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BOOK REVIEWS

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Aid Effectiveness in Education

Setting Priorities in a Time of Crisis*

Halsey Rogers#

Abstract

This paper sketches the dimensions of the sharp downturn in global economic prospects resulting from the financial crisis that began in fall 2008, raises cautions about the effects of the downturn on developing-country education systems, and suggests priorities for both donor and recipient countries in responding to the new circumstances.

The New Global Economic Context and Its Implications

The world financial landscape has changed dramatically over the last year, especially since September 2008. These changes will mean tectonic shifts in the economic landscape over the medium term, as the real economy adjusts to increasing unemployment and slowing growth after a five-year period of rapid global expansion. For developing countries, these changes will translate into a greater need for aid at precisely a time when there may be greater domestic pressure on aid budgets in donor countries.

The Era of Rapid Growth

The period from 2002 to 2007 was characterized by strong global growth, and in the case of the developing world, the strongest in decades. Developing countries entered the decade in a relatively strong macroeconomic and structural position, with low inflation rates, more sustainable fiscal situations, and better integration with the global economy. These parameters predisposed them to more rapid growth, but developed economies also benefited from expansionary, monetary and fiscal policy. As a result, the GDP of the developing world rose by more than 5 percent each year between 2003 and 2007 (see Figure 1), with growth rates peaking at nearly 8 percent (Lin, 2008; World Bank, 2008b).

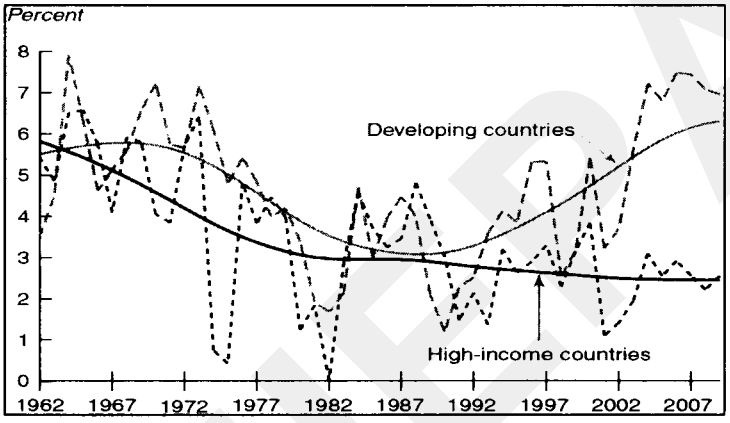
One feature of the expansion was a sharp rise in capital flows, both private and public, into emerging economies and the developing world more generally. Global expansion fueled exports, inflows of portfolio capital and foreign direct investment (FDI), and remittances, all of which rose sharply. In 2007 alone, for example, net private capital flows to developing countries increased by $269 billion, reaching a record $1

DECRG, World Bank, 1818 H Street NW, Washington DC 20433, USA.
Email: Hrogers@worldbank.org

trillion (see Figure 2). At the same time, flows of aid to these countries rose by two-thirds, from $61 billion in 2000 to $106 billion in 2005 (World Bank, 2008a).

FIGURE 1

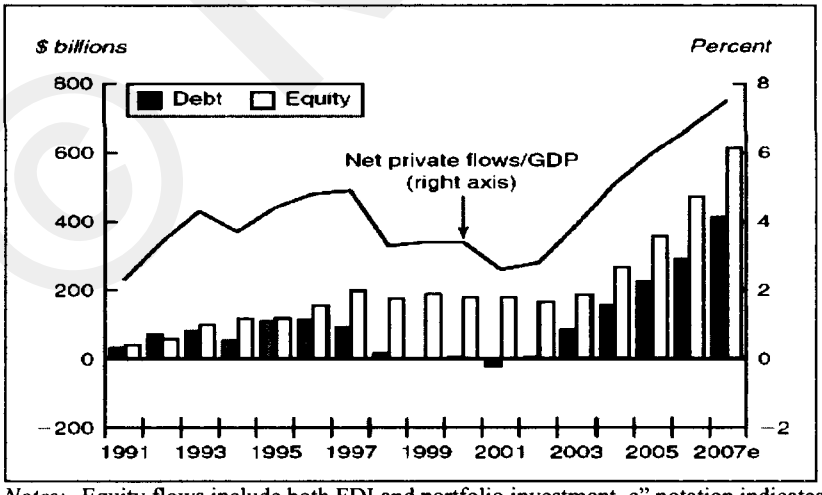
GDP Growth in Developing and High-Income Countries, 1962–2007



Note: Solid lines represent smoothed trend.
Source: World Bank 2008a.

FIGURE 2

Private Capital Flows to Developing Countries during the Boom



Notes: Equity flows include both FDI and portfolio investment, e" notation indicates estimates.
Source: World Bank, 2008a.

The Medium-Term Future: More Difficult Times Ahead

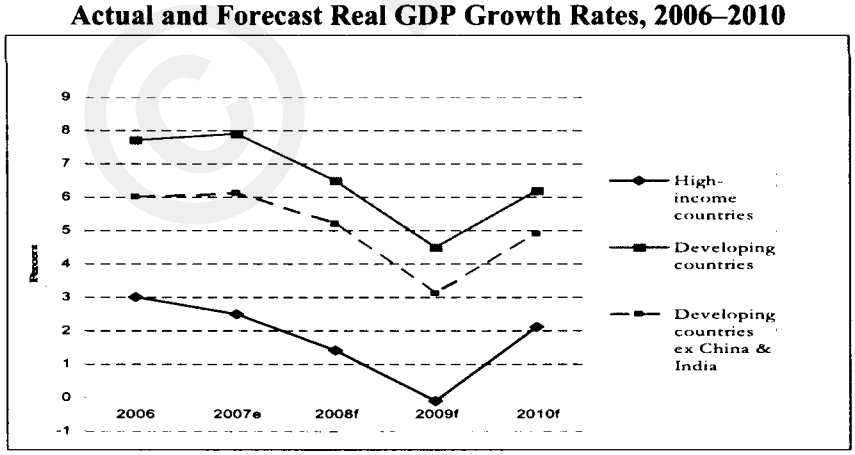
The expansionary era ended with the bursting of the U.S. housing bubble, the collapse of the subprime mortgage market, and the transmission of the crisis throughout the

advanced economies. The dramatic and concerted response by authorities in the European Union, the United States, and Japan has helped prevent the collapse of the banking system, but it has not prevented a marked slowdown in the real economy. Economic forecasts for the medium-term future have steadily worsened in recent months. According to the latest World Bank Group forecasts, prepared for the November 15 meeting of the G20, the OECD economies as a group will shrink by 0.2 percent in 2009 (World Bank, 2008b).

Developing economies are also expected to suffer a slowdown. This time, unlike during the East Asian financial crisis of 1997–1998 or other recent crises, the OECD economies are at the epicenter. But this situation does not shield developing economies from collateral harm. The slowdown in donor countries will (and has already begun to) reduce private capital flows to the developing world, as investors make a "flight to safety." Many developing countries run sizeable current-account deficits: deficits exceed 5 percent of GDP in about half of developing countries and 10 percent of GDP in about one-third of them. These imbalances increase their vulnerability to a sudden fall in external financing (World Bank, 2008b). The World Bank now projects that developing countries' collective GDP growth will drop to 4.5 percent in 2009 (more than 3 percentage points less than in 2006–2007, see Figure 3). While the forecasts project a recovery in 2010 in both developing and high-income countries, whether it arrives as projected will hinge on the effectiveness of the fiscal and monetary stimulus packages that are now being implemented. There are also risks of more severe slowdowns if emerging markets undergo their own financial-sector crises as a result of contagion (Lin 2008; World Bank 2008b).

FIGURE 3

Actual and Forecast Real GDP Growth Rates, 2006–2010



Source: Based on data from World Bank, (2008b).
Note: "e" notation indicates estimates. "f" notation indicates forecast.

Slower growth will likely mean a rise in education needs in developing countries. Even if these countries do not undergo financial-sector crises of their own, but merely economic slowdowns, there will be numerous pressures on education budgets. First,

slower growth overall will translate into fiscal pressures on individual governments and perhaps expenditure cuts if these governments are unable to arrange additional financing. Second, slower growth in household incomes will reduce the ability of households to contribute to their children's education, so that education budgets may need to take up the slack. Third, evidence from past crises suggests that there could actually be an increase in enrolments at the secondary level, as students who would otherwise leave their studies, may decide to forgo the weak labour market and instead remain in school (Ferreira and Schady, 2008).

Aid and the Economic Slowdown

What is likely to happen to aid flows? Despite greater needs in recipient countries—both to replace external private capital and, specifically, to support the education sector—donor countries will likely find it challenging to maintain aid efforts in the current economic climate. In times of economic slowdown, policymakers are likely to be pressed to redirect aid funds toward domestic needs, such as their own schools. There is little research on how large these donor-country economic effects could be on aid levels. Preliminary calculations by the World Bank education sector team (HDNED), based on panel data of donor countries over 1970–2006, suggest that an increase of 1 percent in donor-country GDP per capita is associated with an increase of aid per capita of 1 to 2 percent.[1] If this relationship holds in reverse, and if the recession leaves donor countries, as a group, 3 percent poorer in 2010 than they would have been had their economies kept expanding, aid flows might be expected to drop at least 3 percent. Compared to the big aid increases seen in recent years, this change would not be overly marked, roughly translating into $3-6 billion in forgone aid.

