



HIGHER EDUCATION AND SUSTAINABLE DEVELOPMENT: QUALITY VS. QUANTITY

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Prof. Dr. Naheed Zia Khan has the honor of being a servant of the nation by the virtue of working in public sector system of Pakistan. Prof. Khan owes a high measure of gratitude to The Islamia University Bahawalpur (IUB), Pakistan, where she started, in the Department of Economics, her professional career in 1981 as a young passionate research scholar. Prof. Khan was subsequently offered her most cherished opportunity of a teaching position in 1982, as lecturer in the same Department. Prof. Khan was granted the award of an overseas scholarship for furthering her higher studies abroad. She proceeded to U.K. in 1987 and graduated from University of Glasgow, and University of Strathclyde with Master and Doctor of Philosophy degrees respectively. She returned home in 1992 and served her first parent organization till May 1999. Prof. Khan's last position at IUB was Assistant Professor of Economics. Her remaining professional career owes to Fatima Jinnah Women University (FJWU), Rawalpindi. Currently, at FJWU, apart from retaining the honor of a teacher as her first and foremost job description, she is also contributing to various management responsibilities including the Dean of the Faculty of Law, Commerce, Administrative and Management Sciences. Finally, Prof. Khan's personal growth and professional development is credited to her first alma mater for higher learning, The University of Punjab, Pakistan, IUB, FJWU and, most importantly, to the nation of Pakistan for footing the bill of her formal education.



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ABSTRACT

This paper focuses on the outcome of higher education translated into the creation of both physical and social capital. Optimally apportioned quality and quantity of each of the two broad forms of capital ensures sustainable development of a society. The institutions of higher learning, specifically in the modern world, are universally considered to be the service industries responsible for continuous supply of brains sensitized to the dynamic needs of society to create and reform the physical and social capital. For a long time in history, the culture of higher formal learning focused on the creation of social capital. However, the institution gradually brought the creation of physical capital also into its folds. Economic dynamics of the world of late nineteenth and early twentieth century introduced new actors into the system whose influence, specifically in the Western countries, was to go a long way. Nonetheless, entry to higher education remained restricted to a select elite. After World War II (WWII), the approach changed in favor of both egalitarianism and headlong rush for material well being. The former was a capitalist compromise born out of the dependence of fast expanding and diversifying Western markets on highly skilled labor, while the rat race for material well being owed to the possibilities promised by unprecedented rate of growth of technology. Since the last quarter of 20th century, reformers have universally begun to recognize the uncomfortable reality that social function of higher education has been alarmingly compromised by the failure of the institution to underscore sustainable development. The issue is all the more pertinent for developing countries like Pakistan, where the institution of higher education is a poor adaptation of spontaneously evolved Western model. Against this backdrop, the author endeavors to evaluate the performance of the institutes of higher learning in Pakistan. With the help of descriptive statistics, analysis is carried out to determine the priority accorded to higher education sector of the country. The findings suggest that within the hierarchy of education sector, higher education in Pakistan does not appear to have ever been neglected, and there have been times when the relative allocations of public funds made to the sector warrant justifications while keeping in perspective equity and efficiency criteria. The study also briefly reflects on recently introduced higher education reforms in terms of their efficacy in contributing to the quality of service delivery. Finally, the conclusion suggests that in the presence of trade-offs, the efforts to reform higher education in Pakistan must follow carefully worked out optimization criteria.

INTRODUCTION

The institution of formal higher education is a relatively recent inscription on the scale of sociological evolution. It goes without saying that higher education enormously helped pace up the process of making positive laws in the realm of both technology and sociology. Unfortunately, the time has come for historians to admit that the mass access to formal higher education in the period following WWII appears to have worked as a double edged sword: although accessibility of higher education to masses has led to unprecedented technological

growth by uncapping wider human potentialities, the associated developments in sociological and environmental realms have raised serious sustainability issues. This paper addresses the latter in a rather unconventional manner by focusing on the role of higher education in the creation of social capital and physical capital which together underscore the sustainable development of a society. The major argument is built round the premise that although higher education is to be credited for the age of global mass consumption, the latter has been achieved by trading in the environmental sustainability and by trading-off the quality of social capital which helps ensure progressive sustenance of a society. A particular emphasis of the paper is to analyze and determine the quality of the institute of higher education in Pakistan, while keeping in perspective the sustainability aspects explored in general. The argument is structured round three parts. Part I probes into the historical process of making positive laws both in technology and sociology. In this part, an attempt is made by the author to trace the footsteps leading to the glorified tradition of formal higher learning. Part II maps the worldwide expansion of higher education and its implications for sustainable development. Finally, Part III focuses on the major thrust of this work which happens to be the evaluation of the institution of higher learning in Pakistan.

