

“一带一路”高等教育研究丛书

# The Belt and Road Higher Education Research ( 2016 )

Comparative Report

“一带一路”高等教育研究（2016）：国别报告

刘进

[阿富汗] 班伯瑞·穆罕默德·奥斯曼 / 著  
( M.Osman Babury )

[斯里兰卡] 李兰香  
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## Country representatives from B&R countries

Prof. Liu Jin—China,

Prof. Mukdad Al Khateeb—Iraq,

Prof. Pavel Zgaga—Slovenia,

Prof. Iris Benda—Israel,

Prof. Nened Suzic—Bosnia and Herzegovina,

Prof. Mohammad Osman Babury—Deputy Minister of Higher Education,  
Afghanistan,

Prof. Muhammad Faizal A. Ghani—Malaysia,

Dr. Sujeewa Polgampala—Sri Lanka.

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## *Chapter 1*

# **Introduction**

Liu Jin

The post-World War II period has witnessed profound economic changes across the globe. Many countries have shifted to post-industrial economies, in which more jobs require highly educated personnel. Even traditional economies need a larger number of highly educated workers, due to the advances in technology. The most highly remunerative and prestigious occupations invariably require post-secondary education. Higher education has demonstrated its crucial role in introducing society change and progress and this is considered a key agent in educating new generations to build the future, but this does not exempt it from becoming the object of an internal reformulation.

Following the United States and Western Europe's rapid growth in massification took place in the developed countries. Over the past decade, most of the remaining countries have experienced similar expansion. China and India, currently the world's largest academic systems, have been growing rapidly and will continue to do so. Indeed, perhaps half of the world's increase in enrollment can be found in China and India.

Mass higher education has fundamentally transformed the higher education system worldwide. Differentiated academic systems have emerged, with various institutions serving quite different purposes and roles within each country. Universities have become large and complex institutions as a result of massification and the expansion of the student numbers, in part because of the growth

of science and the many new functions that universities now serve.

Women began to assert their rights to pursue higher education, benefiting significantly from massification, first in developed countries and later elsewhere. In most countries, women had been dramatically underrepresented in student population. By the 1980s in much of the world women had achieved parity with men and in some countries, outnumbered men.

As we look at the state of higher education in developing economies today we see a varied picture with some countries having made phenomenal progress over the last few decades while others slipping further behind the rest of the world in quality, creativity and effectiveness. What has become even clearer than when it was first highlighted in 2002 is the fact that national economic and social progress is increasingly dependent on having a high-quality higher education system. As emphasized in the UNESCO study *Toward Knowledge Societies*, “Institutions of higher education are destined to play a fundamental role in knowledge societies, based on radical changes in the traditional patterns of knowledge production, diffusion and application.” The authors go on to emphasize, “While there is no single organizational model, it is important to ensure emerging systems of higher education a high enough level in terms of quality, relevance and international cooperation if they are to play their full role as key components in building knowledge societies.” The challenges, however, are both the need to ensure that the critical importance of high-quality higher education is recognized by the authorities, and to ensure sufficient funding for it, whether from the government, donors, private sources or a certain combination of the formers.

Understanding the changes that have taken place in higher education worldwide in the past half century is a difficult task because of the scope and complexity of the trends. One can, without the risk of exaggeration, speak of an academic “revolution” —a series of transformations that have affected most aspects of post-secondary education worldwide. The academic changes of the late 20<sup>th</sup> and early 21<sup>st</sup> centuries are most extensive in that they are truly global and affect more institutions and larger populations.

A central reality of the 21<sup>st</sup> century is the emergence of the knowledge economy. The many manifestations of this economy, including the growing centrality of the service sector, new fields like biotechnology, the importance of information and communications technology and many others, enhance the salience of higher education. Growing segments of the workforce require advanced education to be offered in post-secondary institutions. Research, much of it carried out in universities, has been expanded in scope and relevance.

Information and communications technology composes another global force. The effect on society in general is still unfolding, but without question this aspect of the revolution is one of the most powerful influences on higher education. The impact of technology on science, teaching and learning in traditional universities, on the possibilities for distance education and even on the internal management of universities has been particularly profound.