Moreover, it is possible that this analysis understates the effect of the crisis on aid. Experience from some OECD countries in the 1990s (Finland, Japan, Norway, and Sweden) suggests that donor countries hit directly by domestic financial crises often see their aid levels falling sharply (Roodman, 2008). Bank rescues and recapitalizations place massive new fiscal demands on the public sector; donors may find it more difficult to continue giving aid during such crises than they would in even a normal downturn. Because the largest aid donor (in absolute, not relative, terms)—the United States—has been hit first by the financial crisis, there is a risk that the crisis-effect could reduce overall aid significantly. Education aid need not rise and fall in lockstep with overall aid,

[1] These results are preliminary and should be used with some caution. Although the finding that higher donor income leads to higher aid levels is reasonably robust, GDP *growth* rates (as opposed to levels) also appear to have an offsetting effect in the data, with more rapid growth at a given GDP level predicting *lower* aid. If this relationship holds in times of economic decline, it could mitigate or even eliminate the downward pressure of recession on aid. This effect seems counterintuitive, however, and analysis to better understand the statistical relationships is ongoing.

of course; in recent years, aid for education initially rose more rapidly than overall aid, then fell in 2005, even as overall aid was rising (UNESCO, 2007). However, there is little reason to be sanguine about the prospects for education aid if overall aid falls as a result of the crisis.

In short, these are very different circumstances than those the world faced a year or two ago and the education and development communities need to prepare for a possible reduction in external private (and even public) resources available to developing economies.

Implications for Donor Countries

These new and more straightened circumstances suggest several priorities for donors:

- *Maintain aid effort.* There will likely be pressures to reduce aid budgets or, at a minimum, to postpone or eliminate planned increases in aid. Recent research on domestic voters' support for aid in the United States, for example, finds that higher levels of financial insecurity are associated with a reduction in voter support for foreign aid (Paxton and Knack 2008). But in a period when education needs will likely rise as developing countries' fiscal constraints tighten, it would be a mistake to suddenly back off on donor commitments to governments that are doing their part to stay focused on access and quality goals despite the economic crisis. Making aid budgets procyclical will simply add to the misery. The force of global education targets will, moreover, expectedly be lessened if they are not backed up by sufficient funding for deserving recipients. Over the past decade, more countries have abandoned fees and cost recovery in primary and secondary education. This is a welcome development, but it makes schools more vulnerable to budget cuts. The more schools have to rely on household contributions to make up for cutbacks in aid and public spending, the greater will be the inequality across schools. Sustained commitment by donors will be especially crucial in fragile state settings, where even in the best of times, governments struggle to provide services. External actors, both governments and NGOs, will have to pick up the slack and provide an educational safety net during the downturn.
- *Reconsider the allocation of aid.* Donors should make sure that aid is allocated in ways that are most likely to advance education goals. In the 1990s, they focused on aid allocation across countries, that is, making sure that the largest amount of aid went to the countries that could use it most effectively. This type of allocative efficiency remains important; but there are other ways in which donors can improve their allocation of aid for development results. A companion paper for this conference (Fredriksen, 2008) lays out these arguments in detail.
- *Focus on aid effectiveness and efficiency of public spending.* Effectiveness should always be a concern for donors, but tighter economic constraints should cause them to redouble their efforts to increase the returns to aid. It will also be more important than ever to provide evidence of aid effectiveness to electorates,

given both cyclical pressures and the influential voices of aid critics (see, for example, Easterly 2001; Easterly 2008). The next section discusses aid effectiveness priorities.

Implications for Developing Countries

In a time of downturn, developing countries will face the toughest choices. Here are some suggested guidelines for education policy in these countries:

- *Protect the most vulnerable and disadvantaged.* The greatest long-term costs of the crisis will be on students who are forced to drop out of school, or who are prevented from attending school in the first place (rather than students who suffer a temporary reduction in the quality of their education as a result of cutbacks). One policy focus should be on keeping these children in school through such measures as conditional cash transfers, emergency scholarships, and cuts in school fees (for an excellent new survey of measures to cushion the impact of crisis on poor households, see Ravallion, 2008). This goal is especially urgent in the case of the most marginalized populations—ethnic minorities and, perhaps in some cases, girls—who are likely to be the first casualties of a cutback in household and schooling resources.
- *Consider carefully where to prioritize efforts, using evidence on returns to education.* Despite the best efforts of donors and developing-country governments, some cutbacks in resources for education are likely. Governments should consider carefully which levels and types of schooling can best absorb the reductions. Different levels of schooling have different levels of private and social returns at the margin, as well as very different fiscal and economic costs. Cutbacks should come at the level that delivers the lowest marginal returns per year of study, especially if this level is more expensive.
- *Redouble the focus on results and effectiveness.* The drying up of external private financing (and, possibly, public financing as well) will force tough fiscal choices on developing-country governments. To some extent, countries can loosen those constraints by using reduced resources more effectively. It will be necessary to monitor results in such a way that they can be linked to particular policies and projects. Measurement should cover not only enrolment and completion, but also intermediate inputs and the quality of schooling. As noted above, enrolments may not fall in many countries and governments are unlikely to close schools or lay off many teachers. Instead, the quality of inputs may suffer due to deferred infrastructure maintenance, lower levels of teacher effort, or reductions in non-salary inputs and supplementary programs—leading to lessened learning outcomes.

Promoting Aid Effectiveness and Setting Priorities

Given the importance of greater aid effectiveness on the priorities of all development partners, this section delves into the topic in greater detail. It offers evidence on the effectiveness of aid in spurring development, both in macroeconomic terms and within the education sector, and suggests priorities for removing barriers to greater effectiveness.

Progress in Education Outcomes and the Role of Aid

Recent years have seen major progress toward international education goals. Net primary enrolment ratios are estimated to have risen from 81 to 86 percent between 1999 and 2005. Even though many education systems are now having to pull in harder-to-reach populations as they approach universal primary enrolment, the increase in net enrolment rates more than doubled from 1991-1999 to 1999-2005. Sub-Saharan Africa saw the most dramatic progress, with net enrollment growing by more than 2 percent annually since 1999. As a result, the number of out-of-school children is estimated to have dropped from 96 million in 1999 to 72 million in 2005. There have also been some advances (often slower) toward other goals, such as improved gender ratios in schooling in South and West Asia (UNESCO, 2007).

How much of the progress in education can be attributed to aid? Much of the literature on the effects of aid has focused on *macro effects:* the link between aid and growth and between aid and poverty reduction. The debate heated up in the 1990s with the advent of statistical literature based on cross-country regressions, but as of yet, there is no consensus in the literature. For a time, evidence supported the view that aid was effective in spurring growth, but only in countries with reasonably good policies and institutions—those that least resembled Mobutu's Zaire, for example (Burnside and Dollar, 2000; World Bank, 1998). And indeed, this view seems consistent with case studies and micro-evidence (see, for example, Devarajan, Dollar, and Holmgren, 2001). Other influential recent papers using expanded data sets and different statistical techniques have found a variety of conflicting results: that aid is generally ineffective in increasing growth; that aid is generally effective; or that certain types of aid (e.g., aid with developmental purposes) are effective (see, for example, Clemens, Radelet, and Bhavnani, 2004; Dalgaard, Hansen, and Tarp, 2004; Easterly, Levine, and Roodman 2004). On balance, these papers can be read as supporting the view that aid can accelerate growth (Doucouliagos and Paldam, 2005), hence it is likely that it also increases education outcomes. Nevertheless, the effect is not sizeable compared with domestic factors—the statistical relationships are often hard to replicate with different samples or econometric specifications (Roodman, 2007). Moreover, aid effectiveness does not robustly depend on the quality of policies and institutions.

Much less specific research has been done on *how aid promotes education goals,* but some recent findings are encouraging. Because the link between education aid and enrolments is more direct than the macro link between aid and growth, there are reasons

to believe that aid is more effective in this sectoral context. One new study by aid researchers, for example, finds that over the period 1970–2004, higher levels of aid for education significantly expanded primary-school enrolment in recipient countries (whereas these governments' self-financed expenditures on education did not) (Dreher, Nunnenkamp, and Thiele, 2008). Other recent studies have also found positive effects on enrolment, although sometimes smaller in magnitude (Michaelowa and Weber, 2007), and there is evidence that aid may have greater effects when it is targeted at the schooling levels appropriate for a recipient country's level of development (Asiedu and Nandwa, 2007). These results have not been subjected to the same degree of scrutiny as the aid-growth studies, however, and should thus be regarded only as suggestive at this point. Further research is also needed on how aid affects other education goals, including gender equity and student learning, which are goals desirable in and of themselves and have proven developmental effects (Hanushek and Woessmann, 2007; World Bank, 2001). The Bank has a research program aimed at filling some of these gaps.

Removing Barriers to Aid Effectiveness

In short, there has clearly been substantial progress toward education goals and the limited evidence suggests that aid may have contributed to that progress. But education progress to-date, while impressive by historical standards, still falls short of the goals set by the international community. To ensure that aid makes the greatest contribution possible to these goals, the broader aid literature and more limited literature on effectiveness of education aid may provide insights into the barriers to aid-effectiveness and how to address them:

- *Fungibility of aid.* One possible barrier, often studied in the aid effectiveness literature, is the fungibility of education aid. If an increase in education aid allows recipient governments to reduce their efforts in the sector and shift their own revenues to other areas, improvements in education outcomes may be weakened. In that case, education aid would in effect be partially funding other sectors. Evidence from the 1990s suggests that historically, a substantial share of aid to education and other sectors has indeed proved to be fungible (Feyzioglu, Swaroop, and Zhu, 1998; Swaroop and Devarajan, 1999). More recent work confirms this finding for education and other sectors, finding that a substantial share of aid is in effect diverted outside the intended sector (Pettersson, forthcoming).[2] Because even new studies do not include much data from the current decade, they may not have captured work in recent years to ensure that recipient governments maintain their efforts in the sector, which might have reduced fungibility in education. Nevertheless, the advice that follows—which

[2] Surprisingly, Petterson also finds that in the area of health outcomes, fungible "pro-poor" expenditures reduce infant mortality as much as non-fungible expenditures do. However, the study includes no comparable evidence for the education sector.

stems from a concern about fungibility—is likely to be broadly applicable. To combat potential fungibility problems, donors need to help recipients: (1) *focus on education results*, rather than input measures alone; (2) *improve the overall management of public expenditures* so that even fungible aid contributes to development; and (3) *maintain their own efforts* in the sector.