I) Necessity is the Mother of Invention

The history of civilization is the history of positive laws which ought to be recognized and understood in relation to the natural laws. The latter refer to inherent physical characteristics of all matter, organic or inorganic, and inherent behavioral characteristics of all fauna, particularly the active agent of the family belonging to the specie of *Homo Sapiens Sapiens*. Positive laws in technology are about the physical mode of production, being constantly invented and innovated by the humankind since times immemorial, with continuous efforts to discover and understand the physiological natural laws. Positive laws in sociology on the other hand are about the code of conduct governing the organization of human society at various levels. Natural law in this case is essentially the instinctive human behavior which can't be fully trusted in situations involving conflict of interest. Natural law is universally an eternal and imperfect design and it is the destiny of human beings to bring it closer to perfection by making the positive laws that minimize its conflict part while simultaneously improving on its harmonious side. Except for the human beings, each and every object in the *Grand Design* is destined to live out its time under a strategy, which may also be called a system, predefined by the Providence. On the other hand, it ought to be the sacred mission of every able-bodied and sane member of humankind to partake in redefining the predefined systems, owing their characteristic value, both in the realms of technological development and sociological evolution, to Providence and/or to predecessors/ ancestors.¹

¹ The responsibility for subject matter of this paragraph solely lies with the author, as no authentic reference could be found to support the dispositions contained therein. The literature reachable by author mostly belongs to the realm of sociological evolution and philosophers like John Locke appear to be too much under the influence of religious establishment of the times to allow unrestricted enlightenment to prevail: *The state of Nature has a law of Nature to govern it, which obliges everyone, and reason, which is that law, teaches all mankind who will but consult it, that being all equal and independent, no one ought to harm another in his life, health, liberty or possession* [Locke, 1952, P. 26]. Here Locke appears to suggest as if the law of Nature is perfect. Similar contradictions and ambiguities are found in the works of Rousseau who evidently admits that *it is this ignorance of the nature of man, which casts so much uncertainty and obscurity on the true definition of natural right; and that it is impossible to comprehend the law of nature, and consequently to obey it, without being a very subtle casuist and a*

The time travel from the Paleolithic era to the contemporary postindustrial age is guided by landmark achievements in human efforts while making the positive laws of technology and sociology. The breakthroughs in the former are commonly called technological development, while in the latter case the respective phenomena may be recognized as distinct paradigm shifts in sociological evolution. Technological development offers the possibilities of creating and accumulating physical capital taking countless shapes and forms; from farmer's sickle to the nukes and from clay oven baked loafs of bread to modern breakfast cereals. On the other hand, the most popular paradigm shifts in modern history of sociological evolution are the French Revolution, Russian Revolution and the neo-liberalist revolution, of 18th century, 20th century and recent times respectively, especially from a secular perspective. A paradigm shift universally creates new forms of social capital while simultaneously throwing the older forms either in the recycle bin, politely called social reforms, or in the basket for discarded items.

Bourdieu (1985), in his theoretical development of the phenomenon, divides capital into physical capital, social capital and cultural capital. This paper, however, considers the cultural capital lying on the crossroads of physical capital and social capital, hence not meriting to be listed as a separate category. Notwithstanding the debatable potential of the argument, any further elaboration of this point is beyond the scope of this study.²

Although technological development and sociological evolution universally have been mutually inclusive and reinforcing phenomena, creation and accumulation of social capital was adopted to a formalized setting much earlier than that of the physical capital. It will be argued in the following that formalized setting for creating, accumulating and producing mass physical capital largely owes to the evolution of the institution of higher education.

While considering sociological evolution, the informal stock of social capital has taken varied shapes and forms since times immemorial, both over space and time.³ However, the formal social capital, the positive laws and/or rules underlying the governance structure, universally remains the major explanatory variable for determining the quality of informal social capital. The earliest documented stock of formal social capital is found in 18th century B.C. Babylonia

profound metaphysician [Rousseau, 1952, P. 330]. Indeed, the controversy dates back to the making of *Pax Romana*, the most authentic original source, found in the world of antiquity, of contemporary positive laws of sociology. Roman jurists followed the Stoic belief that there was one law in nature, the law of reason; hence the inference that human rules, positive laws, could and should conform to the natural law [see, Stein, 1999]. The author does not have any problem with that inference but for the suggestion that the one law in nature is the law of reason rather than the eternal law of instinct which in the state of society ought to be regulated by the positive laws without compromising its harmony part, if the conformity condition is to be met.

² Moreover, most of the research on social capital has been carried out in the academic discipline of sociology and it is largely centered on individuals or small groups as the units of analysis [see, for example, Coleman 1988, 1993; Hao, 1994; and Lang and Hornburg, 1998]. That said, there is sizeable body of literature endorsing the application of social capital also in macro analysis since the concept has been variously used to explain the economic development and governance quality of nations (see, Putnam, 1993; Schiff, 1992).

