Quality guidelines for good governance in higher education across the globe

Khalid Zaman[*]

Department of Economics, University of Sargodha, Canal Campus, Lahore, Pakistan

ARTICLE INFO

ABSTRACT

Globally, the rules and regulations of higher education are for the betterment of economies and social uplift. The objective of this study is to develop a link between governance indicators and educational outcomes, particularly in relation to the internationalization of our universities. The current study proposes a framework for the internationalization of universities using three broad categories of governance indicators, i.e., political governance, economic governance and an institutional dimension of governance; these three categories are accompanied by six educational factors: higher education expenditures, higher education enrolment, higher education expenditures per student, literacy rate, research & development expenditures and economic growth during the period of 1996—2012. The panel fixed effect model is employed for estimating the possible links between governance indicators and educational outcomes. The results reveal that governance indicators act as a strong contributor for increasing educational effects, which further assist in formulating the policies towards the internationalization of universities. It is concluded that greater Voice and Accountability, political stability, government effectiveness, regulatory quality, rule of law and control of corruption enhance educational outcomes, which ultimately benefit the major regions of the world that have internationalized their universities.

1. Introduction

Good governance is a major factor in improving the quality of higher education. To bring about a balance between autonomy and accountability, the role of quality in education has stepped to the foreground, increasing its presence in recent times (Hénard and Mitterle, 2009). The Worldwide Governance Indicators (WGI, 2012) cover three groups of governance indicators, which include six different aspects of governance:

i. Political Governance:
   a) Voice and Accountability and b) Political Stability & Absence of Violence.

Voice and accountability include the assumptions that citizens are able to have a say in making their government, to have freedom of expression, to have freedom of association and to have a free open media. Stable political government and absence of violence/terrorism measures the perceptions that a government might be destabilized or dethroned illegally by violent means, including politically motivated violence and terrorism (WGI, 2012).

ii. Economic Governance:
   a) Government Effectiveness and b) Regulatory Quality

Government effectiveness includes the sense of the quality of public and civil services, as well as the extent to which they are insulated from political interference. It also consists of the government's ability for developing quality policies, their capacity to implement them and how much an individual government values such policies. Regulatory quality takes into account the government's capability to develop and execute good policies and rules that allow and promote private sector development (WGI, 2012).

iii. Institutional Dimensions of Governance:
   a) Rule of Law (ROL) and b) Control of Corruption (CoC)

* Tel.: +92 334 8982744; fax: +92 042 3867541.
E-mail address: khalid_zaman786@yahoo.com.

ROL measures the confidence of citizens that an agent will follow the norms and rules of society, particularly ones related to contract enforcement, property rights, the police, the courts and the possibility of crime and violence. By contrast, the CoC evaluates the interference of a country's bureaucracy— i.e., red-tapism, which has been defined as corrupt office bearers and other parties interfering with the implementation of policy (WGI, 2012). Higher educational bodies have focused on strategies and setting priorities instead of day-to-day work activities. In a handful of countries, different ad-hoc bodies have been established to check the quality of teaching and research within institutions of higher learning (OECD, 2003). In Europe, high acclaim is given to long-term planning and strategies development for higher education. One policy cannot be made for different countries, but some objectives are common to all.

These include:

- More public funding for the higher educational system;
- Granting more autonomy to institutions regarding financial matters;
- Creating direct links between results and the public funding allocated;
- Diversifying funding sources to prove education is not only a public good but a positive step towards growth and social solidarity, i.e., the creation of partnerships with research institutes, businesses and regional authorities (EUROPA, 2008).

The future plans for an Association of Southeast Asian Nations (ASEAN) Community 2009—2015 demands institutions of higher learning establish an ASEAN Socio-Cultural Community (ASCC) through which awareness, mutual understanding and respect for the different cultures, languages and religions can be nurtured (ASEAN 2009). The ASCC also envisions economic integration as an ultimate goal; that is, it aims to create a single market and production base to make ASEAN countries more dynamic and competitive (ADB, 2012).

Higher education is very important for sustaining growth in low and middle income East Asia. Higher education increases production and competitiveness in struggling East Asian countries by:

- Providing high quality skills to the labour market, i.e., technical, behavioural and thinking skills.
- Bestowing research for innovation and growth.

The number of people associated with higher education has increased greatly in the last thirty years; this is because societies have recognized the need to be more competitive, learn precise skillsets and utilize research. For all this, higher education must work as a well-connected system of institutes, firms, research bodies and educational establishments (inclusive of all levels of education) (World Bank, 2012a). Enders (2004) found that the "globalization" concept questions the theory of social dynamics where less attention has been given, which is to the prerequisites of theory building and empirical evidence. According to Marginson and Rhoades:

> Globalization processes in higher education are under-studied and under-theorized. Although there is comparative research, the dominant analytical framework for higher education scholars concentrates attention on governmental policies of the nation-state and on national systems of higher education (2002, p. 2814).

