

## INVESTIGATING THE TRENDS IN GROWTH OF HIGHER EDUCATION ACROSS THE WORLD WITH REGARD TO INTERNATIONALIZATION FACTORS AND POPULATION CHANGE

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### ABSTRACT

As one of the most important components of national education, universities are considered to be one of the main factors forming the future of the world. Knowledge development is the major task, function, and mission of this sector. In today's world, higher education has the most significant share and highest impact on scientific, cultural, political, and economic approaches of the countries. Therefore, it seems necessary to study the trends in growth of higher education across the world and investigate the factors affecting it. Thereupon, this paper attempts to investigate and analyze population and globalization as two factors affecting the growth of higher education in different countries across the world, then it reviews the growth of higher education in the world, and Europe in particular.

**Keywords:** Higher Education, Globalization, International, Population Growth Higher Education

### INTRODUCTION

Nowadays, specialized and skilled human resource is the main element of economic, social, and cultural growth of the countries.

The role of human capital in its economic growth and development has become more important, so investment in higher education is considered to be one of the most fundamental ways to achieve socio-economic development (Al-e-Agha, 2008). On the other hand, as one of the most important components of national education, universities are believed to be one of the main factors forming the future of the world.

Knowledge development is the major task, function, and mission of this sector. This sector plays a pivotal role in preparation for accelerating economic growth, interaction with the global economy, economic competitiveness, knowledge-based development, preserving the environment, improving health and quality of life, enhancing human security and social justice, cultural development, national security, development of judicial affairs, modernization of the state and improving the effectiveness of the governance whose realization depends on knowledge development. In today's world, higher education has the most significant share and highest impact on scientific, cultural, political, and economic approaches of the countries (Dadmarzi, 1998).

Therefore, higher education has become one of the most important elements of development in the various communities.

Accordingly, this research aims to investigate the trends in growth of higher education across the world. To do so, first, the main future changes of higher education are elaborated, then, the trend in growth of higher education across the world is investigated.

### **Population Changes**

Population change is one of the most important factors affecting the future of higher education. The trend of population change in the world during 1950-2012 is summarized in Table 1.

Generally, the rate of population growth has decreased over the years due to reduction of this index in different parts of the world. On one hand, industrialized countries of the West and East Europe are facing the process of population aging of the societies with declining fertility rates. On the other hand, societies in the developing countries of South and Southeast Asia, Middle East and Africa have increasing young

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population. This might lead to increasing immigration to Europe and increase in population through migration. Changing demographic structure affects the higher education in this region by aging the student population and active human resource. This is one of the main reasons of increased student migration to European countries (Pasternack, 2009).

**Table 1: The Trend of Change in the Population Growth Rate (Percent) of Some Countries and Islamic Countries during 1990-2012 (The World Bank)**

| Country              | 1990 | 2012 |
|----------------------|------|------|
| The Arab World       | 3.54 | 2.06 |
| The Whole World      | 1.72 | 1.15 |
| Afghanistan          | 4.5  | 2.44 |
| United Arab Emirates | 5.66 | 3    |
| Argentina            | 1.4  | 0.87 |
| Indonesia            | 1.8  | 1.24 |
| Bangladesh           | 2.46 | 1.19 |
| Bahrain              | 3    | 1.9  |
| Brazil               | 1.73 | 0.87 |
| Pakistan             | 2.94 | 1.68 |
| China                | 1.46 | 0.48 |
| Germany              | 0.86 | 0.11 |
| Egypt                | 2    | 1.66 |
| England              | 0.3  | 0.75 |
| India                | 2    | 1.26 |
| Iran                 | 2.56 | 1.31 |
| The Israeli Regime   | 3    | 1.81 |
| Jordan               | 3.66 | 2.19 |
| Libya                | 2.34 | 0.83 |
| Arabia               | 3.4  | 1.8  |
| Turkey               | 1.73 | 1.27 |
| US                   | 1.3  | 0.74 |
| Uzbekistan           | 2.43 | 1.13 |
| Yemen                | 4.5  | 2.3  |
| Malaysia             | 2.8  | 1.66 |