³ Informal social capital consists of individual, familial and communal networks, interwoven into a relationship of trust underscored by shared norms, beliefs, values, traditions and/or social status.

where the Code of Hammurabi, engraved in cuneiform writing on a 7-foot-tall black stone pillar, guided an efficient civil service, effectively governing a vast empire extending far beyond Babylonian frontiers [Oppenheim, 1977].⁴ The next evidence of formal social capital may be considered embodied in the laws of righteousness and ritual purity conveyed by Torah, originating about 1000 B.C. as documents contained in the Ark of Covenant [Cohn-Sherbok, 1988]. The first ever landmark achievement in the history of positive laws of sociology is, however, known as the *Pax Romana*, finalized in the 6th century of the first millennium. *Pax Romana* or the famous Roman Law replaced various successive reformations of customary laws, originally recorded in Twelve Tablets dating back to 5th century B.C. [Tellegen-Comperies, 1993].⁵ The time travel from 6th century A.D. to the English Common Law and documentation of Magna Charta [Bartlett, 1994] in the 3rd century of second millennium largely appear no more than a temporal lapse, while comparing the seminal value of *Pax Romana* with new forms of formal social capital in Europe.

In the realm of technological development, responsible for ever multiplying production, consumption and accumulation of physical capital, the progression appears to be painstakingly slow for quite a long time and taking place largely within an informal setting up until the late 19th century. From the simple technologies of Paleolithic era, the transition to the Neolithic technologies happened round 8000 B.C., while from the early Neolithic village settlement, it was a long road to the landmarks of wheel and plough invented round 3500 B.C. Rest of the journey is no less trying with distantly erected milestone stones leading to the iron age round 1000 B.C. [Fagan, 1995]. The first technological breakthrough of modern times may be considered the invention of printing press in 15th century [Bringhurst, 1999].

Although the technological development, specifically before the advent of the 20th century, is hard to be identified within a formal setting, it merits to be credited for being the major explanatory variable determining the quality and quantity of the stock of formal social capital evolving through the ages.⁶ Indeed, scholarly institutions of higher learning for deliberating on spatial and temporal dynamics of social capital had begun to be established even before the first millennium was out. The high point, relating to the major thrust of this work, may be identified with the establishment of Al-Azhar (in Arabic: the most flourished and shining) University in Cairo, Egypt. The University began its school of social sciences in

⁴ Although the Sumerian law codes existed several centuries earlier [see, Kramer, 1971], only Hammurabi's code has been recovered in its original form.

⁵ Indeed, *Pax Romana* or the Roman Law, completely codified in *Corpus Juris Civilis (Body of Civil Law)*, during the reign of Justinian, became the foundation of legal systems even existing today and borrowing, in whole or in part, from the Roman *Corpus* [see, Johnston, 1999; Stein, 1999].

⁶ *Craft guilds* of the medieval times represent the closest formal setting for technological development. In a single town of late medieval Europe, there were about thirty to forty guilds including weavers, dyers, tailors, carpenters, masons, silversmiths, bakers, barbers, and the like. Although the primary function of a *craft guild* was to supervise the production of goods and the training of artisans, the institute also provided valuable social capital by the virtue of performing personal and social functions: in times of trouble, individual members counted on the support of their respective guilds. The latter also conducted social affairs on the occasions of births, marriages, funerals and Church festivals [see, Mundy and Riesenber, 1967]. Indeed, university in Europe itself appears to have started as a scholastic guild of teachers and scholars.

October 975 A.D., when the incumbent Chief Justice, Abul Hasan Ali ibn Al-No'man started teaching the book "Al-Ikhtisar on positive law making in interpersonal affairs while keeping in perspective spatial and temporal dynamics."⁷ The European counterpart of Al-Azhar University began its life at a much later date in south of the continent through the Byzantine route which made it possible to have easiest and a much earlier access to Muslim learning [Knowles, 1989; Grant, 1996].⁸ However, many of the modern European universities were originally modeled after University of Paris, instituted some time between 1150 and 1170. Paris was, therefore, the first city of the world to house a school of higher learning that offered studies in medicine, law, theology, and liberal arts. Its spillover effect was immense as by 1300, eighteen universities, following similar curricula, had been founded in major European countries.⁹ In the next two hundred years, the total number of universities reached beyond eighty, and, by the 17th century, physical science began to be rendered more and more an object of study, following the succession of eminent scientific thinkers including Isaac Newton and his successor William Whiston [Haskins, 2001].

Liberal arts studies were widely popular with European aristocracy, having both money and time to indulge in purely intellectual pursuits.¹⁰ Given that young members of aristocracy graduating in liberal arts had enjoyed economic security for many generations, the enlightenment that followed in the European societies was to go a long way in creating the most progressive forms of social capital: a room for logical dissent allowing to stand up to dogmatic bigotry demanding absolute conformity.

II) *Invention is the Mother of Necessity*¹¹

Medieval university, by its very nature, was an elitist institution, not admitting a cross-section of the population. However, selection of the elite group was generally not based on family ties or social class but on preparatory training in Latin grammar and access to financial support. Moreover, in contrast to many of its modern counterparts, the medieval university had no set enrollment policy or ceiling. Therefore, it did not exclude willing and qualified candidates and, theoretically, it could take all those having desire, resources and requisite educational preparation [Courtenay, 1980]. World over, universities increasingly became the *warehouses* providing the inputs, shaped as human capital, for the

⁷ Al-Azhar University is the second oldest operating university of the contemporary world after the University of Al Karaouine in Fez, Morocco [[http://en.wikipedia.org/wiki/Al-Azhar_University, accessed on August 12, 2007, 16:42 hrs.].