Mok (2008) studied the transnational educational system developed by Singapore to diversify their institutions of higher education. The governments in East Asia give more importance to setting up regulations, social laws and welfare, and they are considered a complement to the markets. Kretek et al. (2013) studied the possible prototypes of behaviour of key decision makers at the central university level, i.e., the roles of governing bodies, the set of factors that create hurdles for governance, the diversification of roles played by new board members and the analysis of the governing body itself. These studies show that board members with varying roles develop conflicts of interest; therefore, role ambiguity ensues. Magalhaes et al. (2013) concentrate on the EU's policies and their interaction on the national higher education sectors in the countries involved in the TRUE project (England, France, Germany, Italy, The Netherlands, Norway, Portugal and Switzerland), making the case for European governance over the constituent bodies' educational systems. The study reveals that the efforts of the European governments and their practices are helping their educational systems to develop. Middlehurst (2013) studied the internal changes of educational institutions in the UK during the last ten years, describing the similarity and differences in the policy and political conditions over time.

Enders et al. (2013) examined the area of university performance through the study of organizational autonomy and the control of higher education reform. The study was on the principal-agent model as a normative theory for policy reform; they also examined institutions' approaches to and designs of public policy and reforms. Cho and Palmer (2013) studied stakeholders' perceptions South Korea's higher education internationalization policy. According to the findings, the stakeholders have positive perceptions of the Korean universities' internationalization policy instituted by the government, and stakeholders believe it has increased the competitiveness the country in a quantitative manner. Additionally, stakeholders believe the government should take into account the quality and identity of higher education in Korea. Berger et al. (2013) investigated educational management models used in postsecondary institutions in the five provinces of China. These findings helped to reverse the existing imbalances of information necessary for research on higher education. Furthermore, these results are of great importance for the ongoing rapid expansion and development of higher education around the globe. Jons and Hoyler (2013) studied two major international ranking schemes that have had a tremendous public impact regarding the neoliberalization of higher education. The ranking schemes have brought a shift in the geopolitics and geo-economics of higher education to the international level for particular fields of study. Abramo et al. (2013) showed an empirical analysis of the recruitment system of associate professors in the Italian university system. The study further highlighted the research output of a university and its potential relationship with the indexes of concentration, which compare the productivity researchers across all Italian universities active in the hard sciences. The bibliometric method was used to study research performance, using publications indexed on the Web of Science for the period between 2004 and 2008. The results showed the impact of top performers was more than that of non-productive researchers.

Our study confirms the strong connection between governance indicators and higher educational reforms in the developed and developing world. In the subsequent section, an empirical illustration has been made on the relationship between educational and governance indicators in the world's seven largest regions by using the panel fixed regression method. The study is divided into the following sections: Section 1, the introduction (see above); Section 2, the data source and methodological framework; Section 3, results; and finally, Section 4, our conclusion.

2. Data source and methodological framework

The study employed panel data fixed effects regression for the world's seven largest regions to estimate the relationship between governance indicators and educational outcomes and to access the road map for industrialization in the specified regions of the world. The regions studied included East Asia and Pacific region (09 countries); Europe and Central Asia (14 countries); Latin America and the Caribbean (11 countries); MENA (13 countries); North America (02 countries); South Asia (05 countries); and Sub-Saharan Africa (07 countries). The data were obtained from two sources: *World Development Indicators* which is published by World Bank (2012b) and World Governance Indicators (WGI, 2012) between the period of 1996–2012, from which the missing data were collected. It is no doubt that educational indicators improve economic gains, which ultimately are the benefit of internationalization. This study takes the initiative to extend the model by using governance indicators in higher education, which ultimately lead to internationalization of universities in specified regions of the world. In higher education, governance is the formal management and organization of the university. The following model is used to find the relationship between governance indicators and educational outcomes in terms of internationalization, i.e.,

$$\ln(Y)_{it} = \beta_0 + \beta_1 \ln(X_1)_{i,t-1} + \beta_2 \ln(X_2)_{i,t-1} + \beta_3 \ln(X_3)_{i,t-1} \\ + \beta_4 \ln(X_4)_{i,t-1} + \beta_5 \ln(X_5)_{i,t-1} + \beta_6 \ln(X_6)_{i,t-1} + e_{it}$$

$$(1)$$

The dependent variable Y_{it} reflects the six educational indicators (i.e., higher education expenditures as percentage of GDP, higher education enrolment in numbers, higher education expenditures per student, as percentage of GDP per capita, literacy rate in percentage, R&D expenditures as percentage of GDP and GDP in current US $). The variable 'i' indicates a specific country and 't' the time period. Independent variables X_1 to X_6 reflect governance indicators, which covers three broad indicators, and each of the indicators comprises two sub-indicators: political governance comprises voice and accountability and political instability and violence; economic governance comprises government effectiveness and regulatory quality; and finally, the institutional dimension of governance comprises rule of law and control of corruption. Fig. 1 shows the research framework for internationalization in conjunction with governance indicators and educational outcomes.