### Globalization

Globalization is one of the major changes we are facing today. It is one of the effective drivers of the future of higher education. In the last decade, globalization had a significant effect on higher education sector. The term globalization is sometimes used interchangeably with internationalization. Internationalization is among behaviors highly affected by globalization. Based on these opinions, globalization doesn't originate just from one simple phenomenon, but it is believed to be a combination of several political, economic, social, cultural, science and technology phenomena. Moreover, internationalization is some sort of reaction against the pressure caused by globalization and form a set of behaviors affected by it. Globalization is a natural and spontaneous process, which is the product of growth of communication technologies, universal development of communication and increasing the awareness of human beings, while internationalization refers to special policies and plans implemented by the states, organization, and academic institutes. In globalization, scientific, technological, commercial and economic trends of the world having significant effect on the future of societies are focused, while internationalization emphasized on the presence of other cultures, and socio-economic flows. Internationalization acknowledges the acquisition of a single culture and socio-economic flow. The process of internationalization can reflect in different forms such as immigration, transferring institutions

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and programs from one country to another, increase in international research ratings, emergence of common approaches in higher education sector of different countries, increase in the interactions between higher education sectors of different countries, and growth of internationalization in higher education systems organizations across the world. As a consequence of globalization, internationalization have resulted in growth of intercontinental competition, and universities are involved in this Competitive environment. Globalization is a flow of technology, economy, people, values and ideas along the borders having a significant effect on different aspects of the society, and is an important and influential factor for the performance of higher education. In recent decade, the number of students migrating to other countries to continue their education has also increased, so it is a factor accelerating the trend of higher education growth in some countries, the process of internationalization, and effectiveness of this growth on higher education sector. Student migration has significantly increased, especially in the last two decades. According to UNESCO, the number of international students from 1980 to 2004 has reached to 4,000,000, with a growth rate of 300% (Walsh, 2009). So, the growth of international higher education is one form of internationalization of higher education, and in fact, one of the effects of internationalization process on higher education sector. In the following, the population of international students in some parts of the world is investigated.

Table 2 reports the official statistics published regarding the number of student visas obtained from different countries for Australia. These statistics can be found on the website of the Australian immigration department. The statistics show that the pursuit of knowledge through education in Australia is not specific to Iranian students. Students of other countries, such as Iraq, Bangladesh, Brazil, Saudi Arabia, and even China, the largest economy in the world, along with students of Middle East countries, such as Pakistan, Oman, Lebanon, Saudi Arabia and the United Arab Emirates, choose Australia to continue their education.

**Table 2: Immigration Department of Australia, Students Visas Obtained in each Country, 2013**

| Country                  | 570 Visa | 571 Visa | 572 Visa | 573 Visa | 574 Visa | 575 Visa |
|--------------------------|----------|----------|----------|----------|----------|----------|
| Brazil                   | 3711     | 364      | 483      | 131      | 47       | 1368     |
| Colombia                 | 3170     | 10       | 63       | 263      | 31       | 42       |
| Germany                  | 65       | 1055     | 132      | 282      | 71       | 1264     |
| India                    | 9        | 48       | 1122     | 7724     | 335      | 98       |
| Malaysia                 | 55       | 130      | 457      | 4197     | 511      | 203      |
| Pakistan                 | <5       | 16       | 444      | 2843     | 161      | 14       |
| Philippines              | 43       | 32       | 1448     | 1398     | 38       | 263      |
| Saudi Arabia             | 1210     | <5       | 72       | 1747     | 322      | 137      |
| Singapore                | <5       | 46       | 139      | 2390     | 98       | 138      |
| Thailand                 | 1645     | 148      | 480      | 2372     | 99       | 44       |
| Great Britain            |          | 21       | 422      | 329      | 69       | 895      |
| United States of America | 6        | 52       | 661      | 763      | 143      | 6244     |
| Vietnam                  | 78       | 655      | 138      | 5134     | 222      | 91       |
| China                    | 344      | 2798     | 321      | 22638    | 823      | 544      |
| Canada                   | <5       | 42       | 216      | 911      | 58       | 677      |
| France                   | 256      | 131      | 280      | 45       | 599      | 14       |
| Italy                    | 483      | 413      | 213      | 83       | 71       | 251      |
| South Korea              | 1120     | 263      | 1062     | 1422     | 29       | 209      |
| Russia                   | 150      | 22       | 51       | 403      | 27       | 17       |
| Iran                     | <5       | 24       | 22       | 627      | 523      | 9        |

