different foreign institutions. In 1975, only 5,000 students were studying in Jordanian universities, while almost 35,000 Jordanians were studying abroad.

Table 3: Jordanian students in Jordanian and foreign universities in all higher education levels (1954-2008)

Academic Years	In Jordan Uni	Distribution of Jordanian Students in Foreign Universities						Total in Foreign Countries
		Arab Countries	West Europe	East Europe	North America	Asia	Un-specified	
1954/69	-----	29,500	3,500	2,500	1,000	----	-----	7,000
1972/73	2,700	24,300	3,300	-----	800	600	-----	4,700
1975/76	5,200	27,400	6,200	2,700	1,000	2,100	-----	12,000
1980/81	15,800	41,100	6,300	10,500	6,100	2,100	-----	25,000

⁷ In 2005, GRE in tertiary education reached 39%, one of the highest in the Arabic region (UNESCO, 2008).

⁸ World Bank, 2008; UNESCO, 2007.

1985/86	26,700	8,300	4,200	5,800	6,600	1,000	9,900	27,500
1990/91	39,700	7,200	4,500	4,400	4,300	7,300	----	20,500
1995/96	83,500	10,300	2,500	3,200	2,500	3,100	8,000	19,300
2000/01	126,212	12,000	1,700	6,100	1,900	1,300	8,000	19,000
2005/06	208,174	9,529	1,549	3,575	2,374	193	8,000	15,691
2007/08	226,401	11,315	1,545	4,195	2,374	267	8,000	16,381
2008/09	236,820	10,828	1,419	4,193	1,922	249	2,243	10,026

Source: for the years from (1954/1981): Zaqqa,(2006); for the years(1985-2009): Ministry of Higher Education and Scientific Research(Different years): Annual report.

The human capital gains associated with migration accrue from the returnees bringing home new skills acquired abroad (Stark *et al.*, 1998), and in the acquisition of tertiary education in the foreign country which yield higher return in the home country's labor market (Dustmann and Kirchkamp, 2002). The concept of brain circulation (Tremblay, 2005; Gaillard and Gaillard, 1998), which refers to the cycle of moving abroad to study, then taking a job there, and later returning home to take advantage of a good opportunity, increases knowledge transfer to the home country. This sort of temporary brain drain (Gribble, 2008; Balaz *et al.*, 2004) is characterizing Jordanian student mobility at higher education levels and does not constitute a form of highly skilled migration in its own right (Li *et al.*, 1996; Findlay, 1990). Circular migration impact on development tends to be positive when the returnees have gained skills and savings while abroad (Agunias and Kathleen, 2007) and Jordan's higher education policies during the past years have succeeded into turning circular migration arrangements into positive circularity. An example can be seen in the returnee academic staff (PhD holders) at different faculties at Jordanian universities (Tab.4). The results show that USA and UK continue to be by far the largest destination for Jordanian graduate students, accounting for an average of 38% and 27% of total Jordanian returnees respectively. This clustering were in science faculties such as engineering, IT and sciences, and among humanities faculties was mainly in business administration, law and educational sciences disciplines. Germany and France have also a share of 4% and 3% respectively of Jordanians who achieved their PhD in IT; sciences and law studies. The socialist bloc countries have experienced prominent percentages of Jordanians attending their universities. Finally, some Arabic

countries such as Iraq and Egypt emerged as destination countries among Jordanians PhD students with 4% each.

Table 4: Academic staffs at Jordanian universities by PhD place of graduation and faculties in the academic year 2009/2010 (in %)