Fig. 1 suggests a road map for internationalization through the channel of governance indicators and educational reforms. There is no doubt that around the world, higher education is under more pressure to bring about changes. The growth of higher education has been fast, and its economic contribution is immense. To create knowledge, further improve the quality of education and fulfil the demands of the scholars more efficiently are considered the responsibilities of universities. Therefore, the competition for students, research funds and faculty has increased at national and international levels. Because growth is spawning competition, government involvement must be avoided for better results. OECD (2003) has studied the way independence and dynamism can be maintained by institutions of higher education with the promotion of economic and social objectives. This has increased self-governance in bodies of higher education.

3. Results

For better performance in higher education, the institutions have to balance their academic mission and executive capacity, and the government needs to maintain the equilibrium between excellence and equity (OECD, 2003). The guidelines for quality and the arrangements for governance are important factors for building and maintaining effective institutions. These arrangements improve structures and procedures for board members. Moreover, quality guidelines help in making a quality culture (Hénard and Mitterle, 2009). Table 1 shows the estimated results of governance indicators and educational factors in the East Asia and Pacific region.

The results indicate that there is one-to-one corresponding relationship between government effectiveness and higher education expenditures, and if there is a 1% increase in control of corruption, higher education expenditures increase by 1.102%. The results further indicate that as political instability and violence increases, higher education expenditures decrease by 0.412 percentage point, which emphasizes the role of higher education institutions to meet funding and regulatory criteria that strengthen the market position. In a similar fashion, voice and accountability, government effectiveness, regulatory control, rule of corruption and control of corruption increase higher education enrolment in the region; however, rule of law is a potential contributor, as its coefficient value has an approximately 1.302 percentage point increase the higher the education enrolment. Government effectiveness increases per student spending on higher education and R&D expenditures on higher education, while rule of law has the highest effect on increasing literacy rate in the region. At last, regulatory quality has a greater importance in increasing East Asia and Pacific growth (i.e., 0.825%), followed by rule of law (i.e., 0.639%), government effectiveness (i.e., 0.616%), voice and accountability (i.e., 0.501%) and control of corruption (i.e., 0.402%). The results show that the inflated demand for higher education is caused by the growing trend of globalization in the Asia-Pacific region of the world. For international competition, governments are trying to create their own educational hubs or create transnational educational opportunities to fulfil growing demands (Mok and Yu, 2013). Table 2 shows the empirical results of governance indicators and educational outcomes in Europe and the Central Asian region.

The results reveal that, except for the government effectiveness indicator, all other governance indicators have a significant contributor increasing or decreasing higher education expenditures. Most of the coefficients have less elastic relationships with the higher education expenditures in this region. The institutionalization process in Europe has developed a strong culture of corporate interaction and a prudent decision-making system with a strong position for the head of an institution. Countries with strong leadership have a greater impact on academic and corporate culture (Hénard and Mitterle, 2009). According to Jacobs and Van Der Ploeg:

> Although there are exceptions, most European universities and institutions of higher education find it difficult to compete with the best universities in the Anglo-Saxon world. Despite the Bologna Agreement and the ambitions of the Lisbon Agenda, European universities are in need of fundamental reforms (2006, p. 535).