Table 3 shows the official statistics of the number of visas obtained for education in all levels of school in Great Britain during 2009-2010. Immigration department of Great Britain, based on the official statistics regarding the number of students studying in this country, reports that Asian and Middle East countries

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are at the top of the list, and the number of students from some countries, including Turkey, Pakistan, Iraq and the United Arab Emirates is even higher than the number of Iranian students.

**Table 3: Immigration Department of Great Britain, Students Visas Obtained in each Country, 2009-2010**

| Country      | 2009-2010 |
|--------------|-----------|
| Australia    | 1680      |
| Brazil       | 1315      |
| Canada       | 5575      |
| China        | 56990     |
| France       | 13780     |
| Germany      | 15425     |
| India        | 38500     |
| Iran         | 3185      |
| Ireland      | 16595     |
| Italy        | 6550      |
| Japan        | 3480      |
| South Korea  | 4385      |
| Malaysia     | 14060     |
| Nigeria      | 16680     |
| Pakistan     | 9815      |
| Netherlands  | 8415      |
| Russia       | 3245      |
| Saudi Arabia | 8340      |
| Thailand     | 5505      |
| Emirates     | 2995      |
| US           | 15060     |

Table 4 shows the number of students having F1 student visa in US. These statistics are published by immigration department of US based on student's country of residence. Table 5 shows the number of students having student visa in Canada. These statistics are published by immigration department of Canada based on student's country of residence.

About 7000 American students 1500 English students are also studying in Australia, which is much higher than the number of Iranian students studying in Australia (i.e., 1300 students). The statistics of immigration department of US also reports that European students constitute the majority of students studying in US.

Figure 1 shows the share of different countries in providing international education during 2000-2010. According to this figure, the share all member states of Organization Cooperation and Economic Development (OCED) in providing international education has generally increased during 2000-2010 and US, England, Australia, and Germany have the highest share (OECD, 2012). So, as it can be seen, by accelerating the internationalization process from 2000 to 2010, international higher education, and higher education in member states of Organization of Cooperation and Economic Development as a result, has improved.

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Therefore, improvement and growth of internationalization process is one of the factors affecting the development of higher education in the world.

