Editorial

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Biographical notes: Parviz Dabir-Alai is Professor of Economics and Chair at the Department of Business and Economics at Richmond University, the American International University in London. Apart from his interest in education, he has published in the areas of productivity and technical change, migration, foreign aid, and economic vulnerability. He has also had extensive consultancy experience with the Inter-American Development Bank on numerous infrastructure projects within the CARICOM region.

This special issue of the *International Journal of Public Policy* was conceived with a simple and obvious premise in mind. The premise is that what may loosely be referred to as 'knowledge economies' play an important part in generating and managing the creation of knowledge which, in turn, contribute to the pursuit of productive and positive economic outcomes everywhere.

The interpretation used here for furthering understanding of the knowledge economy is as follows. The knowledge economy is viewed as an entity or group of entities whose aim and purpose is to generate and manage the creation of knowledge. In extremity, this process may be seen to develop in perpetuity, and as an end in it-self. However, a knowledge economy may also be viewed as an entity whose aim is to contribute to knowledge creation with quite specific economic and/or social outcomes. Seen in this way the development of the knowledge economy is likely to result in clear and unambiguous benefits to those who participate with it.

The purpose of this special issue is to encourage research on the impact of the development of the knowledge economy (viewed as the second approach described above) within the relatively more prosperous northern economies on those within the relatively less prosperous south.

This special issue brings together the work of seven researchers (SIX papers) covering a range of material pertinent to the above.

In the first of the six papers, the paper by Abebaw Yirga Adamu, entitled 'Internationalisation of higher education in Africa: introducing credit accumulation and transfer system', presents a discussion on the need for both intra- and inter-regional academic collaboration as a necessary condition for the internationalisation of the higher education. Drawing on the experience of Africa, Adamu attributes the persistence of stumbling blocks in the process of internationalisation on the absence of supportive mechanisms. This is a familiar story of too few opportunities and the continent's inability to benefit from the right kind of externalities pertinent to education available elsewhere. As a way forward on this the recommendation is for Africa to embrace a continent-wide

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credit accumulation and transfer system with the purpose of facilitating recognition of studies, academic mobility, internationalisation of curricula, research collaboration within the higher education sectors, and maintenance and promotion of quality assurance. The paper addresses each one of these potential benefits in turn within a regional and continental perspective. One of the main attractions of the paper is the attention given to a detailed and self-critical reflection of the proposals discussed. For example, Adamu stresses that introduction of the CATS could result in unwanted homogenisation of higher education within Africa and thus lead to the loss of existing diversity amongst the institutions, the curricula and even the languages on offer.

The paper by Kenneth Inyani Simala, entitled 'Intellectual flexibility, innovative partnerships and collaborations in the African university of the 21st century: policy challenges and way forward', addresses many of the issues tackled in the paper by Adamu. However, this paper goes several steps further in that it discusses the importance of initiating and managing collaborative partnerships within their national and international contexts. The key motivations for this call for collaboration with partners are well known: poor local infrastructure and facilities, poor local funding opportunities, declining research standards, etc. Given these impediments this paper also calls for further internationalisation of the system of higher education in Africa and suggests that the effort is most likely to succeed if it is spearheaded through some of the existing and well established regional groupings such as the East African Community (EAC), the Economic Community of West African States (ECOWAS) and the Southern African Development Community (SADC).

Amongst several other issues addressed by the paper is the question affecting all areas and regions seeing rapid expansion in the provision of higher education: maintenance and management of quality control. The paper acknowledges that this has been an issue in Africa and sees the establishment of international partnerships as a way of reigning in such thorny problems, or at least ameliorating their impact. The paper acknowledges that the establishment of some of these partnerships can be left to the normal evolutionary cycle of time, but goes on to argue that that the pace of change within the information technology sector can also be harnessed for this purpose.

The role of technology in general, and the contribution of international research and development (R&D) initiatives in particular, is discussed extensively by Matthew A. Shapiro and Jeffrey B. Nugent in a paper entitled 'Institutions and the sources of innovation: the determinants and effects of international R&D collaboration'. The paper has several original features with some insightful outcomes. First of all the issue of international R&D collaboration is explored within the context of cross-national patenting. This in itself is quite innovatory as it requires consideration of the role of intellectual property rights (IPR) within a dynamic context affecting the measurement of total factor productivity change (TFP), economic growth and the role of political systems. The paper makes use of a unique dataset on patents (from the US Patent Trademark Office) covering up to 125 countries over a period stretching between 1975 and 2005. The model the authors develop is a two-staged one through which they assess both the determinants and the effects of international R&D collaboration. Amongst the most interesting results is the finding that relatively poor and open economies' ability to raise their technical efficiency is not enhanced through R&D collaborations with wealthier economies (or what the authors call tier-1 countries).