PhD countries	Faculties								Total (%)
	Scientific				Humanities				
	MeD.	Nurs	Eng.	Sci.& IT	BA	LW	FL	Ed.Sc.	
USA	26	48	42	41	26	1	46	57	38
UK	42	34	25	22	30	31	29	18	27
France	3	0	2	1	4	26	1	1	3
Ireland	5	1	0	1	0	0	0	0	0
Germany	7	2	5	10	1	1	1	1	4
Belgium	0	0	0	1	1	0	1	0	0
Switzerland	0	0	0	1	0	0	0	0	0
Austria	0	0	0	1	0	0	0	0	0
Sweden	0	0	1	1	0	0	0	1	0
Finland	0	0	1	0	0	0	0	0	0
Netherlands	0	0	1	0	0	0	0	0	0
Spain	1	0	1	1	1	2	0	1	1
Greece	1	0	1	1	1	0	0	1	0
Italy	1	0	2	1	1	0	0	0	1
Poland	0	0	1	1	2	0	0	0	1
Russia	0	0	5	2	4	1	0	0	2
Ukraine	0	0	4	3	5	1	0	0	3
Romania	0	0	1	1	2	0	1	0	0
Moldova	0	0	0	1	1	0	0	0	0
Czech R.	0	0	0	0	1	0	0	1	0
Bulgaria	0	0	1	1	1	0	0	0	0
Yugoslavia-former	0	0	0	1	0	1	0	0	0
Hungary	0	0	1	0	0	0	0	0	0
Slovakia	0	0	1	0	0	0	0	0	0
Uzbekistan	0	0	1	1	0	0	0	0	0
Latvia	0	0	0	1	0	0	0	0	0
Azerbaijan	0	0	0	1	0	0	0	0	0
Malaysia	0	0	1	2	2	0	1	1	1
Canada	3	0	4	5	0	0	2	1	2
India	1	0	1	2	7	0	7	0	2
Pakistan	0	0	1	1	1	0	0	1	0
Australia	6	3	1	2	2	2	2	1	2
New Zealand	1	0	0	0	0	0	0	0	0
South Korea	0	0	0	0	1	0	0	0	0
Japan	0	0	1	1	0	0	0	1	0
China	0	0	0	1	1	0	0	0	0
Philippine	0	0	0	0	1	0	1	0	0
Taiwan	0	0	1	0	0	0	0	0	0
Cuba	1	0	0	0	0	0	0	0	0
Turkey	1	0	1	2	1	0	2	0	1
Cyprus	0	0	1	0	0	0	0	0	0
Lebanon	1	0	0	0	0	2	1	1	0
Iraq	1	2	2	3	6	3	5	8	4
Saudi Arabia	0	0	1	0	0	0	0	0	0
Egypt	2	10	1	1	3	21	2	10	4

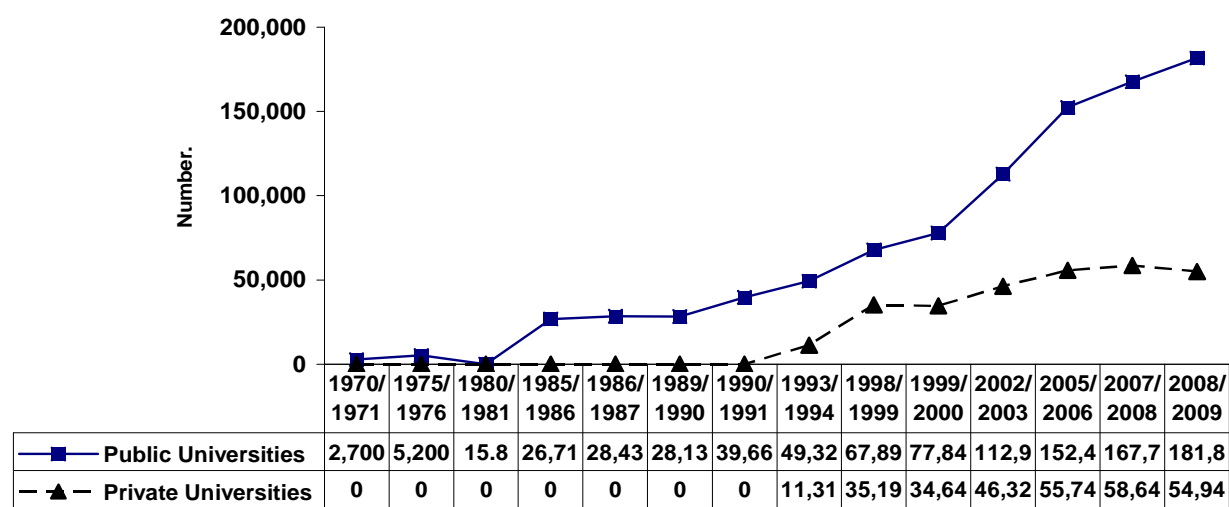
Morocco	0	0	0	0	0	7	0	0	0
Algeria	0	0	0	1	1	1	0	0	0
Tunis	0	0	0	0	0	2	0	1	0
Sudan	0	0	0	0	0	0	1	1	0
Syria	0	0	0	0	1	1	0	1	0