In addition, other results in relation to higher education enrolment indicate that voice and accountability has the most influential impact on enrolment, which has the corresponding value of 0.712 percentage point. Regulatory quality increases spending on higher education expenditures per student, while there is an approximately one-to-one corresponding relationship between literacy rate and voice and accountability. Rule of law increases R&D expenditures by 1.052, while government effectiveness increases economic growth of Europe & Central Asia by 1.295 percentage
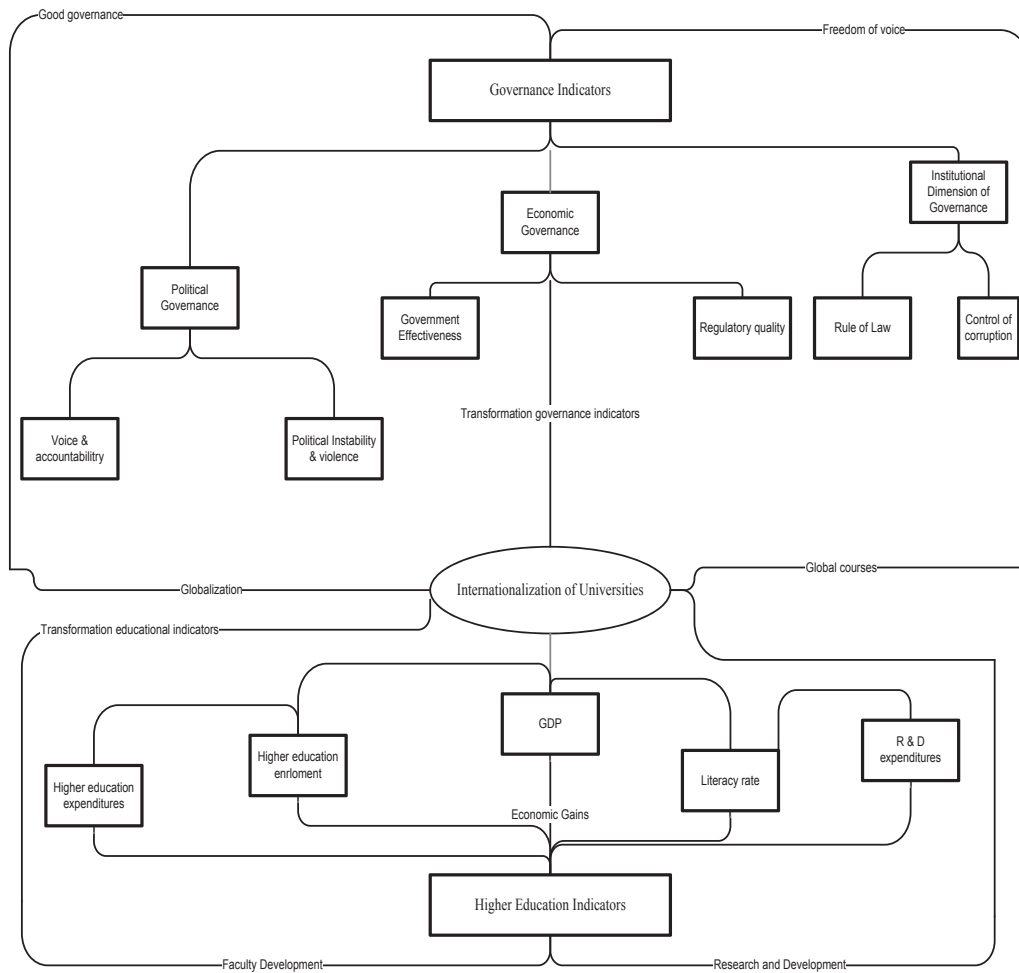
Fig. 1. Research framework for internationalization via route of governance indicators and educational reforms.
Source: authors' extraction

points. Both the EU and its member states understand the importance of higher education. Educational goals are expected to reach the objectives of Lisbon i.e., the growth, prosperity and social bond improvements. The EU has acknowledged the importance of modernizing the higher education system by implementing the 'Education and Training 2010' EU work program, with an intention of establishing a European Higher Education Area (EUROPA, 2008). The results listed in Table 3 capture, in a similar fashion, the context of the Latin America and Caribbean regions.

The results indicate that political instability and violence in the Latin America and Caribbean regions decrease higher education expenditures by 0.441 percentage point; higher education enrolment by −0.523 percentage point; the literacy rate decreases by 0.625%, R&D expenditures by −0.558% and 0.301% decrease of GDP by the region. Control of corruption contributes the largest share to increases per student spending on higher education expenditures, while regulatory quality has approximately a one-to-one relationship with the literacy rate. Finally, government effectiveness

Table 1
Specification of one-fixed effects regression of governance indicators and educational outcomes in the East Asia and Pacific region.

Variables	Higher education expenditures	Higher education enrolment	Higher education expenditures per student	Literacy rate	R&D expenditures	GDP
Voice and accountability	0.109**	0.556*	0.020	0.129**	0.338**	0.501**
Political instability & violence	−0.412*	−0.385**	−0.285***	0.103	−0.220***	−0.309**
Government effectiveness	1.010*	0.989*	0.712*	0.513*	1.402*	0.616*
Regulatory quality	0.012	0.205**	0.305*	0.102	0.685*	0.825*
Rule of law	0.759*	1.302*	0.529*	1.125*	0.996*	0.639*
Control of corruption	1.102*	0.352**	0.109	0.098	0.663*	0.402**
R-square	0.798	0.812	0.845	0.662	0.865	0.882
Adjusted R-square	0.769	0.798	0.812	0.643	0.840	0.865
Countries	09	09	09	09	09	09
Years	1996−2012	1996−2012	1996−2012	1996−2012	1996−2012	1996−2012

Source: authors' calculations.
Notes: the data were taken from the World Governance Indicators (WGI, 2012) and World Bank (2012b). All variables are in a natural logarithmic form. Specifications of the model are fixed effects and are estimated using robust t-statistics. *Significant at 1% level of confidence, **significant at 5% level of confidence interval, and ***significant at 10% level of confidence interval.