Dramatic change has occurred in funding higher education and in deliberating how to support mass higher education. In most countries, with the notable exceptions of some East Asian nations, higher education has long been considered a responsibility of the state and thought of as a “public good”. University study benefits the individual, of course. It also benefits the society by such means as increasing productivity and contributing to national goals. The financial pressures resulting from massification, combined with the neoliberal orientation of international funding agencies during the last decade, have tempered the notion of higher education as strictly a public good. The benefits of tertiary education have been emphasized as a “private good”, with implications for the allocation of the responsibility for costs. It is becoming obvious that the state alone can no longer afford to educate the growing numbers of students in a mass higher education system and that (given the benefit of education to an individual over a lifetime) students and families need to assume a share of the financial burden. These factors have contributed to both the dramatic rise of private higher education worldwide and to the privatization of public universities.

At the beginning of the twenty-first century, higher education has become an increasingly effective factor for economic and social development. Over

the past few decades, many efforts have been made to draw experiences from advanced countries and their universities to promote higher education in other countries. Nevertheless, there are still many potential challenges facing higher education. Though a number of these challenges have a global phenomenon and are evident in most countries of the world.

The development of higher education in Asian countries has been dramatic over the past two decades. Increasing the access to higher education in these most populated countries of the world, the greater number of world class universities, and most importantly, the reliance of countries on universities as the main drivers of economic development constitute a major manifestation in Asian higher education. At the same time, in a number of these countries, higher education still faces certain challenges, hampering it in transformation to an effective impetus for economic development.

While universities in these countries seek to improve their service and positioning, the presence of any regional and global intermediaries to accelerate this trend is crucial. Indeed, establishing “*the Research Group of Higher Education along ‘the Belt and Road’*” can boost the growth of higher education through a suitable platform for harmonization, sharing of experiences, the establishment of a comprehensive and appropriate framework for quality assurance, regionalization and internationalization. This initiative will support the maximization of the potential of higher education systems to provide quality higher education; prepare graduates for the changing labour markets and changing societies; and to increase innovation capacity and contribution to growth and job.

This publication aims to reveal the higher education status in Afghanistan, Bosnia & Herzegovina, China, Israel, Malaysia, Sri Lanka and Vietnam, countries represented in “*the Research Group of Higher Education along ‘the Belt and Road’*”. National contexts and institutional models of higher education in these countries vary widely. Therefore, each country can choose, from among the various possible pathways, a strategy that plays to its strengths and resources. Some countries and regional experiences can provide some relevant and useful lessons regarding the key features of successful models.

## *Chapter 2*

# **From Brain Drain to Brain Gain: A Study on Faculty Mobility from Countries along “the Belt and Road” to China**

Rebecca Wenjing Lyu, Liu Jin, Jin Chen

### **Abstract**

On the basis of the brain drain and brain gain theory, this paper examines the basic pattern of faculty mobility from countries along “the Belt and Road” to China over the past 15 years, by analyzing faculty resumes from 109 Chinese research universities in the “211 project”. The paper finds that although countries along “the Belt and Road” are not the major sources of academic talent in Chinese research universities, these countries do maintain certain degree of academic connections with China. Rather, among all of the countries along “the Belt and Road”, ASEAN ( Association of Southeast Asian Nations ) is currently the leading source of talent for China’s research universities.

This paper also finds that China is becoming a regional center for higher education and research. Thus, we suggest that China needs to seize the opportunity to completely reversing the traditional pattern of brain drain and realize a major transformation in its international role, from a source of brain drain to a destination for brain gain. To do that, China has to gain strengthen academic

connections with Central and Eastern European and Southwest Asian countries. This paper also suggests that as developed eastern regions in China aim to attract academic talent mainly from the United States and Europe, developing western regions in China can take countries along “the Belt and Road” as their major sources of international brain gain. Therefore, through a variety of initiatives, China can build an emerging academic labor market along “the Belt and Road”, playing the central role.