Note: MeD : faculty of medicine, IT & Sci.: faculty of Information technology and faculty of science .Ed.Sc.: faculty of educational sciences.

Source: Calculations by the author depending on Jordanian universities databases in 2010, including 10 public Jordanian universities and 16 private ones.

Jordan has managed in sustaining the international competitiveness of its Higher Education Institutions (HEIs) among Arabic countries in the Middle East region. In addition, Jordan is considered safe and politically stable country, enjoying a pleasant environment and having an Arabic and Islamic culture. Hence, a regional demand on Jordanian higher education services started to appear in the 1990s and onwards and a large number of international students started to enroll in different Jordanian universities (Fig.1).

Figure 1: International students at Jordanian public and private universities during academic years (1988/1989-2008/2009)



Notes: It includes international students at all levels of higher education, that is, graduates and undergraduate.

Sources: From (1988-1999): MoHESR (Different years): The Annual Statistical Report on higher education in Jordan (Different Issues). From (2000-2009): MoHESR Databases.

Not only this rather increasing number of international students⁹ was originating from Arabic neighboring countries like: Kuwait, Saudi Arabia, West

⁹ Students who have crossed a national or territorial border for the purposes of education and currently enrolled outside their country of origin are called intentional students (UNESCO-Institute for Statistics-UIS).

Bank, Iraq, Syria, and Yemen started to enroll into different Jordanian universities (Tab.5).

Table 5: A sample of international students enrolled at Jordanian universities* at undergraduate level by countries of origin in the academic year 2008/2009

Countries of origin	Numbers
Palestine	7,083
Syria	1,874
Saudi Arabia	3,263
Isreal	2,707
Kuwait	1,476
Iraq	2,950
Oman	907
Yemen	863
Malaysia	763
Egypt	338
USA	244
Lebanon	192
Qatar	188
Sudan	90
United Arab Emirates	49
Total	22,987

Note: including both public and private universities.

Source: Ministry of Higher Education (2010): The annual statistical report on higher education in Jordan for the Year 2008-2009 .The Hashemite Kingdom of Jordan.

Several economic and political conditions tended the number of international students to increase:

1. The political and economic turbulence resulting from the Gulf war in 1990/1991, and the mass Jordanian returnees from Kuwait and other Gulf countries;
2. The war on Iraq in 2003 and the influx of Iraqi migrants into Jordan;
3. The unrest situation in the West Bank;
4. The difficulties created for some Arabic and Muslim students in western environments due to the September 11th 2001 attacks, which subsequently made it more difficult for students particularly from the Arab Gulf, to acquire visas to US and even to EU countries (IEE, 2003).

This international demand on higher educational services, measured by the number of students enrolled in educational institutions outside their country of origin is called: educational export (Larsen and Vincent-Lancrin, 2002;

Mazzarol and Hosie, 1996). It is the fees and charges paid by imported international students that correspond to export revenues in higher educational services for the host country. For Jordan, the demand on its higher education quality services by international students constituted a new source of income and new source of foreign currency.

Before assessing the merit of further economic benefits of educational export to Jordan's national economy, it is important to follow the development in Jordan's Higher Education Institutions (HEIs), in terms of number of universities, student enrollments and tuition fees.