Table 2
Specification of one-fixed effects regression of governance indicators and educational outcomes in Europe and Central Asia.

Variables	Higher education expenditures	Higher education enrolment	Higher education expenditures per student	Literacy rate	R&D expenditures	GDP
Voice and accountability	0.660*	0.712*	0.025	1.020*	0.363**	0.589*
Political instability & violence	−0.299**	−0.725*	−0.362**	−0.032	−0.019	−0.295**
Government effectiveness	0.195	0.320**	0.445**	0.021	0.525*	1.295*
Regulatory quality	0.562*	0.235**	0.852*	0.521*	0.102	0.302**
Rule of law	0.625*	0.456*	0.023	0.701*	1.052*	0.879*
Control of corruption	0.025	0.102	0.302**	0.020	0.669*	0.712*
R-square	0.524	0.598	0.589	0.612	0.658	0.885
Adjusted R-square	0.501	0.572	0.712	0.598	0.613	0.823
Countries	14	14	14	14	14	14
Years	1996—2012	1996—2012	1996—2012	1996—2012	1996—2012	1996—2012

Source: authors' calculations.
Notes: the data were taken from the World Governance Indicators (WGI, 2012) and World Bank (2012b). All variables are in a natural logarithmic form. Specifications of the model are fixed effects and are estimated using robust t-statistics. *Significant at the 1% level of significance and **significant at the 5% level of significance.

Table 3
Specification of one-fixed effects regression of governance indicators and educational outcomes in Latin America and the Caribbean.

Variables	Higher education expenditures	Higher education enrolment	Higher education expenditures per student	Literacy rate	R&D expenditures	GDP
Voice and accountability	0.586*	0.852*	0.669*	0.401*	0.201***	0.550*
Political instability & violence	−0.441*	−0.523*	0.107	−0.625*	−0.558*	−0.301**
Government effectiveness	0.332**	−0.231**	0.178	0.661*	0.339**	1.012*
Regulatory quality	0.712*	0.442*	0.185	1.030*	0.895*	0.302**
Rule of law	0.662*	0.129	0.712*	0.623*	0.021	0.425*
Control of corruption	0.412*	0.302**	1.425*	0.885*	0.036	−0.125
R-square	0.895	0.712	0.499	0.758	0.523	0.669
Adjusted R-square	0.862	0.699	0.474	0.723	0.501	0.625
Countries	11	11	11	11	11	11
Years	1996—2012	1996—2012	1996—2012	1996—2012	1996—2012	1996—2012

Source: authors' calculations.
Notes: the data were taken from the World Governance Indicators (WGI, 2012) and World Bank (2012b). All variables are in a natural logarithmic form. Specifications of the model are fixed effects and are estimated using robust t-statistics. *Significant at 1% level of confidence, **significant at 5% level of confidence interval, and ***significant at 10% level of confidence interval.

increases economic growth approximately 1.012%, which is good sign for future reforms in this region. In the last 20 years, Latin America and the Caribbean have faced new challenges for educational achievement. The enrolment of the students in the educational sector has increased at all levels in this region, but most significantly primary school enrolment has reached 85%. The educational systems in many countries have improved the management of student learning by having educational foundations, research centres and a few NGOs to carry out better policy analysis and evaluation (World Bank, 1998). Table 4 shows that governance led educational reforms in the MENA region.

The results indicate that control of corruption increases higher education expenditures (i.e., 1.102%) and, subsequently, so too, rule of law (i.e., 0.895%), regulatory control (i.e., 0.526%), voice and accountability (i.e., 0.332%) and Government effectiveness (i.e., 0.320%). However, political instability and violence in this region decrease higher education expenditure by 0.332 percentage points. In case of higher education enrolment, voice and accountability contributes the most to increases enrolment in this region. There is a one-to-one corresponding relationship between higher education expenditures per student and voice and accountability, while political instability significantly decreases per student spending by 0.958 percentage points. Political instability and violence decrease the literacy rate by 1.202 percentage point, which is higher than every region in the world. Control of corruption increases R&D expenditures by 0.914 percentage points and GDP by 1.102%. The results indicate that the Middle East and North African region have been facing considerable economic challenges. Many of MENA countries have brought about structural reforms to fight economic decline, high

unemployment and increased poverty. The people have also become aware of the knowledge revolution that is opening new avenues for growth—that is, they've come to understand the importance of information and technology, as well as the overall trend of global development through creation, acquisition, use and distribution of knowledge (Aubert and Reiffers, 2003). Table 5 shows the estimated results of governance and educational indicators in the North American region.