**Key words:** academic labor market, brain drain, brain gain, faculty mobility, “the Belt and Road Initiative”

## 1 Introduction

One of the major tasks of “the Belt and Road Initiative” is to strengthen the “people-to-people bond” among countries in the region, which need more synergy in the development of education, science, technology and culture among countries along “the Belt and Road”, especially in terms of promoting cooperation and sharing of development opportunities in higher education. This requires strengthened connection along with free and mutually complementary high-level academic talent circulation is one of the major actions. It is foreseeable that after proposing “the Belt and Road Initiative” ( hereafter the “Initiative” ), there will be a greater regional and international faculty mobility to China, which, to a great extent, is the major path to reverse China’s traditional patterns of brain drain, transfer China into a regional center of higher education and promote economic and social development in China through brain gain and brain circulation. Meanwhile, different from traditional higher education centers in history, the Initiative proposes the concept of shared development, which can not only be built in the emerging academic labor market with China as the new center, but also promote the free circulation and fair, effective allo-

cation of academic talent among countries along “the Belt and Road”. It would also ensure that these countries share development opportunities in science, technology and education, which in fact help each country benefit and prosper from its internal talent supply.

However, up to now, the academia basically has a poor knowledge about academic talent mobility along “the Belt and Road”. To be specific, the pattern of faculty mobility from China to countries along “the Belt and Road” is not clear, The pattern of faculty mobility from countries along “the Belt and Road” to China remains unknown.

In 2016, we established the International Research Group on Higher Education for “the Belt and Road”. With dozens of countries along “the Belt and Road” joining in, we have built up several databases on higher education, including educational policies, faculty resumes, educational infrastructures, etc., which will definitely make up for the shortage of research on higher education of “the Belt and Road” countries. Among them, the faculty resumes database of research universities in countries along “the Belt and Road” is important for studying academic talent mobility in “the Belt and Road”. Based on this faculty resumes database which was completed in one year, this paper examines the basic patterns of academic talent mobility from countries along “the Belt and Road” to China.

## 2 Literature

### 2.1 Brain Drain and Brain Gain

Brain drain, brain gain and brain circulation represent different stages of academic mobility. Thus it is suitable to analyze characteristics of academic mobility among countries after the Initiative was proposed. From the perspective of historical development, China and the vast majority of countries along “the Belt and Road” have a long-standing problem of significant academic brain drain.

First, the essence of “brain drain” is a “trade deficit” in the talent mar-

ket. The superordinate concept of brain drain is “brain distribution” which is the result of a series of migrations of human capital, encompassing “brain introduction”, “brain drain”, “brain waste”, “brain circulation” and “brain spillover”. (Lowell & Findlay, 2001). Among these concepts, “brain drain” refers to the imbalanced distribution of human resources, as a manifestation of “the movement of human capital in a certain direction at a significant rate” (Salt, 1997). It can also be understood as the talent market trade “deficit”. “Talent” refers to any individual possessing a potential technology, qualification or attribute, and the so-called “drain” means that the flow rate is higher than the “normal” situation or the possible expectation (Davenport, 2004). Together, “talent drain” means “the departure of the most talented people is at a remarkable speed” (Bushnell, 2001). Second, “the Belt and Road” countries and regions are facing a long-term academic brain drain. In terms of etymology, the concept of “brain drain” was first introduced with the outflow of scientists and technicians from the United States and Canada (Cervantes & Guellec, 2002), and the most significant brain drain occurred in the 1960s “along the Southeastern European countries”. For the decades since then, a “North-South flow” of talent was gradually developed, a pattern of flowing from developing to developed countries (Carrington & Detragiache, 2008). “The Belt and Road” countries are still regarded as the primary drained countries. This includes not only the aforementioned Southeastern European countries and the developing countries of Asia and Africa. Even comparatively more developed “the Belt and Road” countries with a stronger, higher education systems are still unable to escape the scourge of brain drain. For example, in the CIS countries represented by Russia, there was a great deal of brain drain and even “fleeing brain” during the Cold War (Kangasniemi & Winters, 2007), from which many top academic talents were lost. India’s brain drain can be traced back to the British colonial period, when the problematic brain drain situation lasted for more than a century (Lidgard, 2001). In the first International Forum on Higher Education

of “the Belt and Road” countries in 2016, the data released by Israeli academics sparked strong concern: Israel, with its well-developed higher education system, has an annual academic talent loss of about 26%. Third, China, like the overwhelming majority of countries and regions along “the Belt and Road”, is one of the world’s main sufferers of brain drain. After China launched its reform and opening up policy, the global free flow of students caused the loss of a large number of high-level talents (mainly academic talents, and not talents with specialized skills). Issues such as the significant income disparity between China and foreign countries, some major social events (Faini, 2003), and the visa policy adjustments of some European countries and the United States (such as the visa amendment policies in the United States made for the STEM disciplines) have all exacerbated China’s brain drain (Bhagwati & Hamada, 1974). Ample evidence support that China suffers most from brain drain among all countries (Kuhn, 2006).