4. Higher education in Jordan

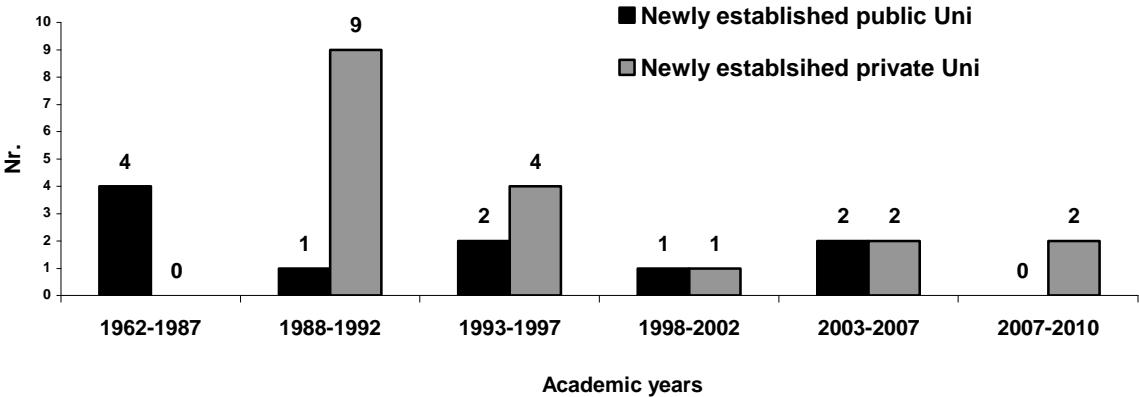
Higher education environment in Jordan has experienced significant changes started in 1951 with a one year postsecondary teacher training class. The first university program began in 1962 with the establishment of University of Jordan (UoJ). Between the establishments of the first public university until 1987, three public universities were established (Fig.2). In the second time period (1988-1992) one public university and nine new private universities were established. The reasons for this surge are:

1. Increasing demand on Jordanian higher education services by the returnees of Jordanian migrants from Kuwait and other Gulf countries resulting from the gulf war in 1990/1991;
2. Continuing population growth rate in Jordan increased from 3.7% in mid 1980s to 5.6% in 1990 (UN, 2009).
3. Increase in tertiary education Gross Enrollment Rates from 13.1% in 1985 to 63% in 1991 (UNESCO, 2006).

The government was the sole supplier of higher education until the end of 1980s, therefore the government realized that it could not satisfy this increasing demand on its own and issued policies allowing the participation of the private sector in providing higher education services, and that was the start of private higher education in Jordan. Following the period from (1993-1997)

two public universities and four private ones were opened up and during (1998-2002) one public and one private university was established. Finally, from 2003 until the end of 2007 two public universities were established¹⁰ and other two private ones have been established (MoHESR, 2006). As a result, right now in Jordan there are ten public universities and nineteen private ones.

Figure 2: Development of Jordanian newly established public and private universities (1962-2007)

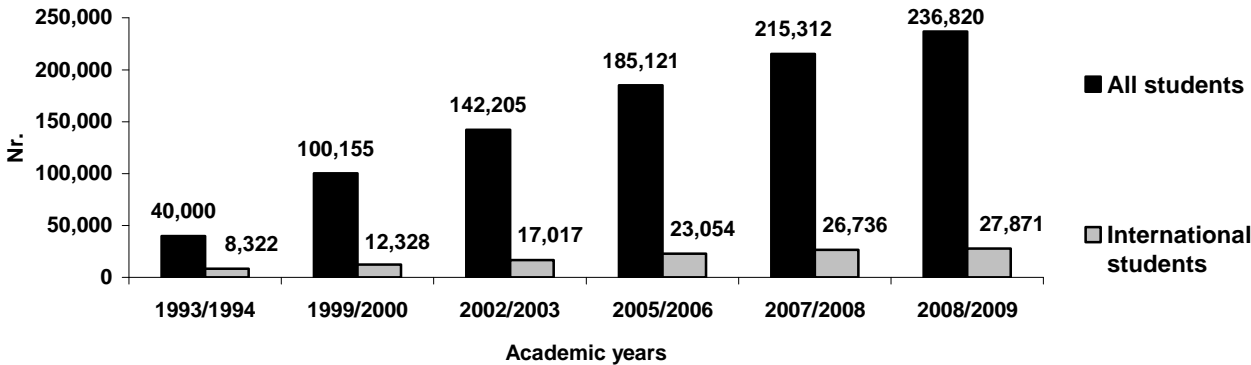


Source: Ministry of Higher Education and Scientific Research (Different years): Annual report on higher education in Jordan.