The results illustrate that control of corruption significantly increases higher education expenditures in the region (i.e., 0.778%), followed by regulatory control by 0.669% and voice and accountability by 0.128 percentage point. Political instability decreases higher education expenditures by 0.325 percentage point. Regulatory control indicates a more elastic relationship with higher education enrolment and the literacy rate, while its effect simultaneously decreases R&D expenditures and GDP, which are less elastic. The results indicate here that educational governance should take into account access to better schools, local needs, teachers training, teacher motivation, the responsibility of better learning outcomes, policy formulation, identification of priorities, resource allocation, implementation of reforms and monitoring (UNESCO, 2010). These results are important for policymakers formulating polices in the region so they can expedite the process of internationalization. Table 6 shows the fixed effect regression results of governance indicators and educational factors in South Asia.

The results indicate that in South Asia political instability and violence insight decreases in higher education expenditures in this region; the coefficient value indicates that there is half of the corresponding relationship with 1% similar results have been obtained

Table 4
Specification of one-fixed effects regression of governance indicators and educational outcomes in the Middle East and North America (MENA).

Variables	Higher education expenditures	Higher education enrolment	Higher education expenditures per student	Literacy rate	R&D expenditures	GDP
Voice and accountability	0.332*	0.585*	1.019*	0.339**	−0.052	0.665*
Political instability & violence	−0.445*	−0.362**	−0.958*	−1.202*	−0.012	−0.362**
Government effectiveness	0.320**	0.556*	−0.077	0.425*	0.362**	0.852*
Regulatory quality	0.526*	−0.023	1.203*	0.889*	0.412*	−0.045
Rule of law	0.895*	−0.412*	0.552*	0.028	0.466*	−0.056
Control of corruption	1.102*	0.230**	0.669*	0.858*	0.914*	1.102*
R-square	0.889	0.756	0.799	0.812	0.499	0.501
Adjusted R-square	0.856	0.712	0.768	0.799	0.482	0.489
Countries	13	13	13	13	13	13
Years	1996–2012	1996–2012	1996–2012	1996–2012	1996–2012	1996–2012

Source: authors' calculations.
Notes: the data were taken from the World Governance Indicators (WGI, 2012) and World Bank (2012b). All variables are in a natural logarithmic form. Specifications of the model are fixed effects and are estimated using robust t-statistics. *Significant at the 1% level of significance and **significant at the 5% level of significance.

Table 5
Specification of one-fixed effects regression of governance indicators and educational outcomes in North America.

Variables	Higher education expenditures	Higher education enrolment	Higher education expenditures per student	Literacy rate	R&D expenditures	GDP
Voice and accountability	0.128***	0.401*	−0.056	0.253***	0.669*	0.998*
Political instability & violence	−0.325*	−0.259***	−0.439*	−0.895*	0.056	0.569*
Government effectiveness	0.044	0.458*	0.625*	0.452*	0.325**	0.235***
Regulatory quality	0.669*	1.023*	0.159	1.056*	0.785*	0.589*
Rule of law	0.256***	0.569*	0.663*	−0.012	0.625*	0.410*
Control of corruption	0.778*	0.856*	0.723*	0.695*	0.523*	0.562*
R-square	0.689	0.912	0.756	0.799	0.668	0.925
Adjusted R-square	0.645	0.889	0.732	0.778	0.634	0.901
Countries	02	02	02	02	032	02
Years	1996–2012	1996–2012	1996–2012	1996–2012	1996–2012	1996–2012
Observations	48	48	48	48	48	48

Source: authors' calculations.
Notes: the data were taken from the World Governance Indicators (WGI, 2012) and World Bank (2012b). All variables are in a natural logarithmic form. Specifications of the model are fixed effects and are estimated using robust t-statistics. *Significant at 1% level of confidence, **significant at 5% level of confidence interval, and ***significant at 10% level of confidence interval.

in relation to the literacy rate, where political instability decreases the literacy rate approximately 0.889 percentage points. Regulatory quality and control of corruption significantly increase higher education expenditures per student (i.e., 1.024%) and the GDP (1.065%) of the South Asia. Developing countries in Asia are focusing on the development of structure and reforms to face the challenges (ADB, 2012). Table 7 shows the governance-education outcomes in Sub-Saharan African region.