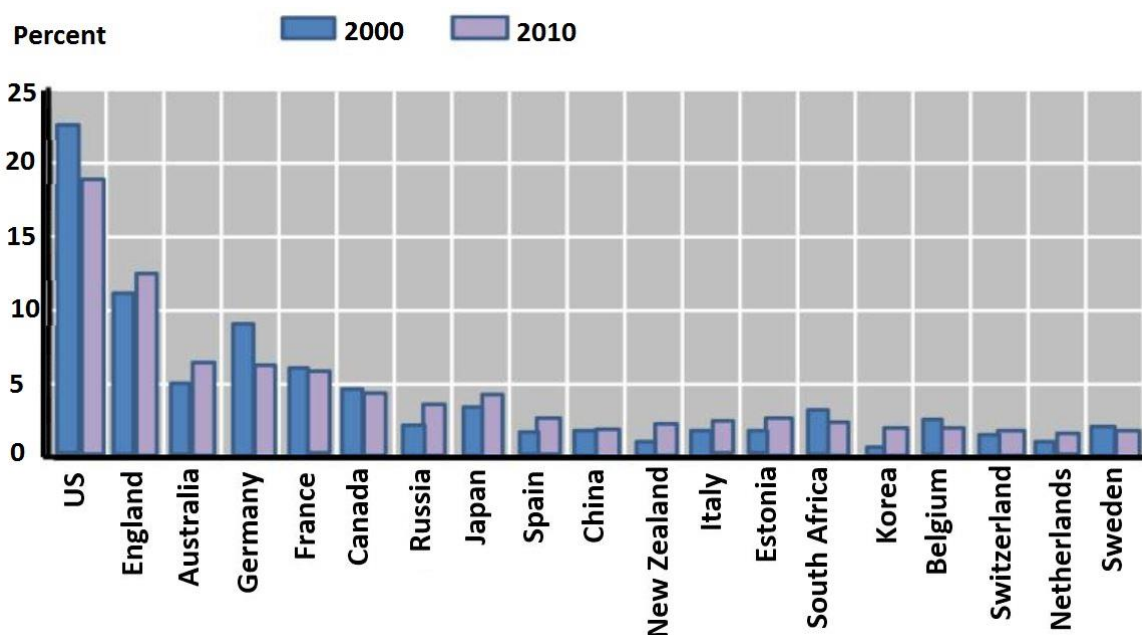
**Table 4: Immigration Department of US, Students Visas Obtained in each Country, 2013**

| Country              | F1 visa     |
|----------------------|-------------|
| <b>Asia</b>          |             |
| Bangladesh           | 1364        |
| China                | 189402      |
| Taiwan               | 10621       |
| India                | 23466       |
| Iran                 | 3024        |
| Iraq                 | 335         |
| Japan                | 18669       |
| Malaysia             | 1985        |
| Pakistan             | 1088        |
| Saudi Arabia         | 27932       |
| Thailand             | 4166        |
| Emirates             | 958         |
| Vietnam              | 10343       |
| <b>Europe</b>        |             |
| Czech Republic       | 606         |
| Denmark              | 1430        |
| France               | 6232        |
| Germany              | 8146        |
| Great Britain        | 4621        |
| Italy                | 3935        |
| Netherlands          | 684         |
| Norway               | 2587        |
| Russia               | 5846        |
| Sweden               | 2773        |
| Turkey               | 6490        |
| <b>North America</b> | <b>6490</b> |
| Canada               | 245         |
| Mexico               | 8240        |
| <b>Oceania</b>       |             |
| Australia            | 2086        |
| New Zealand          | 459         |
| <b>South America</b> |             |
| Argentina            | 1155        |
| Brazil               | 15506       |
| Colombia             | 5905        |

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**Table 5: Immigration Department of Canada, Students Visas Obtained in each Country, 2012**

| Country       | Visa  |
|---------------|-------|
| China         | 80638 |
| India         | 28929 |
| Korea         | 19079 |
| Saudi Arabia  | 14219 |
| US            | 12142 |
| France        | 11334 |
| Japan         | 6404  |
| Mexico        | 5003  |
| Nigeria       | 4726  |
| Iran          | 4278  |
| Vietnam       | 3429  |
| Brazil        | 2923  |
| Germany       | 2846  |
| Pakistan      | 2804  |
| Taiwan        | 2648  |
| Great Britain | 2588  |
| Russia        | 2404  |
| Emirates      | 1909  |
| Bangladesh    | 1823  |
| Malaysia      | 1797  |



**Figure 1: The Share of Different Countries in Providing International Education in the World (OECD, 2012)**

### *The Increasing Demand for Higher Education*

In recent years, the rapid and increasing growth of access to higher education in many countries has been supported by the states as a response to social, political, and economic necessities. This approach has made the higher education attract many attentions as a focal point guaranteeing the progress of communities in other aspects. Thereupon, the states tried to develop higher education system as much as