⁸ Of special interest to European scholars were the original writings and commentaries of Muslim scholars. Chief among the latter was the 12th century philosopher Averroës (ibn-Rushd), a Spanish born Arab. Interestingly, many of the Christians in Europe were disturbed by his doctrine, drawn from Aristotle, that the universe had always existed and was therefore *not created*. [see, Knowles, 1989; Grant 1996].

⁹ Of the universities modeled on that of Paris, Oxford would appear to have been the earliest, while the University of Cambridge rose into existence somewhat later than Oxford.

¹⁰ The liberal art curriculum was known as *trivium*, spanning over grammar, rhetoric and logic; and, aided by history, extending to intellectually rich territories of philosophy and literature [see, Rashdall *et al.*, 1987]. In the contemporary scheme of studies, the subjects of the *trivium* are referred as *Humanities*.

¹¹ Metaphor is borrowed from Diamond (1999).

creation and production of both physical and social capital. Literature on higher education in United States of America (US) provides enlightening analysis of successful successive integration of university history into the broader stream of social and intellectual history of that country [Lucas, 1996].¹² To begin with, higher education in colonial America had a distinctly church dominated flavor. Barring few exceptions, the origin, financial support, and administrative control of higher education rested within the boundaries of some sectarian interest. The things, however, drastically changed in the nineteenth century when the growth of US higher education paralleled the growth of enterprise, and a more secular and scientific emphasis served the needs of the business organization as well of society. The former provided the money to found, endow, and support an otherwise underfinanced educational system [Wren, 1983]. The business philanthropy, therefore, has played no small part in the development of the glorious tradition of US higher education. This is all the more remarkable in the perspective that there were no allowable corporate deductions for income tax purposes until 1935 [Harris, 1970].¹³ By 1951, there were 1,859 institutions of higher education in US, priding in an enrollment of over two million students between them.¹⁴ Research by that time had become an important part of the work of universities and a considerable part of research activity was organized in projects funded by foundations, scholarly and professional societies, commercial concerns, state agencies, the federal government and individual donors.

In Europe on the other hand, WWI&II brought home serious setback to university study and development. However, the process of recovery was admirably speedy. Furthermore, the wars impressed upon the nations the necessity for widespread technological and administrative proficiency. Consequently, there was a rapid development of specialist studies and new faculties and schools were instituted in applied and social sciences, agriculture, commerce and fine arts.¹⁵

Other developed parts of the world do not appear to inherit an as old and as elaborate tradition of higher learning as is witnessed in US and Europe. That said, Moscow University dates back to 1755, and the progress made by Bolsheviks in former Union of Soviet Supreme Republics (USSR) was both legendary and exemplary when compared with the general state of education in Czarist Russia.¹⁶ Far Eastern universities also appeared quite late in the day; Imperial University of Tokyo and National University of Peking founded in 1877 and 1902 respectively. However, by 1925 there were said to be 47 institutions of university status in

¹² However, the contemporary higher education in US appears to be entangled in a struggle to resolve the inevitable conflict between dual goals of excellence and equity [see, Nidiffer, 1999].

¹³ Nineteen century US extended to philanthropic efforts a tax disadvantage rather than an advantage, as the inheritance taxation penalized gifts to "strangers in blood" such as "bodies politic and corporate." In 1899, Harvard University paid out \$76, 500 to the government out of an endowment fund of \$433,500, left by the merchant Edward Austin [see, Harris, 1970].

¹⁴ Of this number, 209 were the universities, with an enrolment level exceeding a million students [see, Encyclopedia Britannica, 1954, Vol. 22, P. 876].

¹⁵ See, Encyclopedia Britannica, 1954, Vol. 22, P. 878.

¹⁶ The country had about 44% adult illiteracy rate in 1917. In the late 1980s, not only the literacy rate was 100%, the country also had nearly 900 institutions of higher learning of which 69 were universities (see, <http://www.history.com/encyclopedia.do?articleid=224802> accessed on September 14, 2008).

China, and their number increased to 108 by 1937. Similarly, about 35 universities were founded in Japan between 1920 and 1945 [Hall, 1949].