Jordanian universities experienced extraordinary growth in the number of students enrolled in all undergraduate and graduate study programs growing by 12% since 1993 (Fig.3). At the same time, the number of international students has been growing annually by 8% during the last 15 years (Fig. 3) and almost 90% of international students are enrolled into undergraduate studies (MoHESR, 2009)

¹⁰ One of them is the German Jordanian University established in 2005.

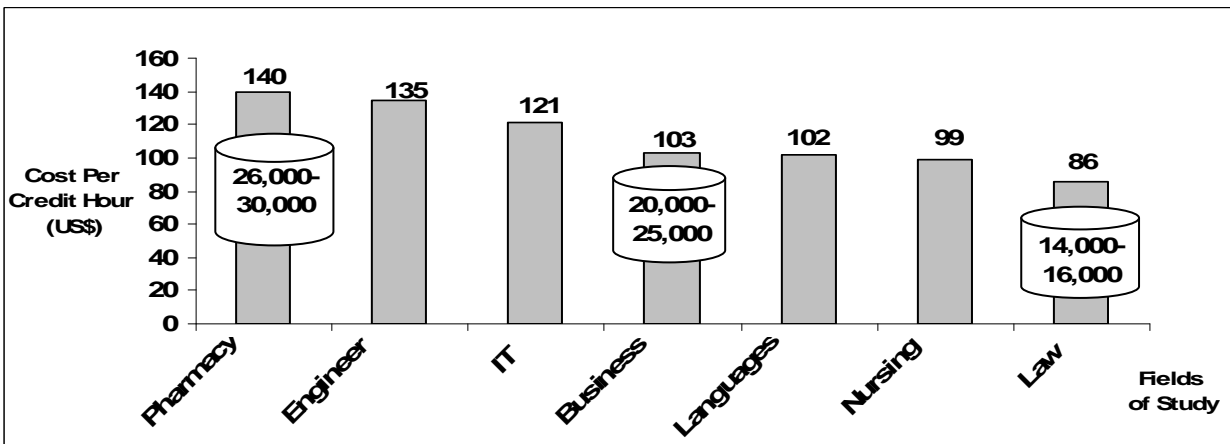
Figure 3: Student enrollments at Jordanian universities at undergraduate and graduate level in the academic years (1993-2008)



Source: Ministry of Higher Education and Scientific Research (Different years): Annual report on Higher education in Jordan.

The cost per credit hour in selected faculties that are mostly enrolled by international students at Jordanian universities is depicted in figure 4. A total tuition fees between (26,000-30,000 US\$) would be paid by an international student to achieve his/her Bachelor of Science in the faculty of pharmacy during the academic year 2006/2007. In comparison, a total tuition fees from (20,000-25,000 US\$) would be paid for achieving a bachelor of science from faculty of business administration and from (14,000-16,000 US\$) in the faculty of law.

Figure 4: Cost per credit hours for international Students at undergraduate level in Jordanian universities for the academic year (2006/2007)(In US\$)



Source: University of Jordan Database and Applied Science University (ASU) Databases.

5. Higher education exports: economic contribution

The potential development implications of educational services exports are raising numerous concerns in their significant impact of higher education

industry at the national and regional level. This section canvasses the economic contribution of higher education export to the Jordanian economy.