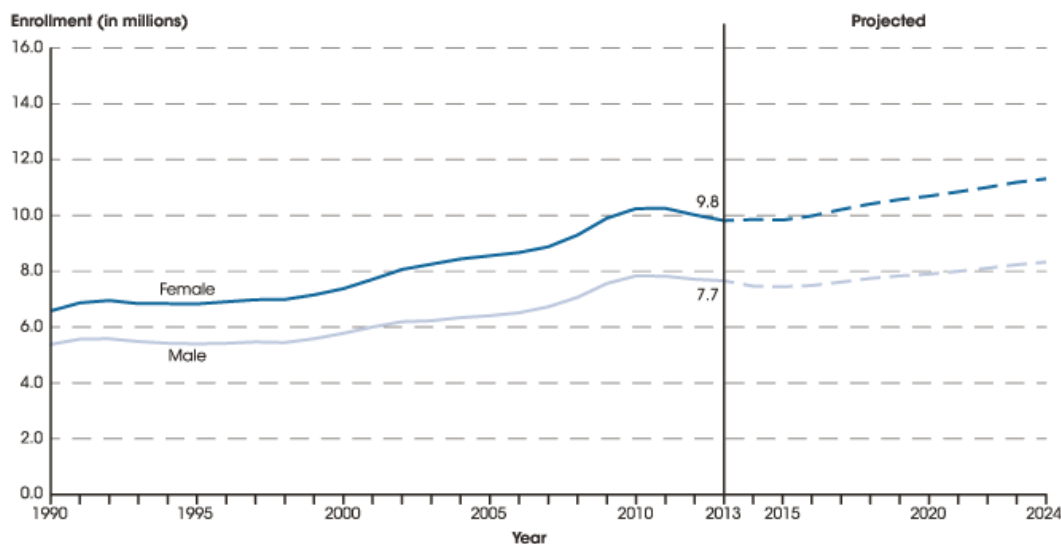
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possible. Understanding the importance of higher education by countries across the world has made higher education their first priority in educational policy, so that the total number students all around the world has increased more than 12 times, from 13 million in 1960 to 158.7 million in 2008. The methods, policies, priorities, challenges, and opportunities in this area are, of course, different in developed and developing countries. In developing countries, universities are almost the only institutions creating knowledge capital capacity in their work force, they are the only institutions able to support knowledge based economy and operate in the areas related to generating new knowledge and transferring technology. At a time when globalization is adding to its extent, the universities in developing countries face decreasing quality and stagnation. In this paper, the experiences of different countries regarding increasing access and development of higher education are investigated. As it will be discussed, development of higher education policies are structurally different in developed and developing countries. While the problem of developed countries is low demand, there is a failure in providing higher education in developing countries. There are no problems such as lack of financial resources, lack of teachers, lack of educational spaces and laboratory equipment, etc. in developed countries, while these are the main problems in development of higher education in developing countries. However, there are some common problems in these two groups of countries, including disproportionate distribution of higher education opportunities between different social groups, or concerns regarding quality assurance in education, though these two problems are much more severe in developing countries (Roshan, 2013).

According to studies, the annual growth in the total number of students across the world was 5.2% from 1991 to 2005. The majority of this growth has occurs in Africa, Asia, Latin America, the Caribbean, Arabic countries and Central and Eastern Europe.

According to the report of Organization of Cooperation and Economic Development, Russia had the highest academic population in 2012 in proportion to its population, and 53.5% of Russian citizens had academic education in 2012. Japan is in third place in this ranking, and 46.6% of Japan's population had academic education in 2012. 46.4% of Israel citizens, 43.1% of US citizens, 41.7% of South Korea's population, 41.3% of Australia's population, 41% Great Britain's population, 40.6% of New Zealand's population, 39.7% of Ireland's population, and 40% of Finns have academic education (OCED, 2015). So, there is a direct relationship between development of higher education and the level of development in a country.

The following plot shows the changing trend of demand for higher education from 1990 to 2013 across the world. As it can be seen, the demand has increased about 46% from 1990 to 2013, and the amount of growth from 2000 to 2010 was 37%.