In the developing world of Asia, Africa and Latin America, a vast majority of previously colonized nations became politically sovereign after WWII. Therefore, the education system in these countries, specifically at higher level of learning, remained grossly underdeveloped and demonstratively peripheral to already established Western tradition. There is scarcely any doubt that the effigy of education is the most important explanatory variable of underdevelopment in South, while its reform process is very often out of context and painfully slow even in the contemporary age of information and communication technologies (ICT) which underscore the phenomenon of knowledge economy. Unfortunately, the latter is largely controlled by the developed countries of the North.¹⁷ Moreover, bilateral and multilateral donors also see to it that the education system remains instrumental to help maintain relative power position of North and South.¹⁸

As mentioned earlier, for centuries, the curriculum of Western universities focused on preparing gentlemen to engage in theological, philosophical, and literary discourse. Although the range of inquiry gradually encompassed also the scientific disciplines, institutions of higher learning were essentially teaching corporations round the world, even late in the nineteenth century. The curriculum was organized round year-long courses of study and students were evaluated on their rote knowledge of key texts within a core curriculum. University teachers were faithfully responsible for defining the content of the curriculum and evaluating whether the students had crammed the knowledge stuffed in the curriculum.¹⁹ Indeed, the system, originally designed to train an intellectual elite for the gentlemanly ancient professions of law, medicine, and theology, was not suitable for training ordinary individuals in applied and behavioral sciences to meet the constantly growing industrial demand for skilled labor since ever the late 19th century.

At the turn of last century, Western universities began to readjust their priorities by reforming the culture of higher learning steeped in age old tradition. As the university curricula responded more and more to spatial and temporal realities, the edifice of formal social capital known as the institute of higher learning became the major force behind acquisition of physical capital in countries who had learned the art of making *An Inquiry into the Causes and Nature of the Wealth of Nations*.²⁰

¹⁷ North and South are the terms widely used in the literature to designate developed and developing countries respectively.

¹⁸ Author's viewpoint is shared by Altbach (1981), who considers the developing countries' intelligentsia, with higher degrees from West, and foreign donors responsible for not allowing these countries to evolve a vibrant system of higher learning with strong internal dynamics.

¹⁹ Unfortunately, it sounds pretty familiar in a country like Pakistan where the overwhelming majority of university teachers are still principally occupied with passing a body of acquired knowledge to *unquestioningly obedient* students who devotedly commit it to memory in order to pass examinations.

²⁰ Title of the famous book by Adam Smith, published in 1776.

With intellectual resources of the university diverted to prepare leaders in science and technology, the glorious culture of formal higher learning was increasingly changed into social institutions for what Leibenstein (1965; 1969) calls ‘skill labeling’; the phenomenon that was to revolutionize the labor market in favor of liberalist forces whose triumph eventually led to the age of mass consumption. Vested interests of business and industry, therefore, increasingly gained stronghold in the Western universities to help preach the pseudo utilitarian gospel which, ever since, is fast winning converts to the new religion of *consumerism*.²¹ Unfortunately, the peripheral status of the culture of higher learning in devotedly docile South has hardly ever allowed any change beyond ritual purity. Hence, compared to the *prophets* in the North, the threat of *persecution* looms much larger for the poor humble *faithful* lot mapped on the lands belonging to Globally Emulating Modern South (GEMS).²²

But what is that *persecution* about? In this work it relates to looming threat to sustainable development, one of the most popular terms in vogue, though making a poor match with its popular understanding. In what follows the author will present three distinct but mutually inclusive strands of sustainable development; social, economic and environmental.

In contemporary times, the individuals and communities have access to both formal and informal stocks of social capital. In the world of antiquity, majority of people counted more on informal stock of social capital like family support and communal networks. Technological advances in communication and transportation increasingly helped frame and enforce formal laws of sociology, hence glued scattered communities both within local bodies and the United Nations Organization (UNO). However, the inevitable trade-off happens to be the weakening of familial and communal ties with vertical and/or horizontal mobility of an ever increasing number of people under an ever widening umbrella of formal social capital, materialized in institutional development including governance structure. The psyche of *Homo S. Sapiens* is unimaginably subtle and the behavioral management of the specie is more of a challenge in collectivity than at the individual level. Contemporarily, two paradoxical currents are observed universally: ICT is bringing the *rats in a race* too close for comfort. The exhibits of poor resolution of the paradox are to be found in escalating threat to the age old, tried and tested institute of bisexual marriage, suicide statistics, drug abuse, underground world, and an ever widening and deepening security market.

The unprecedented growth of formal social capital both followed and led the rapid, headlong and seemingly unstoppable growth of physical capital since ever the turn of last century. The most celebrated Ford Assembly Line, which made large scale production possible, created a wizardly wheel requiring to be constantly kept in measured motion. The challenge is to keep the wheel properly greased without ever allowing it to stop, while slow downs and whirled motions warrant to be monitored very carefully: the Great Depression of 1930s would

²¹ According to Veysey (1973), those who controlled the purse strings also geared the university curricula to help prepare a class of professionals having ability, will and ambition to apply the rapidly burgeoning knowledge in sciences for developing a highly diversified range of consumer products.

²² Term was coined by the author in one of her previous works [see, Khan 2002].

appear like surgical removal of a benign outgrowth when compared with potentially malignant threat of contemporary global economy in a world helplessly multiplying backward and forward linkages of an ever increasing number of product markets both within and between nations.