5.1 Source of foreign exchange reserves and contributing positively to the balance of payments account: higher education export is an important revenues generating activity (der Wende, 2003) and becoming an important source of foreign earnings (Carrington *et al.*, 2007). International students generate much needed income as well as foreign exchange for the national economy. Moreover, Higher education export provides an indirect benefit to the balance of payments (Asteris, 2006). The export value of educational services in a country's balance of payments is not confined to just tuition fees, but extends to all living and travel costs of international students in the host country. International students in Jordan spend an average of 9,000 JD a year (around 13,000 US\$ in current prices) on tuitions, living expenses, rooms and boards, books and other expenses (YEA *et al.*, 2005). Hence, the almost 28,000 international students in Jordan contribute today to what is equivalent to more than 2% of Jordan's GDP¹¹.

5.2 Decreases public universities reliance on ministry of higher education's diminishing financial support: rationalization of higher education systems (Skolnik, 1987; Gore, 1972) and deep cuts in higher education budgets has made institutions to look for alternative sources of funds. The revenues from fee paying international students are an attractive alternative source which enhances university services in an otherwise tight budgetary environment (Mazzarol and Hosie, 1996). In Jordan, the ratio of public higher education budget to government budget was .13 % of the state government budget in 2006 (MoHESR, 2007).

5.3 Strengthens traditional role of Jordan as educational hub for the Middle East: the provision of tertiary education internationally is now a major business and source of income, both directly: through fees received in destination

¹¹ Calculation by the author depending on: a)YEA,2005,2005a; b)Central Bank of Jordan (different years): Inflation in Jordan c) Jordanian Sales Tax Act Nr.(6) for 1994 and its Amendments Published on Page 1037 of Official Gazette Nr. 3970 on 31.05.1994 .

countries and indirectly through establishment of links (Salt, 1997). Education, either school education or higher education is a natural competency for Jordan. Today, about 12% of the total students in Jordanian universities are international students and are growing annually by 8.7% since the academic year 1993/1994.

5.4 Supports Jordanian traditional tourism: the average international student in Jordan receives 2.44 visits from family and friends every year and each visit lasts for 6.5 days, which means that the average length of all visitors staying in Jordan per international student is 15.86 days (YEA *et al.*, 2005). Those visitors often go with the international student to local tourism destinations such as the Dead Sea, Gulf of Aqaba, Petra and other tourist places.

5.5 Students networking opportunities with International students: international students are not simply a source in financial terms and a market to be won; rather they add immeasurably to the academic and cultural life of a university (Kinnell, 1989). They take home their knowledge and experience gained in the host country institution. Moreover, numerous contacts with host country students could have on the long run a positive effect in providing the foundation for strong foreign and trade relations between home and host country (Williams, 1981).

5.6 Low vulnerability to regional instability: a comparison between higher education export in Jordan and other service sectors reveals that educational exports have the highest revenue in terms of average receipt per student; 13,000 US \$ in comparison to 6,540 US\$ for medical tourism and 585 US\$ for traditional tourism (Tab. 6.). In addition, as most of international students and foreign patients in Jordan originate from Arabic region (Reisman, 2010; Oxford Business Group, 2007), hence they are more familiar with the region in relation to international students. As a result, educational export and medical tourism are less vulnerable sectors to regional instability than traditional tourism, where political instability, *inter alia*, affects the motivation to travel (Lea, 2003).