**Plot 1: Changing Trend of Demand for Higher Education from 1990 to 2013 across the World**



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### Higher Education in Europe

In order to have a comprehensive understanding of the situation of higher education in Great Britain, first, a brief review of the status of higher education in Europe is presented based on the available statistics and information. Then, the status of higher education in Great Britain is investigated as an example of developed European communities.

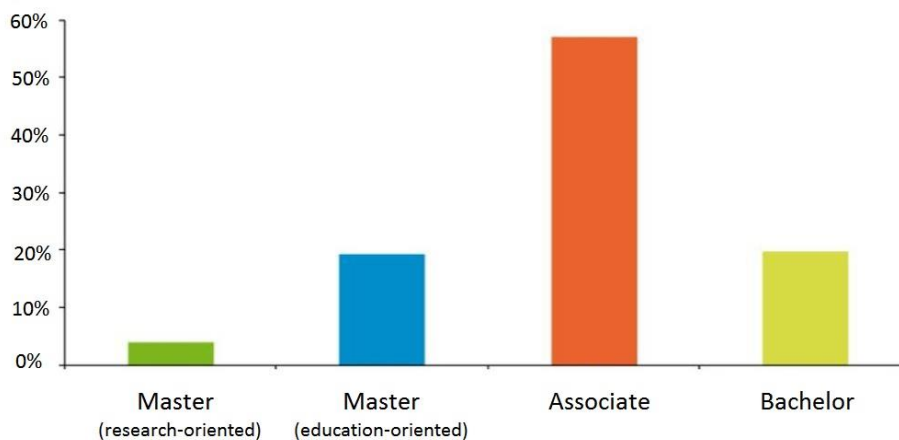
#### A. Population Changes in the number of students of higher education in Europe

In European Union, reaching a common point in higher education policies is easy since the main problem in this region is encouraging young people to participate in higher education. In this regard, encouraging different social groups to study in higher education has been of interest of policy makers of higher education.

The rate of participation in higher educations in European countries depends on the age group and passing high school. In 2009, 13% of men and 19% of women of 18 years old were studying in a course of higher education. In the same year, the amount of participation in higher education in the age group of 20 years old was the highest, with 30% participation of men and 42% participation of women. For the age group older than 24 years old, this index had significantly decreases, so that a 5% reduction was observed per a year increase in age. Ultimately, about 2% of men and 2.5% of women from 35 to 39 years old participated in higher education. Regional differences and age differences were the reason of varying participations in higher education in different European countries.

#### B. Status of higher education in Great Britain in 2010

In November 2010, the number of higher education students in Great Britain was 2.5 million. 56.4% of this population was women and 43.6% of them were men. Plot 2 shows the percent of students participating in different levels of education at the end of 2009 and early 2010 in Great Britain. As it is can be observed, more than 50% of higher education students were enrolled in associate degree and about 19% of them were enrolled in bachelor's degree. The number of master students had the lowest amount. It has to be noted that the focus studying in an education-oriented system is on training based on theoretical courses, while research-oriented education has a course focusing on research and its achievement is to produce a new technology, present a new theory, produce technical knowledge, patent, etc. which consists of taking limited theoretical courses and requires conducting research (Isfahani, 2010).



Plot 2: Separation of Students Based on Level of Education (OECD, 2011)

### Conclusion

As it was noted, the amount of participation in higher education in European countries is higher than that of other countries. Moreover, US, England, Australia, and Germany have the highest participation in providing international education. The main growth of higher education in the last decade has occurred in Africa, Asia, Latin America, the Caribbean, Arab countries, and Central and Eastern Europe.



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Furthermore, Russia, Canada, Japan, US, South Korea, Australia, Great Britain, New Zealand, Ireland, and Finland respectively have the highest population with academic education. Finally, it can be concluded that the factors of human population, development, internationalization, and facilitation of international communication are in turn the main influential factors affecting the demand for higher education and its growth and development.

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