Finally, no less important is the fact that the phenomenon of double edged sword is nowhere as relevant as in the realm of technological development. Therefore, the pretty CAT also happens to be MAD, the same old paradox, without a workable resolution in sight so far.²³ Even if the home planet is saved from intentional or accidental blowing up by the precious arsenal, at some point in time humankind will have to pay for the lavish lunch being served complacently for pretty long time. The colossal questions involve how to sustain inventory for fuel and other raw materials including the blue supply in the sky? How to cook the lunch without getting the house heated up? And who will do the dishes and wipe up the kitchen floor?

Time has come for higher education to run the full cycle. It is not too late yet. That said, the contemporary challenge to human philosophizing ability is formidable: for the first time in the history of civilization, the *love for wisdom* faces scientific dogma and secular bigotry of the corporate world.

III) *Some Mothers Do Have Them*²⁴

As mentioned earlier, the edifice of formal social capital in GEMS, including higher education, lies on the fringes of relatively much less imperfect governance structure in the developed world. Similarly, in the realm of technological development, the available stocks of physical capital in GEMS mainly depend on technological acquisition because of a huge deficit in corresponding capabilities.

One of the previous works of the author sheds light on weaknesses of educational curricula in Pakistan.²⁵ The study points out that beyond early years of schooling, social sciences and exact sciences are increasingly divided by a *Berlin Wall*. On the west of the Wall are exact and/or natural sciences widely considered to be engaging the most capable, competitive, hardworking and forward looking students, while on the east are the social sciences frequently looked down by the privileged and liberal west. However, in the context of the ability to make and sell positive laws of technology, the *par excellence* does not appear to prevail even in the former disciplines of higher studies: regrettably poor state of affairs in patented scientific achievements happens to be a very valid case in point.

Unfortunately, while dishing out elaborate branch plans for a system having serious problems with the roots, the architects of educational reforms in Pakistan have universally appeared to adopt a misperceived Darwinian approach to

²³ Acronyms for Computer Axial Tomography (CAT) and Mutually Assured Destruction (MAD) respectively.

²⁴ Metaphor is borrowed from an old comic serial telecasted by British Broadcasting Corporation.

²⁵ The study analyzes the GEMS' potential for sustainable development with reference to the prevalent culture of higher studies in social sciences[see, Khan, 2007].

philosophy.²⁶ Therefore, the most recent reforms of higher education **have** raised same old fundamental questions that demand historical investigation.

Isani and Virk (2005) provide a detailed review of higher education in Pakistan. Their elaborate description reveals that not only the country provides limited access to higher education; the outcome of the effort is also scarcely conducive to sustainable development because of generally low quality of students fed on outdated curricula.²⁷ While discussing the successive higher education reforms, the authors conclude that the sum total of the lofty aims and claims has been a mere collection of schemes catering to *ad hocism*. Although the study is considered to be one of the most consolidated works on higher education in Pakistan, overall approach of the authors appears to be lacking both consistency and analytical strength.²⁸

Even within the league of GEMS, Pakistan is one of those countries which are still a long way away from universal literacy, while school education is contemporaneously considered one of the fundamental social rights. On the other hand, higher education is essentially a privilege supposedly carrying a huge social responsibility tag. Recently, in some influential quarters of Pakistan, a top down approach has been frequently propagated in education on the basis of following two justifications:

- Extensive and intensive growth of the lower rungs of educational hierarchy requires the skills provided by the institutions of higher learning. Expansion of higher education is, therefore, important for capacity building of the entire educational sector;
- Compared to other parts of the world, relative allocation of public funds for higher education has been much less than that of the school education.

Before addressing the first bullet point, the analysis in the following provides evidence that does not appear to endorse the second bullet point. Table 1 lists the percentage share of school education and higher education in gross domestic product (GNP) of three categories of countries represented by a region in each case. The evidence is based on data for 1970s. One of the three regions represented in Table 1 includes 13 member countries of the Organization for

²⁶ Dewey, while discussing the influence of Darwin on philosophy, writes that intellectual progress usually occurs through sheer abandonment of questions, an abandonment that results from their decreasing vitality and a change of urgent interest. According to him, the questions are solved by simply getting over them: old questions disappear and evaporate with the new questions, corresponding to the changed attitude of endeavor and preference, taking their place [see, Dewey, 1910]. Those familiar with the effigy of higher education in Pakistan and its most recent reforms, including Model University Act, may find it difficult to endorse universality of Dewey's position on intellectual progress.

²⁷ The authors provided an estimate of 2.6% of the relevant age group enrolled in higher education in 1998, while the ratio of arts and science students was 70:30.

²⁸ For example, the authors mention lack of merit being one of the problems in higher education. On the contrary, all public sector universities enroll students on straight merit. As a matter of fact, the real problem of the quality of students in Pakistan appears to be similar to Huxley's analysis of higher education in post WWII Britain. According to him, in the egalitarian culture following the socialist movements, the average of the youth who make it to higher education on merit belong to less well-to-do strata of the population. Therefore, they usually happen to be far below the standard expected of a university student in terms of all-round character and interests, in intellectual initiative, and even in general education. Huxley believes that such a crop of students may fail to produce sufficient number of a trained *elite* which is efficient and truly representative of collective interests [see, Huxley, 1945].