- *Aid fragmentation.* The 1980s and 1990s saw sharp growth in the number of aid donors overall, leading to a rise in aid fragmentation (as measured by a standard measure of industry concentration). If not accompanied by strong harmonization of efforts, the rise in fragmentation can increase administrative burdens on borrowers and even reduce their administrative quality (Brautigam and Knack, 2004). Recent calculations suggest the same rise in aid fragmentation within the education sector in the 1990s as seen overall, followed by a recent levelling-off. To combat potential pernicious effects of fragmentation, *donors need to continue to strengthen their harmonization efforts,* while recipient countries need to take the lead on harmonizing country goals.
- *Volatility of aid and expenditures.* Volatility of aid has been cited as a likely barrier to aid effectiveness. Excessive volatility makes it difficult for governments to make education investments that require a long-term commitment, such as hiring teachers. Some research has shown that aid flows are even more volatile than domestic fiscal revenues (Bulir and Hamann, 2006; Eifert and Gelb, 2005). What ultimately matters most, however, is the volatility of overall education expenditures in recipient countries. At a minimum, then, donors should ensure that aid is not procyclical, that is, that aid does not fall precisely at the time when domestically financed expenditures drop. To the contrary, *donors should make aid as countercyclical as possible* because evidence has shown that aid may be most effective when it helps recipient countries smoothen economic shocks.
- *Poor-quality service delivery in education.* Although econometric evidence on how policies and institutions affect aid effectiveness remains controversial, there is little doubt that it must be true in extreme cases of graft and corruption. Even in less extreme cases, if additional aid does not translate into more and better service delivery at the school level, it is unlikely to lead to much progress in education. In certain systems, there are many broken links in the chain from finance to results, such as leakage of funds, high levels of teacher absenteeism, ineffective pedagogy, or too little expenditure on important non-salary inputs (Chaudhury and others, 2006; Pritchett and Filmer, 1999; Reinikka and Svensson, 2005; World Bank, 2003). Donors and recipients alike need to *focus on identifying and fixing these breakdowns in service delivery* in both aid-financed and domestically financed programs, thus increasing the returns to public education expenditures.
- *Lack of monitoring and evaluation for results.* One particularly important dimension of both recipient- and donor-government efforts in education is better

monitoring and evaluation (M&E). Better M&E will allow governments not only to show results to donors and citizens, but equally important, improve education results over time. Serious impact evaluation should be part of any major aid-financed initiative; donors also need to encourage recipient governments to *make M&E an integral part of their domestically financed programs.*

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Managers in-the-Making

Their Socio-Economic Background, Values and Attitudes

Baldev R Sharma[#]
V. Chandra[#]

Abstract

This paper examines the Socio-economic background, selected values and certain attitudes of MBA students. The findings show that management education continues to be dominated by the elite sections of the Indian society, particularly those from the urban background. Significantly, some of the economic, social and occupational values/attitudes of students are found to be associated with their socio-economic status. The policy implications of these findings are discussed at two levels – namely, the admission procedures and the teaching process.

Introduction

Based on primary data collected through an empirical study, this paper examines the socio-economic background of MBA students from one of the institutes of management located in the National Capital Region (NCR). These findings are compared with those of an earlier study conducted in 1973-74. Over the years there has been a massive increase in the number of management schools to cope with the ever-rising demand for management education. Much of this expansion has taken place in the private sector. Despite high cost of this education, there is stiff competition to get admitted into a good management school as demand in this field continues to exceed supply. Students from a wide variety of academic backgrounds are attracted by the MBA course as it enables them to command premium compensation and benefits from business and industry.

The second objective of this paper is to ascertain the values and attitudes of managers in-the-making. It also tries to find out whether these values and attitudes are influenced by their socio-economic background. Such values are acquired early in life and are deeply embedded in one's personality. It is important to study the values of students as these are likely to influence their overt behaviour, both at the organizational and societal levels. Data for the study were collected from a random sample of 70 students from an upcoming private school of management in NCR (not the one where the author is working). The sample consists of both first and second year students of the two-year postgraduate programme in management and constitutes roughly one-third of all students. Data were collected during December 2007 and January 2008 with the help of a

[#] International Management Institute, B-10/30, Qutab Institutional Area, New Delhi-110016, E-mail: baldevsharma@imi.edu, vchandra@imi.edu

specially-designed and "structured" questionnaire administered to the students individually.

Review of Literature

***Socio-Economic Status**:* Certain demographic factors (e.g., rural-urban background) and socio-economic status of the family are known to act either as a "gateway" or a "barrier" insofar as access to higher education is concerned. To ensure **inclusive** growth of higher education, it is necessary to widen the gateways and to reduce (if not remove) the barriers. That is why the state is sometimes required to adopt various constitutional, legal and/or administrative measures to ensure wider participation in higher education. Despite the significance of this subject, social scientists have surprisingly refrained from undertaking systematic research in this area.

The few studies that are addressed to this subject, have found that children of lower income and lower occupation families are under-represented in higher education in relation to their proportion in the total population (Chalam, 1986 & 2007; Salim, 1997). Sharma (1972, 1976 & 1977) has shown that candidates from higher income groups, particularly those from the urban areas, stood a much better chance of getting admitted to institutes of professional education than those from lower-income groups, particularly those from rural background.

In a more recent study, Salim (2003) found that wards of the poor, less-educated and lower-occupation parents are only marginally represented in professional education. Kumar (2003) attributes this trend to the high cost of professional courses, which exceeds the annual family income of the low-income groups. As such, the capacity to invest in education is largely determined by the socio-economic status of an individual's family (Loury, 1977; Bowman, 1981). Coleman's (1966) landmark study on "Equality of Educational Opportunity" in the United States has shown that socio economic status (SES) is a strong predictor of student achievement. He asserted that the influence of student background was greater than anything that goes on within schools.

A study in Israel has found that choice of institution and field of study for a bachelor's degree is based essentially on merit as also on socio-economic status (SES). According to Dar and Getz (2007), the students of higher ability opted for universities while those of lower ability applied to academic colleges. However, among students of higher ability, those from higher SES opted for prestigious professions (e.g., medicine and law as well as natural or social sciences), while those from lower SES chose economics, management, computer science, engineering and paramedical professions. On the whole, students who possessed financial resources and higher cultural capital were found to prefer more **theoretical** fields in a more extended course of study, while students from lower SES opted for more **practical** studies that would enable them a quicker entry to paying positions in the market.

The Department of Education of the Australian Government compiles data on regular basis relating to the socio-economic status (SES) of students based on their home address postal-code. After the universities criticized this measure of SES for its inaccuracy given

the wide variation possible in socio-economic circumstances in any particular postal-code area, in 1998 the Department commissioned a review of the current methodology, which found that correlations with SES determined by the postal-code were low across a range of individual level measures. This investigation recommended that measures for SES be developed based on the educational levels and occupations of students' parents, arguing that this would be more accurate indicator of SES, both for school leavers and mature adult students.

Values and Attitudes: Sociological and anthropological theories and research suggest that an understanding of human behaviour requires, among other things, knowledge of a person's values. Values, like beliefs and attitudes, can be viewed as a person's social capital, which to a large extent is inherited from his family through the process of socialization. These inherited values shape a person's world-view and the way he interprets the environment (Dhesi, 2001).

Rokeach (1973) defined a value as "an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence." Building further on Rokeach's definition, Schwartz (1992) defined values as desirable trans-situational goals, which vary in importance and serve as guiding principles in the life of a person or other social entity. Since values are enduring beliefs, they are very difficult to change. Value systems tend to form early in life and are very stable. Schwartz and Bilsky (1987) summarized various perspectives and concluded that most of the definitions have some similar themes. According to them, **values** are:

a) concepts or beliefs,
b) about desirable end-states or behaviours,
c) that transcend specific situations,
d) guide selection or evaluation of behaviour and events, and
e) are ordered by relative importance.

Family background conditions both the realities an individual may anticipate and his perception of the benefits of higher education (Murnae et al., 1981; Parcel & Menaghan, 1994). For example, Sewell & Hauser (1975) found that high aspirations of parents are associated with high aspirations of children. Parental values and behaviour patterns influence the socialization process by child's observation, imitation and the parent-child interaction (Parcel & Menaghan, 1994).

In a major study of American college students, Rosenberg (1957) found that the students opting for different occupations also differed in their values. For example, the value called "self-expression" was emphasized largely by students opting for careers in journalism, art, science, engineering and public relations, whereas "people-orientation" value was emphasized largely by those planning to enter social work, medicine and teaching. On the other hand, most of the students opting for business or law emphasized the "extrinsic rewards" value.

Pestonjee et al (1970) found that people with similar value structure tended to prefer similar occupations. A survey of high school students in Greece revealed that the

students' choice of educational disciplines as well as occupational preferences were influenced by the educational level of their parents and their family income (Dimaki et al, 2005). Likewise, Kohn & Schooler (1969) found social class to be consistently related to people's values, not only for the adults themselves but also for their children.

In his recently conducted longitudinal studies of student values, Krishnan (2003 & 2008) investigated the role of management education in changing the value systems of MBA students. He has found that **self-oriented values** (e.g., comfortable life, pleasure, social power, daringness, capability and preserving one's public image) became more important and **other-oriented values** (e.g., being helpful & polite, sense of belonging, family security, loyalty, honouring parents & elders) became less important at the end of the two-year residential MBA programme. The author concludes from this evidence that management education appears to make people more selfish and less concerned about others. This outcome is in sharp contrast with the objective of management education, which is to take students to a higher plane by transforming their value systems and lifting them to their better selves (Burns, 1978).