## 2. 2 Brain Drain in Economic Development and Higher Education

According to the judgments of value, brain drain is usually considered to cause “more harm than good”. Thus the countries and regions along “the Belt and Road” have a strong desire to reverse the pattern of brain drain. Mainstream perspectives have a negative view on the possible impact of brain drain. The academic community generally, believes that brain drain “deprives countries of their most skilled and talented people” (Horvat, 2004), thus reducing their potential for economic and social development. Early studies on brain drain state that it is not conducive to national development (Barro & Sala-I-Martin, 1995). The brain drain in Southeastern Europe has historically been seen as a “significant limitation on economic growth and national development in these countries” (Faini, 2007), “creating imbalances in the world’s political and economic systems” (Mountford, 1997). For example, the study of endogenous growth theory found that high rates of skilled migration and

brain drain reduced the rate of economic growth (Ozden & Schiff, 2006), and some of the economic theories were validated by the measurement of brain drain. Brain drain is also thought to drastically reduce the dynamism of economic and social development. Since brain drain often occurs among young and well-educated talent, brain drain has evolved into “youth brain drain” in most cases (Stark, Helmenstein, & Prskawetz, 1998). In addition, brain drain is thought to have the potential to affect the home country’s level of educational development: with high talent costs and excessive brain drain, some developing countries may refuse to continue investment in higher education (Baláz, 2004).

However, there are also perceptions on that brain drain has a positive impact on talent-exporting countries in various ways. This stream of research is collectively referred to as “beneficial brain drain” (BBD). According to BBD, beneficial effects of brain drain include inciting educational development (Morrison, 2001), increasing bank transfers from abroad (Glaser, 1974; Meyer & Brown, 1999) and strengthening tax system in talent-exporting countries (Cañibano, Otamendi & Andújar, 2008). For instance, research on brain drain and the promotion of national knowledge and skills suggests that migrants may return home after acquiring a range of productive skills, which will have a positive effect on economic growth for the home country (Woolley & Turpin, 2009). or, conversely, the loss of talent will drive the future generation with the intention to enhance skills acquisition (Hagopian et al., 2005). Other studies suggest that brain drain may return to the country of talent exporters once reaching equilibrium, “and once they reach their savings goals, they return” (Baláz, Williams & Kollár, 2004). Of course, the academic research conclusions on BBD have been cautious, with the core concern being that the above may bring “favorable brain drain”, but this is rarely proven by reality. Overall, the international community still holds the mainstream opinion that brain drain cause more harm than good, its positive factors precisely because the above-mentioned social and economic problems are currently so severe in countries along “the Belt and Road” and

therefore, it is essential to keep close attention to the status of brain drain, with the hope of eventually reverse unfavorable talent mobility pattern through effective ways.

### 2. 3 Brain Drain in China and Countries along “the Belt and Road”

From the developmental perspective, China is progressing from brain drain to brain gain, through the talent cycle of brain drain-brain gain-brain circulation, and developing the emerging academic labor market along with “the Belt and Road” countries and regions, which will promote healthy regional development. China has a long-standing problem of academic brain drain, as of many countries along “the Belt and Road”, facing with an urgent need to change the status quo of brain drain. However, in the new era, with the continuous return of a large number of overseas Chinese scholars, the problem of Chinese academic brain drain has been gradually mitigated. On the one hand, this is closely linked to changes in the global academic market. In recent years, the flow of skilled migrants worldwide is no longer one-way, and professionals are forming the “elite cycle” of career development. China has rapid and stable economic and social development, so it is a top most opportunity to further obtain international talent from the academic market. On the other hand, culture plays an important role in this trend. Moreover, it is believed that “high-level talents who work or study overseas have a strong will to return”, with Chinese emotional factors also contributing to this return. In addition, the globalization of capital, the increased mobility of transnational corporations, the need for a more flexible workforce and the advancement of information and communication technologies have created opportunities for the return of overseas Chinese academic talents. “The Belt and Road” initiative will accelerate the reversal of the traditional pattern of brain drain, through the flow of national and regional academic talents into China along “the Belt and Road,” and the formation of China as the center of the regional emerging academic labor market. Thus, China and countries a-