Economic Cooperation and Development (OECD) belonging to the North. The other two regions represent the South. The figures show that the relative allocation to higher education in two regions of the South did not lag much behind the North. However, as percentage of GNP, OECD figure was much larger and its significance is further underscored by large and small size of the economies of countries belonging to North and South respectively. Nonetheless, against the backdrop of priority accorded to two broad rungs of education, higher education rather fares better in the South Asia: the relativity of GNP units allocated to school education and higher education was 100:23 for the region, compared to 100:18 and 100:10 for OECD and GEMS respectively.

Given that school education is a right and countries of GEMS needed to have the fundamentals in place for that right to be universally accessed, the ratio of funds allocated to their higher education sector in the 1970s clearly provides the evidence of overlooking a right in favor of a privilege. Such a compromise is only justified in the presence of demonstratively high trickle down effect. Unfortunately, the evidence on the dismal state of both illiteracy and poverty in GEMS shows that such an effect did not take place.

Table 1: Public Educational Expenditure: World Scenario

Region	Annual Average During 1970s (Percentage of GNP)		
	School Education (a)	Higher Education (b)	Ratio (a:b)
OECD [■]	4.55	0.83	100:18
GEMS [●]	6.45	0.61	100:10
South Asia [∨]	1.86	0.43	100:23

Source: Figures in column (a) and (b) are adapted from Tsang (1988), Table 1, P. 200.

- [■] Includes 13 developed countries in the North.
- [●] Includes 68 developing countries of Asia, Africa and Latin America.
- [∨] Includes 6 South Asian countries.

Table 2 provides a comparison of the distribution of right and privilege in the educational sector of Pakistan, while allocating the scarce public funds to school education and higher education respectively. ²⁹ The evidence furnished vividly shows that while considering the ratios listed in Table 1, the respective ratios in Table 2 exhibit a picture highly favorable to higher education, especially between 1965-75 and 1998 onwards. For the period as a whole, the ratio of public funds allocated to school education and higher education in Pakistan surpasses the highest ratio listed in Table 1 with a wide margin, 100:30 and 100:23 respectively. The latter figure, the highest ratio in

²⁹ Apart from being one of the fundamental social rights, an optimally planned school education system also performs a very important social function by educating the masses in citizenship rights and duties, and by equipping them with basic skills required to become efficient economic agents. Unfortunately, because of the supply side variables, including the apathy of intelligentsia, school education in Pakistan falls much short of the mark in terms of its relationship with social needs, social conscious and unconscious. [for evidence on the apathy of Pakistan's intelligentsia regarding the state of school education in the country, see, Asif *et. al.*, 2005].

Table 2: Allocation of Public Funds to Education: Pakistan (1950-2000)

<i>Period</i>	<i>Amount (rupees in million)</i>					<i>% of Plan outlay</i>		
	<i>School Education (a)</i>	<i>Higher Education (b)</i>				<i>General a:(1)</i>	<i>All</i>	
		<i>Colleges (bi)</i>	<i>Universities (bii)</i>				<i>a: 1+2</i>	<i>a:bi+biï</i>
			<i>General (1)</i>	<i>Technical (2)</i>	<i>Total 1+2</i>			
1955-60	251	80	90	50	140	10:4	10:7	10:9
1960-65	618	55	135	182	317	10:2	10:5	10:6
1965-70	883	116	279	616	895	10:3	10:10	10:12
1970-75	1222	365	340	920	1260	10:3	10:10	10:13
1977-83	5983	867	590	779	1369	10:1	10:2	10:4
1983-88	11125	1300	2100	2335	4435	10:2	10:4	10:5
1988-93	16667	615	2000	2000	4000	10:1	10:2	10:3
1993-98	49190	2507	4100	2447	6547	10:1	10:1	10:2
1998-00	256	125	715	114	829	10:28	10:32	10:37
Total	86195	6030	10349	9443	19792	100:12	100:23	100:30

Source: The absolute figures are taken from Isani and Virk (2005), Table 7.1; 7.4; 7.7; 7.11;7.16; 7.19; 7.22-3; and 7.27-8, pp. 112-35.

[■]Except for the last row, figures on right hand side of the ratios are rounded up to help simplify the comparison.

Table 1, matches with overall figure of Pakistan only if higher education is considered exclusive of college education, which essentially will be a misnomer. Finally, even if the higher education is considered as service provided by general universities, the respective ratio for Pakistan surpasses lowest average ratio, figure for GEMS, listed in Table 1.