The results indicate that governance indicators improve educational indicators in Sub-Saharan Africa as well; however, the coefficient value of the governance indicators are weakly connected to the educational factors. Approximately, all governance indicators show a less elastic relationship with the educational attainment, which need contingency reforms in this region. The decision to provide education for all by the Sub-Saharan African countries' educational system was because other sectors, such as the governments, institutions and economies, were too weak to take care of the educational system for the last 10 years. Demographically, the population has increased by 25% from 2002 to 2010 to 873 million, while primary school enrolment has touched 141 million in the same period. The average fertility rate was 5, and the average life expectancy 54 years in the year 2009 (UNESCO, 2012). To

Table 6
Specification of one-fixed effects regression of governance indicators and educational outcomes in South Asia.

Variables	Higher education expenditures	Higher education enrolment	Higher education expenditures per student	Literacy rate	R&D expenditures	GDP
Voice and accountability	0.032	0.278***	0.452*	0.263***	0.695*	0.458*
Political instability & violence	−0.526*	−0.336*	0.124	−0.889*	−0.568*	−0.234***
Government effectiveness	0.365**	0.485*	0.325**	0.225***	0.635*	−0.056
Regulatory quality	0.452*	0.785*	1.024*	0.056	0.589*	0.025
Rule of law	0.445*	0.925*	0.663*	0.089	0.458*	0.698*
Control of corruption	−0.036	0.669*	0.102	0.658*	0.056	1.065*
R-square	0.568	0.945	0.714	0.598	0.712	0.498
Adjusted R-square	0.542	0.924	0.699	0.576	0.699	0.466
Countries	05	05	05	05	05	05
Years	1996–2012	1996–2012	1996–2012	1996–2012	1996–2012	1996–2012

Source: authors' calculations.
Notes: the data were taken from the World Governance Indicators (WGI, 2012) and World Bank (2012b). All variables are in a natural logarithmic form. Specifications of the model are fixed effects and are estimated using robust t-statistics. *Significant at 1% level of confidence, **significant at 5% level of confidence interval, and ***significant at 10% level of confidence interval.

Table 7
Specification of one-fixed effects regression of governance indicators and educational outcomes in Sub-Saharan Africa.

Variables	Higher education expenditures	Higher education enrolment	Higher education expenditures per student	Literacy rate	R&D expenditures	GDP
Voice and accountability	0.558*	0.669*	−0.045	0.028	0.256***	0.562*
Political instability & violence	−0.362**	−0.225***	0.305**	−0.175***	−0.058	0.069
Government effectiveness	0.369**	0.362**	0.625*	0.225**	0.569*	0.029
Regulatory quality	−0.056	0.659*	0.542*	0.172	0.256***	0.269*
Rule of law	0.314**	0.614*	0.552*	0.369**	−0.058	0.128
Control of corruption	0.298***	0.036	0.568*	0.082	0.669*	0.229***
R-square	0.858	0.798	0.885	0.485	0.668	0.429
Adjusted R-square	0.823	0.768	0.834	0.446	0.657	.0.401
Countries	07	07	07	07	07	07
Years	1996–2012	1996–2012	1996–2012	1996–2012	1996–2012	1996–2012

Source: authors' calculations.
Notes: the data were taken from the World Governance Indicators (WGI, 2012) and World Bank (2012b). All variables are in a natural logarithmic form. Specifications of the model are fixed effects and are estimated using robust t-statistics. *Significant at 1% level of confidence, **significant at 5% level of confidence interval, and ***significant at 10% level of confidence interval.

improve and enhance economic and social development, higher education has been under reform throughout the globe. Under this agenda for economic, political, cultural and logical demographic development, these geo-strategic shifts reflect:

- Adoption of new directions by students, academics and for knowledge;
- New competitive projects; and
- Higher education as a form of 'soft power' and 'public diplomacy' (WUN, 2013).

4. Conclusion

The objective of the study was to explore the possible links between governance indicators and educational reforms in the major regions of the world. This study took the initiative to propose a unified framework for internationalization of universities in the world's largest regions, i.e., the East Asia and Pacific region (09 countries); Europe & Central Asia (14 countries); Latin America and the Caribbean (11 countries); MENA (13 countries); North America (02 countries); South Asia (05 countries) and Sub-Saharan Africa (07 countries). This study employed a panel fixed effect model over the period of 1996–2012. The analysis showed that governance indicators such as voice and accountability, political instability and violence, government effectiveness, regulatory quality, rule of law and control of corruption contribute towards the internationalization of universities, all of which help to formulate the policies of higher education in the world's largest regions. Governments around the world are trying to develop strong relationships between the education sector and the society at large. Policymakers' objectives should be to ensure scientific achievement, to create new opportunities and to place the teaching, research, economic and social sectors on one line. Universally, governments and authorities are trying to develop new rules and regulations and allocate more funds for institutions of research and development. Our recommendation to improve the governance of intuitions for higher learning is to increase the capacity of the government and higher education sectors so that they may implement meaningful policy reform, for internationalization is an ongoing process.