The Variables

Socio-Economic Status: *A* composite index of socio-economic status (SES) was developed by adding the scores of each respondent on the following 7 characteristics of his family background:

S.No.	*Variables*	*Score*
1.	**Rural Urban Background**	
	• Village/Town	1
	• City	2
	• Metro	3
2.	**Type of School Attended**	
	• Government/ Municipal	1
	• Private/Public	2
3.	**Medium of School Education**	
	• Hindi/Vernacular	1
	• English	2
4.	**Father's Education**	
	• Upto High School	1
	• Graduate	2
	• Post Graduate	3

S.No.	*Variables*	*Score*
5.	**Father's Education**	
	• Upto High School	1
	• Graduate	2
	• Post Graduate	3
6.	**Father's Occupation**	
	• Agriculture/Blue Cooler/Clerical/ Supervisory	1
	• Officer/Manager/ Semi-Professional	2
	• Professional/ Businessman	3
7.	**Annual Family Income**	
	• Upto Rs. 3 Lakh	1
	• Rs. 3 lakh – Rs. 6 Lakh	2
	• Above Rs. 6 Lakh	3

The total SES score of a respondent varied between 7 and 19. To make sure that each of the 7 background factors was indeed an integral part of the composite SES index, item-to-total tests of association were carried out by using a non-parametric statistic (chisquare) as the 7 background factors represent either nominal or ordinal scale of

measurement. As shown in Table 1, each component of SES is positively and significantly associated with the composite index of SES.

TABLE 1

Association between Socio-Economic Status (SES) and the Components of SES

Component of SES	*Socio-Economic Status (SES)*						*Total*		*Test of Association**
	Low		*Medium*		*High*				
	N	*%*	*N*	*%*	*N*	*%*	*N*	*%*	
1.Rural-Urban Background									$X^2 = 17.228$ d.f.= 4
Village/Town	11	50.00	4	20.00	1	4.00	16	23.88	P < .01
City	8	36.36	11	55.00	11	44.00	30	44.78	C= .45
Metro	3	13.64	5	25.00	13	52.00	21	31.34	
Total	22	100.00	20	100.00	25	100.00	67	100.00	
2. Type of School									$X^2 = 26.231$
Govt. School	15	68.18	3	15.00	1	4.00	19	28.36	d.f.= 2
Private School	7	31.82	17	85.00	24	96.00	48	71.64	P < .001
									C= .53
Total	22	100.00	20	100.00	25	100.00	67	100.00	
3. Medium of Education									$X^2 = 23.715$
Hindi/Vernacular	13	59.09	3	15.00	–	–	16	23.88	d.f.= 2
English	9	40.91	17	85.00	25	100.00	51	76.12	P < .001
									C= .51
Total	22	100.00	20	100.00	25	100.00	67	100.00	
4. Father's Education									$X^2 = 40.180$
Upto High School	11	50.00	1	5.00	–	–	12	17.91	d.f.= 4
Graduate	11	50.00	12	60.00	6	24.00	29	43.28	P < .001
Postgraduate	–	–	7	35.00	19	76.00	26	38.81	C= .61
Total	22	100.00	20	100.00	25	100.00	67	100.00	
5. Mother's Education									$X^2 = 33.497$
Upto High School	11	50.00	1	5.00	1	4.00	13	19.40	d.f.= 4
Graduate	8	36.36	13	65.00	5	20.00	26	38.81	P < .001
Postgraduate	3	13.64	6	30.00	19	76.00	28	41.79	C= .58
Total	22	100.00	20	100.00	25	100.00	67	100.00	
6. Father's Occupation									
Agriculturist/Blue Collar/ Clerical/Supervisory	8	38.10	1	5.00	1	4.00	10	15.15	$X^2 = 14.217$ d.f.= 4
Semi-Professional/ Officer/Manager	9	42.86	10	50.00	11	44.00	30	45.46	P < .01 C= .42
Professional/ Businessman	4	19.04	9	45.00	13	52.00	26	39.39	
Total	21	100.00	20	100.00	25	100.00	66	100.00	
7. Annual Family Income									$X^2 = 15.749$
Upto Rs. 3 lakh	14	63.64	9	45.00	4	16.00	27	40.30	d.f.= 4
Rs.3-6 lakh	8	36.36	8	40.00	12	48.00	28	41.79	P < .01
Above Rs 6 lakh	–	–	3	15.00	9	36.00	12	17.91	C= .44
Total	22	100.00	20	100.00	25	100.00	67	100.00	

* Note: The notation "C" in the last column stands for Contingency Coefficient.

Values & Attitudes

A 42-item questionnaire was used to ascertain the values and attitudes of students. These items sought to measure a variety of student values, including social, economic and occupational values. In addition, a number of items were included in the questionnaire to tap the perceptions of students about the ongoing process of globalization to find out whether they considered the **consequences** of globalization to be positive or negative for the country.

For an accurate and more comprehensive assessment of student values and attitudes, it was decided to use multiple items (instead of a single item) to assess each value/attitude. In other words, it was our intention to develop multi-item scales for the measurement of values and attitudes. Multiple of techniques were employed to identify combinations of items that met the following conditions to constitute a scale:

a) Each item in a scale should be positively correlated with all other items in that scale.
b) The item-to-total correlations within a scale should be higher than those with other scales.
c) The reliability coefficient (alpha) for each scale should be as high as possible, but not less than 0.50.
d) Last but most important, all items in a scale should have apparent face validity.

Analysis of 42 x 42 inter-correlation matrix, factor analysis, and cluster analysis together helped identify the following 8 scales, which met the conditions described above (A list of items included in each scale is given in the appendix):

1)	**Faith in People**	**Occupational Value**	**4**	**.69**
2)	**Self-Centred**	**Occupational Value**	**4**	**.61**
3)	**Machiavellian**	**Occupational Value**	**3**	**.51**
4)	**Liberal**	**Economic Value**	**4**	**.70**
5)	**Modern**	**Social Value**	**5**	**.74**
6)	**Progressive**	**Social Value**	**3**	**.51**
7)	**Negative Perception of Globalization**	**Attitude**	**4**	**.70**
8)	**Positive Perception of Globalization**	**Attitude**	**5**	**.79**

Out of the 8 measures of values/attitudes mentioned above, as many as five have reliability coefficients ranging between 0.7 and 0.8. All inter-item correlations for those five scales were found to be positive and statistically significant. Out of the remaining three measures, alpha value for one (self-centred) is 0.6, while for the other two (machiavellian & progressive) it is 0.5. The relatively lower alpha value of these three scales can be attributed to the fact that one of the inter-item correlations in each of these three scales, though positive, was found to be satistically non-significant. Another reason

could be that there are only 3 items in each of the measures of two scales having an alpha value of 0.5 (machiavellian and progressive). But the item-to-total correlations shown in Table 2 meet the prescribed requirement for each of the 8 measures of values/attitudes.

TABLE 2

Item-to-Total Correlation Coefficients between Each Item Score and the Total Score of the Corresponding Scale

Item	*Faith in People*	*Self-Centred*	*Machi-avellian*	*Liberal*	*Modern*	*Progre-ssive*	*Globali-zation (-ve)*	*Globali-zation (+ve)*
13		.084	-.063	.050	-.084	.145	-.025	-.108
16		.315	-.148	-.117	-.087	-.034	-.123	-.150
21		.135	-.002	.011	-.058	.060	-.001	.101
36		.171	.200	-.024	-.105	.005	.008	.014
18	.091		.199	.187	.262	.207	.043	.192
23	.255		.179	.338	.303	.371	.282	.132
31	-.024		,231	.176	.165	.079	.193	.030
33	.348			.160	.134	.108	.040	-.093
11	-.078	.194		.131	.392	.120	.171	.331
26	-.051	.250		.431	.277	.488	.351	.398
28	.123	.206		.162	.208	.077	.102	.212
7	.044	.080		.734	.285	.268	.369	.545
17	-.089	.245	.170		.367	.264	.397	.510
22	.082	.375	.329		.354	.426	.272	.386
27	-.130	.218	.252		.261	.250	.522	.414
4	-.169	.207	.335		.740	.152	.332	.354
9	-.175	.122	.268	.315		.343	.244	.439
24	.000	.270	-.194	.220		.003	.217	.336
34	-.024	.307	.377	.213		.294	.164	.342
40	-.012	.244	.298	.464		.445	.529	.551
29	-.147	.233	.114	.286	.290		.156	.316
38	-.023	.007	.202	.388	.310		.331	.372
42	.284	.352	.338	.219	.177		.199	.123
10	-.318	-.137	.040	.300	.296		.638	.336
20	.024	.256	.367	.325	.259	.273		.355
30	.140	.299	.241	.602	.454	.410		.642
41	.024	.186	.210	.296	.239	.246		.411
5	-.150	-.023	.292	.465	.327	.108		.744
15	-.017	.202	.241	.636	.566	.379	.539	
25	-.155	.108	.384	.528	.655	.346	.424	
35	.071	-.040	.326	.271	.321	.256	.357	
37	.088	.077	.401	.428	.276	.290	.408	

Note: With degree of freedom in this case being N-2=68, the correlation coefficient required to be significant is .235 ($P < .05$), and .306 ($P < .01$).