The upshot, therefore, is that in the presence of the evidence provided in Table 2, especially while comparing it with the respective figures in Table 1, there is scarcely any doubt regarding the near absence of a bottom up strategy in the education sector of Pakistan, along with a visible tilt of the public policy towards a top down approach to education. Against this backdrop, an optimizing strategy for sustainable development essentially includes, as one of the prerequisites, tangible proof of the materialization of first bullet point outlined in the foregoing. Unfortunately, Pakistan’s unenviable positioning on the world profile of Human Development Index (HDI), ranked at 138 out of a total of 173 countries[UNDP, 2006], scarcely appears to support a top down approach to formal education, especially in the presence of over 50% illiterate adult population. Indeed, theoretically unexpected parametric relationship between school education and higher education rather merits serious heart searching in Pakistan by all those concerned with the cause of country’s sustainable development.

Pakistan's educational archives are adorned with numerous reports and six major policies on the lofty subject of the relevance, reform and uplift of the country's institution of higher learning.³⁰ The reports also include unrivaled *authentication* of previously *undiscovered information*, so *generously* and *painstakingly* dug out and doled out by World Bank (1990) and (1992). Although the supply of higher education has markedly responded to the gap identified by the Bank, the other parameters included in its report of 1990 have not exhibited commensurate improvement.³¹ Indeed, with large number of buyers and sellers, the higher education has become a monopolistic market where product differentiation happens to be markedly high. The prevalent marketing strategies are forcing even the public sector universities to behave and, at times, fake like most of the sellers in the private sector. The latter is highly unregulated and, in many cases, widely unstructured and blatantly unprincipled. Mushroomed and unplanned growth of higher education, both in the public and private sector, has created a serious dearth of human resource. Since no criteria have ever been devised for measuring up to certain intrinsic worth, the faculty is popularly demanded to have a foreign qualification tag, preferably from a Western country. The private sector very often wins the bids by virtue of its ability to milk out the *customer*, the popular renaming of the old fashioned phenomenon previously known as *student*. Using Dickens' words for French Revolution, it is both best and worst of the times for higher education in Pakistan, but it scarcely appears to be a simple matter of looking at the glass half full or half empty.

The Bank in its reports also identified low research productivity of Pakistan's higher education sector. Well, the *good news* is the multiplication of research output of universities in recent years, thanks to the research productivity allowance and other numerous perks doled out too complacently to allow universally out of perspective social opportunity cost considerations to sneak in. That said, the outcome of phenomenal growth in research output is still nowhere in sight as the technological capability of the country remains as poor as ever, while variously threatened human security situation summons alarm regarding the quality of society's formal and informal social capital.

Recently, quality assessment of higher education has been introduced in many countries of the world including Pakistan. This is a step in the right direction. However, one size essentially does not fit all and so far the corresponding initiatives have raised more questions than they have answered. Of particular relevance are the questions relating to center-periphery differences and disciplinary differences in quality management and assessment. Notwithstanding fairly standard norms of quality assessment for an individual discipline, center-periphery and inter-disciplinary differences will inevitably introduce distortions in the league tables of national institutions of higher learning and different disciplines of studies within an institution respectively. Moreover, it is a

³⁰ The earliest higher education policy of Pakistan dates back to 1959, while another three major policy documents were successively issued within one decade; in 1970, 1972 and 1979. Following the worldwide educational reforms, the country revamped its higher education policy in 1992, followed by the latest revisions introduced in 1998.

³¹ The World Bank reports also identified the poor capacity of the economy to absorb the youth graduating from institutions of higher learning, and poor intrinsic worth of the degrees churned out from a system largely divorced from the job market.

formidable challenge to make the evaluation processes acceptable and less demanding to carry out in terms of time and resources needed, especially in big and old universities.

Finally, the institutions of higher learning in Pakistan have scarcely ever been the laboratories for personal growth and professional development. The faculty members, specifically those with foreign Ph.D. degrees, rather than measuring up to the paragons of excellence for society, have overwhelmingly and universally responded to the criteria of material success set by the society itself. Although university ought to be a forum for stakeholders in sustainable development, the recent wave of reforms is fast changing institutions of higher learning into an arena demanding the faculty to win within and between the universities.

CONCLUSION

Contemporaneously, government and private think-tanks universally vote in favor of improving global competitiveness by investing in a highly trained technocratic elite. There is hardly any doubt that countries like Pakistan face formidable challenges to their economic survival in the high-tech frenzy of the new millennium. That said, a hoodwinked approach to economic imperatives may seriously undermine the groundwork for sustainable development. Institutions of higher learning ought to be a major force in society not only for producing leaders in science and technology, but also for downstream channeling of progressive social, moral, and political values while keeping in perspective temporal realities and spatial constraints. Notwithstanding the rhetoric of globalists, it is important **for** quality management that perspectives, goals, imperatives and limitations of higher education reforms vary considerably both within GEMS and between GEMS and the North. That said, five major interests universally considered to be at stake in national higher education systems include social justice, competence, academic freedom, autonomy vs. accountability, and decentralization vs. centralization [Rhoades, 1983]. While there may remain some unavoidable conflicts between these interests in Pakistan, higher education reform efforts aiming at independent, strong, and objective analysis of ground reality and a clear sense of direction and pace will be a lot more successful in optimally balancing out the apparent trade-offs in favor of sustainable development.

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