Table 6: Jordanian service sectors: a comparison

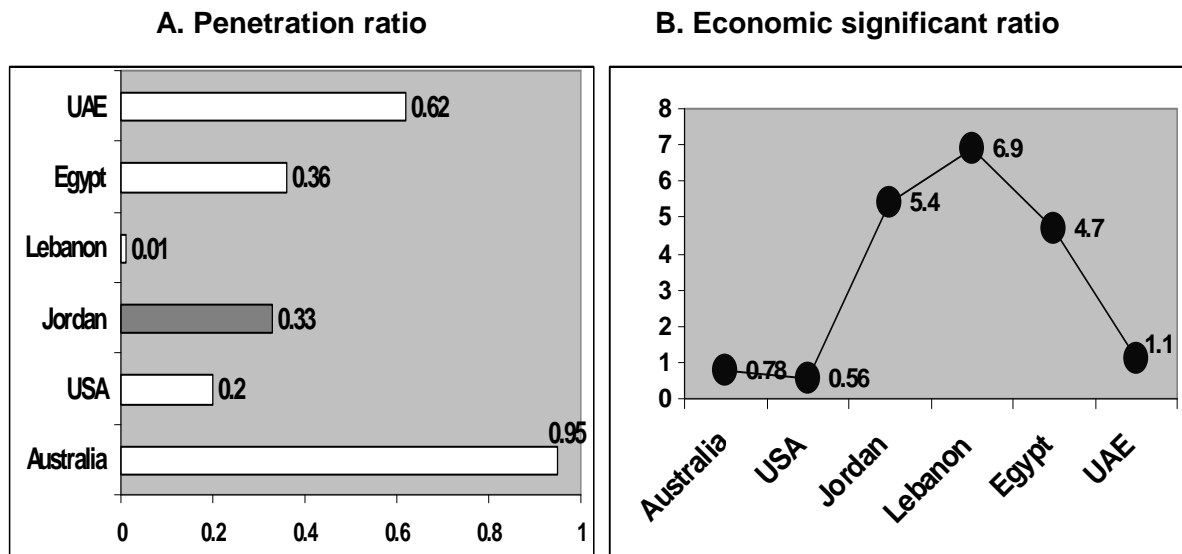
Service sectors	Annual number of students/tourists	Average receipts (per student/or tourist) in US\$	Vulnerability to regional instability
Educational export	26,736 ⁽¹⁾	13,200 ⁽²⁾	Low
Medical tourism ⁽³⁾	108,000	6,540	Low
Traditional tourism ⁽⁴⁾	1,350,000 - 1,478,000	585	Medium

Source: (1) Jordan Ministry of Higher Education and Scientific Research, Student Enrolment Statistical Report (2007). (2) YEA *et al.* (2005) (3) Jordan Ministry of Health, Annual Statistical Report (2006) (4) Jordan Ministry of Tourism and Antiques (2007); UN World Trade Organization: International Tourism Receipts, (2005).

5.7 International students: international and regional comparison

Jordanian universities have been benchmarked internationally against Australian and United States universities and regionally against the United Arab Emirates (UAE), Egypt and Lebanon. For Jordan, in terms of international student to total population or what is called: international penetration ratio, there is one international student for every 303 Jordanian residents, in comparison to one for every 105 Australian residents (YEA *et al.*, 2005). Nevertheless, international student penetration ratio in Jordan is higher than the US: one for every 495 residents of USA. Regionally, Jordan comes in a second position after the UAE: one for every 159 residents and in Lebanon: one for every 271 residents. Egypt comes last: one for every 6,380 residents, (Fig. 5 A). On the other side, the ratio of international student spending to per capita income or the economic significant ratio of international students in supporting local residents is highest for Lebanon (6.9) and Jordan (5.4) and lowest for USA (0.56) (Fig. 5 B). In another words, each international student in Jordan supports more than five Jordanians or a Jordanian family (the Jordanian family was estimated at 5.2 individuals, including the father and the mother) (DOS, 2004). Moreover, given the US high per capita income, hence each international student supports less than one American.

Figure 5: International students in Jordan according to penetration and economic significant ratio in 2004



Source: YEA *et al.* (2005).