Findings

Table 3 presents the mean score and standard deviation for each of the 9 variables selected for this study. The mean score of SES (73.68%) shows that most of the students come from the **upper** socio-economic status families. The following information lifted from Table 1 will provide further support to this conclusion:

(1)	Persons from cities or metros	....	76.12%
(2)	Those who studied at private schools	....	71.64%
(3)	Those with English as medium of education	.....	76.12%
(4)	Father being a graduate or postgraduate	....	82.09%
(5)	Mother being a graduate or postgraduate	.....	80.60%
(6)	Father being semi-professional or professional/businessman	.....	84.85%
(7)	Annual family income in excess of Rs. 3 lakh	....	59.70%

TABLE 3

Mean Score and Standard Deviation for Each Selected Variable

Sl. No.	Variable	Score Range	Mean Score	Standard Deviation	% Score*
1.	Socio-Economic Status	7 –19	14.00	2.69	73.68%
2.	Faith in People	0 –12	5.80	2.36	48.33%
3.	Self-Centred	0 –12	7.20	2.15	60.00%
4.	Machiavellian	0 – 9	5.63	1.81	62.56%
5.	Liberal	0 –12	8.04	2.50	67.00%
6.	Modern	0 –15	9.93	3.27	66.20%
7.	Progressive	0 – 9	6.86	1.63	76.22%
8.	Negative Perception of Globalization	0 –12	7.73	2.50	64.42%
9.	Positive Perception of Globalization	0 –15	10.74	3.24	71.60%

* Mean score of each variable was converted into a percentage by using the following where formula LP and HP stand for the lowest and highest point of each score range:

$$\bar{X} \text{ Score as } \% = \frac{\bar{X} - LP}{HP - LP} \times 100$$

***Socio-Economic Status**: A* similar study of students of management was carried out by the first author in 1973-`74 in which the same set of questions were included to ascertain the SES of the respondents. It should be of interest to find out as to how the findings of the present study compare with those of the previous study. Has the family background profile of students of management remained more or less the same as it was some 35

years ago? Or, has the intervening period of more than three decades contributed to any change in the situation? Table 4 presents the comparable data from the two studies.

TABLE 4
Comparable Data of 1973-74 and 2008

No Difference between Then & Now			*Significant Difference*		
1. Rural-Urban Background			*4. Type of School Attended*		
	1973-`74	2008		1973-`74	2008
Village or Town	46 (19.4%)	16 (23.9%)	Government	25 (10.7%)	19 (28.4%)
City	191 (80.6%)	51 (76.1%)	Private	209 (89.3%)	48 (71.6%)
Total	**237 (100%)**	**67 (100%)**	**Total**	**234 (100%)**	**67 (100%)**
	$X^2 = 0.62$; df=1; n.s.			$X^2 = 13.01$; df=1; P< .001	
2. Medium of School Education			*5. Mother's Education*		
	1973-`74	2008		1973-`74	2008
Vernacular	70 (29.8%)	16 (23.9%)	Upto High School	170 (73.0%)	13 (19.4%)
English	165 (70.2%)	51 (76.1%)	Graduate or above	63 (27.0%)	54 (80.6%)
Total	**235 (100%)**	**67 (100%)**	**Total**	**233 (100%)**	**67 (100%)**
	$X^2 = 0.90$; df=1; n.s.			$X^2 = 62.90$; df=1; P< .001	
3. Father's Education			*6. Father's Occupation*		
	1973-`74	2008		1973-`74	2008
Upto High School	60 (26.0%)	12 (17.9%)	Agri/Manual/ Clerical	13 (5.8%)	10 (15.1%)
Graduate or above	171 (74.0%)	55 (82.1%)	Managerial/ Semi-Prof.	39 (17.6%)	30 (45.5%)
Total	**231 (100%)**	**67 (100%)**	Professional/ Businessman	170 (76.6%)	26 (39.4%)
	$X^2 = 1.85$; df=1; n.s			$X^2 = 32.30$; df=2; P<.001	

Out of the six background factors presented in Table 4, there are three for which the findings are more or less identical. These are (a) rural-urban background; (b) medium of school education; and (c) father's education. In other words, people from **cities** (instead of villages or towns) and those with medium of school education as **English** (instead of vernacular) continue to dominate the field of business management. Also, there is no significant change during the last 35 years in terms of **father's education**, a vast majority of whom continue to be graduates and postgraduates.

The other three background factors for which statistically significant differences are observed between the two studies are: (a) type of school attended; (b) mother's education; and (c) father's occupation. Even though **private** school background continues to dominate management education in India, this dominance is getting reduced to some extent. In 1973-74, the students from **private** schools represented 89.3% of all students whereas the corresponding representation is currently 71.6%. On the other hand, the proportion of students with **government** school background has gone up from 10.7% to 28.4%.

The most significant difference is observed in terms of **mother's education**. The proportion of students whose mothers were graduates or postgraduates has gone up from 27.0% in 1973-`74 to 80.6% in 2008. Another significant difference is found in terms of father's **occupation**. In the previous study, a vast majority of students (76.6%) were found to be the sons of professionals or businessmen. The corresponding figure in the present study is as low as 39.4%. On the other hand, the proportion of students whose fathers belong to lower or middle ranking occupations has risen from mere 23.4% to 60.6% which is quite high.

Values and Attitudes: Turning to the data on values and attitudes of students, the mean scores, when arranged in a descending order, present the following picture:

	Values		Scores
(1)	**Progressive (social value)**	....	**76.22%**
(2)	**Liberal (economic value)**	.....	**67.00%**
(3)	**Modern (social value)**	.....	**66.20%**
(4)	**Machiavellian (occupational value)**	.....	**62.56%**
(5)	**Self-centred (occupational value)**	.....	**60.00%**
(6)	**Faith-in People (occupational value)**	.....	**48.33%**
	Attitudes		
(7)	**Positive Perception of Globalization**	.....	**71.60%**
(8)	**Negative Perception of Globalization**	.....	**64.42%**

The profile of students' values suggests that they are predominantly "progressive", "liberal" and "modern". At the same time, these students are highly "self-centered" as well as "machiavellian". Another significant finding of this study is that the students of management reflect a very low level of "faith in people". Finally, in the eyes of most of these students, the process of globalization in India is a mixed blessing as it is perceived to have not only **positive** but also some **negative** consequences for the country.

SES and Values: After this brief account of the descriptive findings of the study, we now examine the relationship between SES and selected values and attitudes of students. The correlation between SES and each of the 8 measures of values/attitudes is given in Table 5.

In five out of the eight selected measures of values/attitudes, SES of the students is found to be significantly correlated. In each of these cases, the association is positive,

which means that the higher the socio-economic status of a person the greater the probability that he is not only more **liberal, modern and progressive** but is also more of a **machiavellian**. Also, the higher the SES, the greater the probability that a person will perceive positive consequences of globalization. No significant relationship was found between SES and the remaining three variables (faith in people, self-centred and negative perception of globalization).

TABLE 5

Association between Socio-Economic Status and Selected Values and Attitudes of Students

Sl. No.	*Value/Attitude*	*Correlation with SES*	*t-value (df =65)*	*Level of Significance*
1.	Faith in People	– .040	0.323	n.s.
2.	Self-Centred	.115	0.933	n.s.
3.	Machiavellian	.243	2.020	P < .05
4.	Liberal	.283	2.379	P < .02
5.	Modern	.312	2.648	P < .01
6.	Progressive	.368	3.191	P < .002
7.	Negative Perception of Globalization	.172	1.408	n.s.
8.	Positive Perception of Globalization	.247	2.055	P < .05

The five positive correlations found between SES and values/attitudes, though statistically significant, are not very high. This could be partly due to the sample being rather small (N=70), and also because of the homogeneous nature of the sample insofar as it consists of students belonging to just one profession (management) and that too from a single institute. Further studies on this subject need to take up larger and more heterogeneous samples from different regions of the country to find out whether the values and attitudes of a person are indeed influenced by his SES.

Conclusion

One of the significant findings of this study relates to the family background of managers in-the-making. As already shown, a vast majority of the management students covered by this study belong to the higher SES families. A similar study of management students was carried out over three decades ago. A comparison of the findings of the present study with those of the earlier study shows that students from higher SES families continue to dominate management education in India. This should be a matter of concern as the prevailing system continues to be iniquitous and unjust even after 60 years of independence.

Institutions of higher education in the private sector have so far escaped from the reservation policies of the government. But political pressures are building up in the country to bring all institutions of higher education under the purview of the reservation

policies. Personally speaking, we are not in favour of this approach to achieve inclusive growth as it results in dilution of quality. But we are also deeply concerned about the social order that denies equal opportunities to all its citizens.

Caught between the horns of this dilemma, we suggest a middle path to deal with this problem. The institutes of management in the private sector need to be proactive and take affirmative action. As a very minimum, they can modify their admission procedures by eliminating the elements that are blatantly biased in favour of the urban rich and against the rural poor.

A part from the question of equity, some of the observed values of the students of management should also be a cause for concern. That the students subscribe to **liberal** economic values and to **modern** and **progressive** social values is quite understandable, given the fact that most of them come from urban background, have studied in private schools through the English medium, and whose parents are college graduates. But the occupational values of these students reflect a low degree of **faith-in-people** and a fairly high degree of **self-centredness** as well as **machiavellianism**. Therefore, the work-related behaviour of the future managers is likely to reflect these values, which should be a cause for real concern. As shown in Table 5, some of the these values are positively associated with socio-economic background of students. The suggested steps for providing equal opportunity to candidates from different strata will not only meet the need for social justice but will also produce a student body whose values are more balanced than what we find today.

More than 90 percent of the students in the present study preferred to take up jobs in private sector companies. This is also confirmed by the trends observed at the time of recruitment of MBAs at various management institutes. There is no reliable evidence available about the kind of values that characterize the culture of Indian organizations in the private sector. But the young men and women who aspire to join the managerial cadre in such organizations must be having some hazy picture of the culture within which they have to operate after completing their studies.