References

Abramo, G., Cicero, T., D'Angelo, C.A., 2013. The impact of unproductive and top researchers on overall university research performance. J. Inf. 7 (1), 166–175.

ADB, 2012. Administration and Governance of Higher Education in Asia: Patterns and Implications. Asian Development Bank, Philippines.

Aubert, J.E., Reiffers, J.L., 2003. Knowledge Economies in the Middle East and North Africa: toward New Development Strategies. In: WBI Learning Resources Series. The International Bank for Reconstruction and Development/The World Bank, Washington, DC.

Berger, J.B., Hudson, K.E., Blanco Ramírez, G., 2013. How universities work: understanding higher education organization in northwest China. Educ. Policy Anal. Arch. 21 (64), 1–24.

Cho, Y.H., Palmer, J.D., 2013. Stakeholders' views of South Korea's higher education internationalization policy. High. Educ. 65, 291–308.

Enders, J., 2004. Higher education, internationalization, and the nation-state: recent developments and challenges to governance theory. High. Educ. 47, 361–382.

Enders, J., Boer, H., Weyer, E., 2013. Regulatory autonomy and performance: the reform of higher education re-visited. High. Educ. 65, 5–23.

EUROPA, 2008. Higher Education Governance in Europe: Policies, Structures, Funding and Academic Staff. In: Eurydice, the Information Network on Education in Europe. Eurydice European Unit, Brussels.

Hénard, F., Mitterle, A., 2009. Governance and Quality Guidelines in Higher Education: a Review of Governance Arrangements and Quality Assurance Guidelines. OECD/Directorate for Education, France, Paris.

Jons, H., Hoyler, M., 2013. Global geographies of higher education: the perspective of world university rankings. Geoforum 46, 45–59.

Kretek, P.,M., Dragsic, Z., Kehm, B.,M., 2013. Transformation of university governance: on the role of university board members. High. Educ. 65, 39–58.

Magalhaes, A., Veiga, A., Ribeiro, F.M., Sousa, S., Santiago, R., 2013. Creating a common grammar for European higher education governance. High. Educ. 65, 95–112.

Middlehurst, R., 2013. Changing internal governance: are leadership roles and management structures in United Kingdom universities fit for the future? High. Educ. Q. 67, 275–294.

Mok, K.H., 2008. Singapore's global education hub ambitions: university governance change and transnational higher education. Int. J. Educ. Manag. 22 (6), 527–546.

Mok, K.H., Yu, K.M., 2013. Internationalization of Higher Education in East Asia: Trends of Student Mobility and Impact on Education Governance. Routledge Critical Studies in Asian Education, Routledge, UK.

OECD, 2003. Chapter 3: Changing Patterns of Governance in Higher Education. Education Policy Analysis, OECD 2003. Online available at: http://www.oecd.org/education/skills-beyond-school/35747684.pdf (accessed 04.11.13.).

UNESCO, 2010. Regional Overview: Latin America and the Caribbean. Online available at: http://unesdoc.unesco.org/images/0017/001784/178428e.pdf (accessed 23.10.13.).

UNESCO, 2012. In: Global Education for All Meeting. Sub-Saharan Africa 2012 EFA report. UNESCO-Paris, November 20–23, 2012.

WGI, 2012. World Governance Indicator, 2011–12. World Bank, Washington, D.C.

World Bank, 1998. Educational Change in Latin America and the Caribbean. Latin America and the Caribbean Social and Human Development. Online available at: http://www.fmmeducacion.com.ar/Sisteduc/Banco/bmeducamerica.pdf (accessed 15.12.12.).

World Bank, 2012a. Putting Higher Education to Work: Skills and Research for Growth in East Asia. The International Bank for Reconstruction and Development/The World Bank, Washington, DC.

World Bank, 2012b. World Development Indicators, 2011–12. World Bank, Washington, D.C.

WUN, 2013. Global Regionalisms, Governance and Higher Education. World Universities Network (WUN). Online available at: http://www.wun.ac.uk/research/global-regionalisms-governance-and-higher-education (accessed 03.11.13.).