Another insightful finding is that for improvements in technical efficiency to become achievable it is necessary for a certain threshold in numbers of patents per capita to be

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reached. But, as the authors note, the impact of patenting activity per capita on TFP will not be instantaneous; and, as such, they examine the effects of a lagged relationship permitting for some non-linearities as well. Somewhat predictably the authors identify a non-linear relationship between IPR indexes, patenting, the political make-up, TFP growth and the presence of international collaborations. This they explain by noting the possible presence of some unidentified misspecification errors in the models used. Another plausible factor they mention is that patenting may actually have impeded the ability of countries with relatively low levels of patenting and growth to imitate and reverse-engineer foreign technology. The paper calls for more research before the above issues can be settled.

The paper by Michael F. Keating entitled 'Global best practices, national innovation systems, and tertiary education: a critique of the World Bank's *Accelerating Catch-up* (2009)' presents a discussion of the abovementioned World Bank publication from a political economy perspective.

Keating's paper reflects on the sub-Saharan African position in particular and amongst its key strengths is its recognition of the intent behind *Accelerating Catch-up* to link tertiary education reform with the promotion of the role of knowledge economies. This recognition is explained in three inter-linked ways: through human capital theory, a growth accounting perspective and, finally, a returns-to-education/training approach. Keating's main argument is that *Accelerating Catch-up* presents a contradictory model for tertiary sector reform and thus cannot be relied upon as a blueprint for modelling change. The source of the identified contradiction is seen as arising from an expanding role for the state whilst the principle of market involvement is simultaneously embraced. The expanded market role is seen mainly in terms of the World Bank's support for private tertiary sector providers within sub-Saharan African countries.

The paper recognises that the World Bank has attempted to fuse its support for establishing knowledge economies in developing countries with its outlook on introducing reform within the tertiary education sectors. But the problem, as seen by Keating, is that in the process of creating such fusion the state needs to increase its own powers of over-sight regarding issues such as governance, coordination and networking responsibilities. This is how the contradiction is presented. However, the contradiction identified seems to be more ideologically rooted than practically impacted as the ultimate test must surely be based on what works well and what does not.

Similar to the papers by Adamu and by Inyani, the paper discusses several of the regulatory aspects associated with cross-border institutional issues as well. The value of this discussion rests with the paper's concerns for the growth of illegal provision and the distortionary impact they have on local labour markets.

The next paper by Binod Khadria entitled 'Migration of health workers and health of international migrants: framework for bridging some knowledge disjoints between brain drain and brawn drain', presents a conceptually rich and detailed discussion of the issue of migration of (health) workers based upon the principles of modern international trade theory. The analysis recognises the limitations of international trade theory by noting their generally static characteristics and the constraints this creates for understanding the relationship between changing production conditions and the performance of the economy as a whole. The paper's contribution is notable in the connections made between the extent of economic performance at the macro level and the part played by growth in human capital at a more micro level. Improvements in human capital are

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discussed as being the result of either additional investments in education, or improving health amongst the workforce, or through immigration.

Given that a main focus for the paper is to investigate the consequences for the knowledge economy of migration of health workers the role of immigration itself becomes quite critical. The paper observes that any investment in acquiring 'health knowledge' through, say, migration of health workers (this is the context of the paper's use of the term brain drain), can act as a useful catalyst for increasing productivity generally through its positive impacts on the productivity of the local work-force. However, the paper also notes that such advantage could easily wither away through the migration of non-health workers, which could include the low and the un-skilled workers (signifying brawn-drain).

This perspective is then used to identify a dichotomy between the applications of knowledge management systems under separate conditions. For example, Khadria notes that the presence of knowledge endowments do not necessarily lead to an accelerated application of modern science and technology to improving living standards. However, the manner in which utilisation of knowledge endowments occur act as a main determinant of the effective knowledge wealth of nations. In other words, the way in which this utilisation takes place can lead to very different distributional outcomes between the North and the South. Khadria further notes that a peculiar aspect of this within the health sector is that improvements in the South tend to improve outcomes in the North more.

Much of the remaining sections of the paper present several international comparisons between key labour market characteristics, a discussion of the links between the health status of migrants and their skill levels based upon their gender and their source of origin and destinations.

The final paper by Stefanie Baumert, entitled 'Changing higher education landscapes – implications for South Africa' reflects on the challenges faced by Africa's most 'developed' southern state. Baumert notes that South Africa's national policy making within the context of the post-apartheid era faced two potentially contradictory pressures. First, were the challenges of establishing new social orders and the task of reducing extreme social inequality. Second, South Africa was intent on finding new ways to try and improve its global competitiveness. It is in the context of these two potentially conflicting objectives that the role of higher education became paramount.

Baumert presents a brief portrait of the developments in higher education in general by taking into account the changing role of the nation state. This is then followed by a chronological description of the developments in higher education in South Africa. Against this background, the paper then shows how the rhetoric of globalisation and the notion of the knowledge society, as telling manifestations of international trends in South African higher education, were reflected in policy documents. The paper further discusses South African higher education's response to these concepts as identified, for example, within the White Paper 3 (1997), as two of the guiding concepts for the reorientation of South African higher education.

In summary, the six papers emphasise the importance of forging strong international partnerships and establishing the right kind of collaborations at institutional and other levels. What is also clear is that the role of technology and the impact of migration will be better understood once policy is treated as an explicit instrument driving the process of change and reform forward.