Is it possible that the attitudes and values found among the management students are the ones which, in their perception, are congruent with the values of the private sector organizations? If so, this may be seen as a case of "self-selection" wherein most of the students opting for a career in management already possess the values and attitudes that would enable them to adjust like a square peg in a square hole. It is also possible that the said perceptions of students about organizational culture may tally with those of the teachers at management institutes. If so, apart from self-selection already mentioned, the selection policies and procedures of the management institutes may also account for the acceptance of candidates having certain "desired" values and rejection of others at the time of admission.

In the absence of empirical evidence about the organizational culture prevailing in private sector organizations, the foregoing observations may sound like conjectures or hypotheses. But if there is a grain of truth in these conjectures, it would follow that the so-called "desired" values and attitudes of students would be further reinforced in the

course of the socialization process in the form of MBA education. The longitudinal study by Krishnan (2008) provides empirical evidence to suggest that management education indeed makes people more selfish and less concerned about others than they were at the start of their MBA programme.

Low faith and trust in people and high degree of self-centredness, coupled with manipulative and exploitative tendencies, make for a heady mixture of values that remind us of social Darwinism. If, as in the physical world, there is constant struggle for survival also in the world of business and industry wherein only the fit survive, then where is the need for a code of conduct, business ethics or corporate social responsibility?

The results of this study might be discomforting for both academia as well as industry. They need to sit together to trace the origins of this problem and try to address it from both ends. Business schools on their part should revisit their admission policies and procedures for a reality check. Based on this they should re-formulate their pedagogy and curriculum to nourish and nurture an attitudinal framework and value system that is more appropriate for a balanced and equitable socio-economic growth. The effort should not be to legitimize current reality but, as Burns (1978) has put it, to take students to a higher plane by transforming their value systems and lifting them to their better selves. The industry should revisit their HR policies and practices to engineer and reinforce managerial culture that is in tandem with the goals of multiple stakeholders rather than just the shareholders.

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Appendix

Details of Variables Used in the Study

1. Socio-Economic Status

1) Rural-Urban Background
2) Type of High School
3) Medium of Education
4) Father's Education
5) Mother's Education
6) Father's Occupation
7) Annual Family Income

2. Faith in People (alpha = .69)

1) Most people are basically kind hearted.
2) Most people can be trusted.
3) Most people are inclined to help others more than looking out for themselves.
4) Human nature is fundamentally cooperative.

3. Self-Centred (alpha = .61)

1) It is human nature never to do anything without an eye to one's own advantage.
2) The best way to handle people is to tell them what they want to hear.
3) No one is going to care much what happens to you when you are in real trouble.
4) In order to achieve one's career and life goals, a person must be willing to do whatever work is assigned to him even if it is not to his liking.

4. Machiavellian (alpha = .51)

1) In order to be successful in life, you have to be able to make people do what you want.
2) If you are not careful, people will take advantage of you.
3) In order to get ahead in life today, one is often required to do some things that are not quite right.

5. Liberal (alpha = .70)

1) An ideal government must guarantee a minimum wage for everyone.
2) An ideal government must ensure free medical care for those who cannot afford it.
3) An ideal government must provide free education for everyone below 16.
4) Taxing the well-to-do sections is necessary to narrow the "gap" between the rich and poor.

6. Modern (alpha = .74)

1) An ideal government must guarantee to everyone unrestricted freedom to practice one's own religion.
2) Birth control should be encouraged by putting the necessary information at the disposal of people.
3) People who spread communalism must be severely dealt with.

4) Inter-caste marriages will reduce some of the prejudices and social tensions in the country.
5) Child marriage is a blot on a civilized society.

7. Progressive (alpha = .51)

1) Widow remarriage should be encouraged.
2) Divorce by mutual consent should be permitted provided the interests of children are safeguarded.
3) Dowry system has been responsible for the ruin of many families in India.

8. Negative Perception of Globalization (alpha = .70)

1) The rapid adoption of foreign ideas, practices and life-styles is gradually eroding India's cultural values and social norms.
2) Globalization has widened the disparity of income between the urban elite and the urban as well as rural poor.
3) Competition from MNCs is adversely affecting the small and medium enterprises as well as the traditional sectors of the Indian economy.
4) Globalization is adversely affecting work-life balance due to long, inconvenient and stressful working hours.

9. Positive Perception of Globalization (alpha = .79)

1) Globalization has contributed to better customer care and benefits to the consumer.
2) Globalization has resulted in substantial growth of the Indian economy, especially in the service sector (e.g., IT, telecom, credit industry, etc.).
3) Competition from multinational companies has made Indian companies to modernize and innovate in order to improve the quality of their products and services.
4) Because of globalization, there is substantial increase in employment opportunities for the urban middle classes.
5) India today is truly a land of opportunity for all of its citizens.

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Poverty and Efficiency in the Primary Education System of India

An Analysis based on DISE Data

Atanu Sengupta*
Naibedya Prasun Pal*

Abstract

Primary education is the real backbone of any economy. Most of the studies give more emphasis to the final output (such as literacy, enrolment etc) rather than the delivery of the entire primary education system. In this paper, we study a region-wise panoramic view of the primary education system of India, with its frailties and inequalities that require immediate policy action using DISE Flash Statistics 2005-06. Our data cover the period 2003-2006. We have used a number of indicators to capture the multi-dimensional aspects of primary education system in India. Our analysis reveals certain disturbing features, such as that, the system is seriously jolted by the lack of adequate resources, and that the discrepancies with regard to social and policy indicators are more or less uniformly distributed. Resource-use efficiency (as measured by DEA) and standard efficiency indicators indicate wide inter-zonal differences. The results from these two approaches are conflicting and contradictory. DEA scores show better correlation with the other variables considered by us. Poverty infringes upon efficiency in a negative way. Social indicators are also positively related with efficiency improvement. Among the zones, North zone shows the worst while the East zone as significantly high in the picture. Policy indicator fails to have any significant effect on the level of efficiency.

Introduction

Sixty years after independence, the slow progress of primary education in India is a matter of deep concern. Education is of value in itself (intrinsic value) and rated for what it can do (instrumental value). There are a number of studies that deal with the role of education in enhancing human development and welfare. However, most of the studies place emphasis on the final output (such as literacy, enrolment etc.) rather than on the

* Economics Department, The University of Burdwan, Rajbati, Bardhaman-713104, *West Bengal* e-mail:sengupta_atanu@yahoo.com and naibedyapal@yahoo.in

delivery of the entire system. It is well understood that the primary education is the real backbone of any economy. As noted by Sen (2006), Japan had emphasized on education as the basic building block of economic development, at the onset of Meiji restoration in the mid-nineteenth century. In this regard, he notes that the recent South Asian miracle draws its inspiration from Japan. In all these, countries the delivery system in primary education has been emphasized even when the country was otherwise poor.

The Indian constitution enshrines compulsory primary education to all her citizen in the directive principle of state policy. However, inadequate attention is paid to the delivery mechanism of the primary education. This remains an Achilles' heel in the development process in India, and in fact this inadequacy has added to injustice and inequality while stunting the prospect of development.

Mere assurance of physical access to education cannot guarantee quality education (Ramchandran 2004, Sengupta, Sengupta and Ghosh 2004). Although several attempts have been made in the past to assess the accessibility, enrolment and learners' achievement, little information is available on the internal efficiency of primary schools in the country. Very few studies have attempted to look into all the indicators of internal efficiency of primary education system from a comparative perspective, covering all states and UTs. Recently, Arun C. Mehta (Mehta 2005) constructed the internal efficiency indicator of primary education system in his paper 'Student Flow at Primary Level An Analysis Based on DISE data'. The indicator emphasized on the completion of at least two years in the primary school by a child. However this indicator is inadequate because its inability to capture social and gender issues.

In this paper, our aim is to provide a region-wise panoramic view of the primary education system in India, with its frailties and inequalities that require immediate policy action. The all India DISE data for three consecutive years have facilitated this type of analysis. While Section 1 cover introduction, Section 2 discusses the data and methodology used. The next four sections discuss these aspects of the delivery system in primary education, viz., the lack of resources, policy indicators, social stigma and efficiency of the system. In section 7, we try to find out some relation between these four aspects and the effect they have on the broader social phenomenon. Section 8 presents the conclusions of the study.

Data and Methodology

Data Description and Variables Used

In this study we have used data from secondary sources. It has been collected from the "DISE Flash Statistics: Elementary Education in India: Progress towards UEE (Universal Elementary Education) for the Year 2005-06". Development of a sound information system is critical for a school monitoring and implementation of any programme, particularly in social sectors. Therefore, design of a school information system was accorded priority from the very beginning of the District Primary Education Programme (DPEP) in 1994. As a result of which National University of Educational Planning and

Administration (NUEPA) developed the District Information System for Education (DISE). The DISE data gives various state-specific key indicators (pupil-teacher ratio, student-classroom ratio, GER, NER, school with boy's toilet, school with girl's toilet, proportion of female teachers, drop-out rate, retention rate etc) for good quality primary education.

Based on the DISE data, the Flash Report attempts to develop an Educational Development Index (EDI) in deciding future course of investment on elementary education in the country. The indicators that have been used in computing Educational Development Index (EDI) can be divided into the following three parts:

- Schools and School-Related Indicators (Infrastructure)
- Teachers and Teacher-Related Indicators./ (Teachers)
- Enrolment and Enrolment-Related Indicators (Enrolment)
- Performance Indicators (Performance)

In other words, the components/ identified by MHRD (Ministry of Human Resource Development), used in DISE 2005-06: Flash Statistics, are Infrastructure, Enrolment, Teachers and Performance. But these indicators cannot be properly analyzed in isolation of an overall index.