6. International students' growth scenarios: JV 2020

In the year 2000, a Jordanian public-private intuitive was launched: the Jordan Vision 2020- henceforth JV 2020. And in beginning of 2004, JV phase II started aiming at enhancing higher educational services export. This is to be achieved with the collaboration of both public and private sectors from one side, and with different Jordanian representative universities, in order to increase the demand on higher education services to 100,000 international students by the year 2020. Different growth scenarios were depicted to project the growth in international students as summarized in table 7. In the first scenario, in order to reach 80,000 international students by the year 2020, this would mean a growth rate of 8.8% from the current 2007/2008 number of international students that is (26,736). This would contribute to Jordan by 560 million US\$ in current prices from students living expenditures and 480 US\$ million from tuition fees and a total receipt of 1 billion US\$ (in current prices) from both tuition fees and living expenditures would be generated. Moreover, if the same population growth rate would prevail, this would raise the international student penetration ratio (ratio of international students to total population) to one to every 100. Assuming the same current sales tax in Jordan which is currently

16%¹² would contribute by 63 million US\$ in tax revenues. 2020. In the second scenario, the projected 100,000 international students will be reached if an annual growth rate of 10.6% to be achieved from 2007/2008 international student numbering. This would raise the international student penetration ratio to one to every 80 Jordanians and the total receipt of 1.3 billion US\$ from both tuition fees and living expenditures would be generated, and 78 million US\$ as tax revenues. The third scenario would result in 160,000 international students by the year 2020 if international students are hypothesized to grow annually by 14.7%. The international student penetration ratio will be one to every 50 Jordanians, 2 billion US\$ as total receipts and 125 million US\$ as tax revenues will be generated.

After discussing the above scenarios, it was decided - among Jordan Vision and universities representatives - that the second scenario is the most appropriate for Jordan, as the first scenario was considered as too conservative, building upon the average historic growth rate of international students and the third scenario is too ambitious, where the change would be difficult to achieve (YEA *et al.*, 2005).

Table 7: International students' different growth *scenarios* in 2020[#]

Growth scenarios	Target number of students in 2020	International students penetration ratio by 2020	Living expenditures* (in million US\$)	Tuition fees ** (in million US\$)	Total Receipts (in billion US\$)	Government tax revenue*** (in million US\$)
8.8%	80,000	1:100	560	480	1	63
10.6%	100,000	1:80	700	600	1.3	78
14.7%	160,000	1: 50	1.1 million	960	2	125

Note: # The year 2020 refers to the academic year 2019/2020.

* This comprises accommodation, food, transportation, books and other expenses.

** This was estimated based on information from several Jordanian universities.

*** Mostly from sales tax on part of living expenditure. Although, other tax revenues on services consumed by the student in Jordan may be collected.

Source: Data are manipulated by the author depending on: YEA *et al.* (2005).

¹² Jordanian Sales Tax Act Nr.(6) for 1994 and its Amendments Published on Page 1037 of Official Gazette Nr. 3970 on 31.05.1994 .

7. Further perspectives

The institutional landscape of higher education is changing: the traditional campuses are declining while profit oriented institutions are expanding (Scott *et al.*, 2003). Higher education has been witnessing major transformations and facing enormous challenges in terms of increasing competition between Jordanian Universities themselves from one side, and increasing competition from new universities in the Middle East region from another side. In addition, the entry of new low cost providers into the industry will increase the rivalry in the future and the existing national investment in higher education institutions might be increasingly at risk. Moreover, offshore education are a growing market for international students, where the main providers are foreigner educational institutions and opening subsidiaries abroad or offering their educational programmes and qualifications via partnerships with host-country institutions. In Egypt for example, the already extensive landscape of international programs has been established. United Arab Emirates has pursued similar efforts through Dubai Knowledge Village, which has already attracting numerous British and European universities and is looking to attract US institutions. Kuwait will have approximately ten private American-style institutions of higher education (Ghabra and Arnold, 2007). These universities would increasingly attract not only these countries' own students, but possibly Jordanian students as well. Higher education services are a growing industry that is not only branching out into new institutions rather into new methods of delivery, such as distance learning via the internet, radio and television, and into new activities such as educational exchange services and educational testing services. These techniques could lead to increased competitive overlap between institutions, particularly as geography becomes less of a constraint. An example is the IT Dubai Internet city, an Internet university; offering international quality courses in e-finance, e-marketing, e-design and e-management. Therefore, the availability of substitutes signals that the demand for Jordanian higher educational services might be in a potential threat to achieve sustained competitive advantage of Jordanian universities within the target markets.

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