The four categories that made up EDI are essentially of two different dimensions. Using the logic of economics of education, first two indicators (Infrastructure and Teachers) are input indicators. The last tow categories (Enrolment and Performance) encompass output indicators. In the terminology of economics, inputs and outputs are different categories that cannot be aggregated or even compared.

Thus the Flash Report constructed Educational Development Index (EDI) as a comprehensive index covering almost all aspects of primary education and its delivery system. However, it is this comprehensiveness that is its main drawback. The construction of EDI contains a logical fallacy, the fallacy of invalid aggregation.

This means that inputs and outputs are aggregated.

Hence, the EDI looses much of its relevance in the analysis of the delivery system in primary education. In this paper, we have attempted to provide a more satisfactory indicator than EDI.

Poverty in Educational Institutions

From the economic point of view two issues are important (i) whether the input supplied meets the minimum requirement that makes production feasible, and (ii) the efficiency of use in inputs.

The first issue is closely related to the concept of poverty used in development economics. By **poverty we mean here relative deprivation from an accepted minimum level**. However, the definition of poverty in the education will obviously be different from the definition of income or economic poverty. The idea may be close to the concept of Human Poverty as developed by Anand and Sen (1997). In this definition Anand and Sen argued that Human Poverty Index (HPI) is an essentially

multidimensional poverty index. HPI tries to capture deprivation in three basic dimensions of human welfare: (health, education and income. Since it is a multidimensional concept, they are to be weighted and aggregated in order to generate unique index. There main argument is that "while these three components of human poverty are all important, it is not unreasonable to assume, given their dissimilarity, that the relative impact of deprivation of each would increase as the level of deprivation becomes sharper. For example, as we consider higher and higher proportions of people who may perish before the age of 40, this deprivation will become more and more intense per unit, compared to other deprivations." Anand and Sen (1995) postulated a similar argument to derive the Gender Development Index (GDI). A simple way to generate this requirement is the following formula suggested by Anand and Sen (1997):

$$P(\alpha) = \left\{ \frac{\sum w_i P_i}{\sum P_i} \right\}^{\frac{1}{\alpha}} \qquad (1)$$

where 'i' refers the number of dimensions considered for constructing P while "P_i"s are the poverty associated with the i^{th} dimension and "w_i" s are their weights while 'α' is a pre-specified parameter. In the case of equal weights the specification of w_i becomes unnecessary. However, segregating the data into various subgroups with equal intra - group weights generates unequal inter-group weights.

Anand and Sen (1995, 1997) prove that if $\alpha>1$ then the above criterion is specified by $P(\alpha)$. We use the same formula in our exercise for calculating poverty. In our exercise we had taken $w_i=w_j \ \forall i, j \ with \ i \neq j$. Following the suggestion of Anand and Sen (1997), we have taken $\alpha=1/3$.

Similarly, poverty in primary education is multidimensional. For example, a school without classroom is obviously suffering from some major deprivation, the access to minimum requirement of useful learning. We have estimated the proportion of such school as a proportion of total schools. In a way, this can be treated akin to the concept of headcount poverty in development economics. Similarly, we are defining poverty in other aspect also.

We have classified these poverty indicators on the following lines: -

- Core poverty indicators (Basic or essential deprivation)
- Input poverty indicators (Deprivation in the supply and quality of inputs)
- Facility poverty indicators (Deprivation in some basic facilities such as playground, toilets, drinking water etc.)

Poverty under each category is measured as an (un-weighted) average deprivation under different heads constituting the category specified. Having derived poverty in three dimensions, we now calculate the Grand Poverty using the Anand and Sen formula (equation (1).

Efficiency in Educational Institutions

The second issue is related to the efficiency. However, since education is a public good we cannot merely define it in terms of narrow economic efficiency. While it is true that wastage of resource is always harmful to welfare, but rationalization of resource used cannot be allowed at the cost of neglecting social dimension of the education system. Hence, we have considered three additional indicators: -

- Policy indicators (Pattern of government funding to schools)
- Efficiency indicators (Performance parameters)
- Social indicators [Issues relating to socially deprived sections (SC/ST/OBC) and gender issues].

These indices are constructed using UNDP formula, because it is unit-free and easily comparable. After indexing, we have constructed grand indices for the various categories. These grand indices are un-weighted means of individual indices. These indices are constructed for three consecutive years. We have divided total state/UT of India into five zones viz, North, South, East, North-East, and West.

However, the concept of economic efficiency cannot be totally neglected. Though economic efficiency has both a technical and cost component, we have to disregard the cost (or allocative component) due to the lack of reliable price data on various educational inputs. In the education sector, we have to deal with a multi-input, multi-output decision making units which attempt to maximize their outputs for given inputs and technology. This is output-oriented approach. Here we measure decision-making unit's technical efficiency, that is, how well a decision-making unit converts its inputs to outputs, based on its available technology. For measuring technical efficiency, we use data envelopment analysis (DEA) in which only factors under a decision-making unit's control are included as inputs in computing efficiency scores.

In this exercise, we use non-parametric DEA to estimate efficiency. Data Envelopment Analysis is a generalization of the non-parametric technique developed by the same Farrell (1957) to measure efficiency. Charnes, Cooper and Rhodes (1978, 1979, 1981) generalised the DEA framework to a multiple-output-multiple-input framework using the mathematical programming approach which is referred to as the Charnes, Cooper and Rhodes (CCR) model. The essential idea of the CCR model is to minimize the weighted input-output ratio subject to certain restrictions on the production technology. These are *constant returns to scale*, *strong disposabili"ty* and *convexity*. Convexity and returns to scale are obvious. Disposability generally refers "to the ability to stockpile or dispose of unwanted commodities" (Färe *et al.* 1994). The CCR model assumes that there is no cost in disposing of unwanted commodities. Mathematically, the original problem is:

$$\min_{a,b} \frac{a^T x_f}{b^T y_f}$$

subject to: $a^T x_{f'} / b^T y_{f'} \geq 1$,

$a, b \geq 0$

Which is transformed to a linear programming multiplier problem

$\min_{a,b} a^T x_f$

subject to: $a^T x_f \geq b^T y_f$,

$a, b \geq 0$

and the corresponding dual is:

$\max_{E_f \lambda} E_f$

subject to: $y_f \leq Y\lambda$,

$X\lambda \leq E_f x_f$,

$\lambda \geq 0$

The matrices x and y are assumed to satisfy Karlin conditions that require strictly positive row and column sums. In the DEA, we judge the performance of a firm on the basis of its ability to increase output, given the restrictions placed by the best-practised firms. From this point of view, E_f denotes the Debreu-Farrell output efficiency measure. The imposition of constraint on the intensity vector λ guarantees that *Ei* lies between zero and one. The above problem assumes constant returns to scale (CRS).

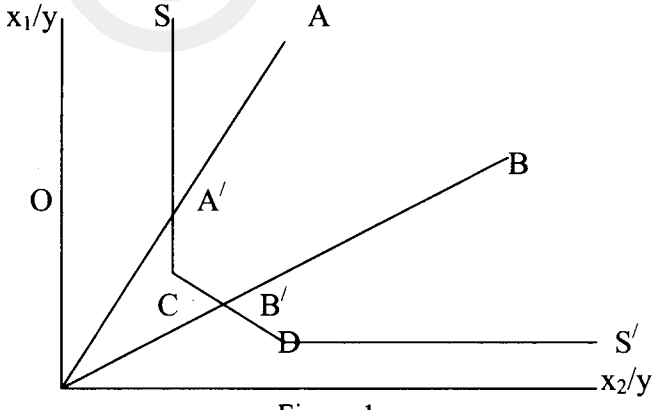

Figure 1

Consider a two -input one- output production function with CRS-y=f (x_1, x_2).

Hence the unit isoquant is $1=f(x_1/y, x_2/y)$ which is drawn in the above figure. SCDS$'$ is the frontier isoquant giving the most efficient combinations. Point A and B are inefficient while the corresponding points A', B' are efficient. Farrell technical efficiency for the input combination at A and B are OA'/OA and OB'/OB respectively. The constraints guarantee the shape of the efficient isoquant SCDS$'$.

In multi-output multi-input concept with non-price data, DEA seems to be most appropriate.

Poverty in Education

There are many ills plaguing educational scenario in India at primary level. In our analysis we have considered mainly indicators that are quantifiable in a definite form (such as proportion of schools without building, proportion distribution of schools having no pucca building etc).Specifically, we note the factors as follows:

(i) Core Poverty Indicators
- (a) Proportion of schools without building[1]
- (b) Proportion of schools having no pucca building
- (c) Proportion of schools without classrooms
- (d) Proportion of single classroom schools
- (e) Proportion of classrooms in "bad" condition

(ii) Input Poverty Indicators
- (a) Proportion of schools without teachers
- (b) Proportion of single-teacher schools[2]

(iii) Facility Poverty Indicators
- (a) Proportion of schools with no drinking water facility
- (b) Proportion of schools having no toilet
- (c) Proportion of schools without blackboard

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[1] The above components of core poverty reflect various layers of poverty. The first component reflects schools that can be named as destitute-they are deprived of the minimum level of a dignified existence. The other components are less severe than this. However, they together constitute a basic deprivation-existence of descent classrooms. It is highly questionable if teaching can every prosper in a situation where even classrooms are missing.

[2] In the standard terminology, a school having a high pupil-teacher ratio is considered to be low quality school. Here, however, we are not concerned with quality per se, but with conditions of extreme deprivation. Hence, our focus is on the least privileged schools and not on the worse quality schools as such. In effect, we are considering only the worst among the worst in the analysis of poverty. The distinction is akin to the distinction between inequality and poverty in the development literature (Sen, 2006).

India is a large country with wide variations in the socio-economic culture across its length and breadth. It is well known that education and its determinants are shaped by the socio-political culture of the community to which it is dissipated. A casual look at our country will reveal various differences among the Northern and Southern, Western and Eastern parts of the country. The North-East with its large tribal population has some unique features of its own. We wish to capture the effects through zonal dummies.
In order to facilitate our analysis, we have segregated the staes/UTs into five zones: North, South, East, North-East and West. Table 1 describes the zonal classification. After grand indexing we have calculated mean, standard deviation zone-wise. We compare and contrast the zone -wise indicators in the following sections.

TABLE 1

Zonal Classification of the States/UTs

Zone	*Name of the States/UTs*
North	CN, DL, HR, HP, J&K, PN, RJ, UP, UA,
South	KN, KR, AP, TN
East	AS, BR, WB, OR, JH,
North-East	ACP, MN, MGL, MZ, NL, TR, SK
West	MP. MHR, CG, GR

Note: CN: Chandigarh; DL: Delhi; HR: Haryana; HP: Himachal Pradesh; J&K: Jammu & Kashmir; PN: Punjab; RJ: Rajasthan; UP: Uttar Pradesh, UA: Uttarakhand: KN: Karnataka; KR: Kerala; AP: Andhra Pradesh; TN: Tamil Nadu; AS: Assam; BR: Bihar; WB: West Bengal; OR: Orissa; JH: Jharkhand; ACP: Arunachal Pradesh; MN: Manipur; MGL: Meghalaya; MZ: Mizoram; NL: Nagaland; TR: Tripura; SK: Sikkim; MP: Madhya Pradesh; MHR: Maharashtra; CG: Chhattisgarh; GR: Gujarat.

TABLE 2

Mean of the Core Poverty, Input Poverty and Facility Poverty Index

Zone	*Poverty*								
	Core Poverty			*Input poverty*			*Facility Poverty*		
	Year			*Year*			*Year*		
	2003-04	2004-05	2005-06	2003-04	2004-05	2005-06	2003-04	2004-05	2005-06
North	0.11	0.12	0.12	0.07	0.07	0.07	0.43	0.31	0.28
	(0.10)	(0.06)	(0.05)	(0.06)	(0.05)	(0.05)	(0.20)	(0.14)	(0.14)
South	0.16	0.15	0.13	0.05	0.04	0.04	0.34	0.29	0.26
	(0.03)	(0.03)	(0.01)	(0.03)	(0.03)	(0.03)	(0.12)	(0.08)	(0.08)
East	0.27	0.26	0.27	0.08	0.07	0.07	0.50	0.47	0.44
	(0.09)	(0.09)	(0.06)	(0.04)	(0.02)	(0.04)	(0.06)	(0.07)	(0.09)
North-East	0.21	0.26	0.30	0.03	0.05	0.06	0.58	0.54	0.46
	(0.15)	(0.12)	(0.05)	(0.02)	(0.07)	(0.09)	(0.13)	(0.12)	(0.09)
West	0.17	0.18	0.17	0.06	0.09	0.05	0.43	0.41	0.38
	(0.07)	(0.07)	(0.07)	(0.02)	(0.04)	(0.02)	(0.09)	(0.10)	(0.11)

Note: Figures in parentheses represent standard deviation

Certain patterns follow from our analysis. Comparing across different poverty indices, it is observed that facility poverty is highest followed by core poverty and input poverty. In other words, this indicates that inadequacy in infrastructural network is the most serious bottleneck of our educational system. Supply of teachers is less serious than this. Thus we may find teachers with no classrooms or blackboards to teach. Hence, their efficiency is seriously constrained by the availability of adequate support system.

Table 2 also shows mean of core poverty and input poverty has remained more or less stagnant during three consecutive years. Only facility poverty has shown some improvement. The bleak picture of our primary education system becomes very clear by these results.

Among the zones, the poverty parameters are most serious for the North-East zone. For others the picture is mixed.

The indices comprising these three indices and constructed following Anand-Sen formula, are given in Table 3. This Table shows that mean of grand poverty has continuously fallen during the three consecutive years. This is somewhat comfortable picture. However, again there exist inter-zonal differences. The fall is most pronounced in North zone, followed by South and North-East zones. The fall is comparatively small in East and West zones.

TABLE 3
Mean of Grand Poverty Index

Zone	2003-04	2004-05	2005-06
North	0.31	0.22	0.21
	(0.13)	(0.09)	(0.09)
South	0.25	0.21	0.19
	(0.08)	(0.05)	(0.05)
East	0.37	0.35	0.33
	(0.05)	(0.05)	(0.06)
North-East	0.41	0.39	0.35
	(0.08)	(0.07)	(0.06)
West	0.30	0.29	0.27
	(0.07)	(0.07)	(0.08)

Note: Figures in parentheses represent standard deviation:

Social Indicator

In our analysis, we have classified social indicator into three broad categories viz, vulnerable group, gender deprivation, and facility gap. Under vulnerable group, we include, proportional distribution of SC teachers to total teachers, proportion of ST teachers to total teachers, proportion SC enrolment, proportion ST enrolment, proportion of OBC enrolment at Primary Level. Under gender deprivation, we include, ratio of proportion of female teachers to proportion of male teachers, proportion of girl's enrolment to proportion of boy's enrolment. And lastly under facility gap we include proportion of schools having girl's toilet facility to proportion of schools having common

toilet facility. These three dimensional social indicators are combined, using an unweighted mean to get the grand social indicator.

After grand indexing the social indicators zone-wise, we compute mean and standard deviation of the respective regions for three consecutive years, as shown in Table 4

TABLE 4
Mean of the Social Indicator Index

Zone	2003-04	2004-05	2005-06
North	0.56	0.42	0.40
	(0.32)	(0.13)	(0.13)
South	0.54	0.55	0.55
	(0.21)	(0.21)	(0.17)
East	0.55	0.56	0.58
	(0.19)	(0.18)	(0.20)
North-East	0.61	0.71	0.52
	(0.43)	(0.33)	(0.20)
West	0.51	0.50	0.46
	(0.13)	(0.12)	(0.15)

Note: Figures in parentheses represent standard deviation.

From Table 4, we find a clear zonal dichotomy in the changes of social indicator. For three zones (North, North-East and West), there is a clear deterioration. For the East, there is only marginal improvement but for South, it is almost static. This picture in social indicator is a sad commentary of our commitment to eradicating social ills within the purview of primary education.

Policy Indicators

In our analysis, policy indicators include proportion of schools that received school development grant and proportion of schools received TLM grant. After grand indexing the policy indicators zone-wise, the mean and standard deviation of the respective zones for three consecutive years was computed. The mean of policy Indicators Index are given in Table 5.

From Table 5, it is seen that policy indicators have risen for all the zones between 2003-04 and 2004-05. Thereafter, the index has fallen for North and North-East zone. For West, it is stagnant. For others there is further improvement in 2005-06.

TABLE 5
Mean of the Policy Indicator Index

Zone	2003-04	2004-05	2005-06
North	0.42	0.59	0.56
	(0.42)	(0.34)	(0.35)
South	0.44	0.45	0.47
	(0.33)	(0.41)	(0.43)
East	0.48	0.66	0.68
	(0.27)	(0.41)	(0.39)
North-East	0.52	0.54	0.51
	(0.39)	(0.33)	(0.32)
West	0.51	0.56	0.56
	(0.46)	(0.49)	(0.47)

Note: Figures in parentheses represent standard deviation

Efficiency Indicators and DEA Efficiency Scores

Efficiency indicators should be related to the performances of the schools. In our analysis efficiency indicators include proportion of schools having PTR≥100, proportion distribution of schools having enrolment ≥50, proportion enrolment in schools with SCR above 60, proportion of districts where enrolment in primary classes declined over previous year. After grand indexing the efficiency indicators zone-wise, mean and standard deviation of the respective zones are computed for three consecutive years. The average ranks of efficiency indicators, are shown in Table 6.

TABLE 6
Mean of Efficiency Indicators and DEA Efficiency Scores

Zone	Efficiency Indicators			DEA Technical Efficiency Indicators		
	Year			Year		
	2003-04	2004-05	2005-06	2003-04	2004-05	2005-06
North	0.52	0.56	0.62	0.52	0.70	0.64
	(0.12)	(0.11)	(0.19)	(0.42)	(0.24)	(0.28)
South	0.55	0.54	0.62	0.88	0.76	0.63
	(0.33)	(0.31)	(0.43)	(0.16)	(0.17)	(0.20)
East	0.54	0.54	0.52	0.84	0.84	0.83
	(0.20)	(0.11)	(0.17)	(0.16)	(0.13)	(0.20)
North-East	0.45	0.51	0.53	0.55	0.63	0.63
	(0.14)	(0.20)	(0.18)	(0.40)	(0.31)	(0.18)
West	0.54	0.55	0.47	0.81	0.74	0.71
	(0.22)	(0.21)	(0.39)	(0.06)	(0.10)	(0.16)

Note: Figures in parentheses represent standard deviation:

From Table 6, it is clear that there is slight increase of mean of efficiency indicator in North zone in 2005-06 compared to that of 2003-04 and 2004-05. Similar case is

observed in South and North -East zones. However, there is decrease of mean in West zone compared to 2003-04 and 2004-05. East zone shows stagnancy.

We also present the DEA technical efficiency scores in this table. Here we have attempted to restrict the total number of input and output variables in the analysis to ensure that some degree of discretionary power remained. The model, hence, involved only four inputs :

(i) Proportion of schools having drinking water facility in school,
(ii) Proportion of schools having girl's toilet in school,
(iii) Classroom-student ratio,
(iv) Teacher-pupil ratio.

It also involved one output, i.e.gross enrolment ratio. It may be argued that net enrolment ratio is more appropriate. However, the relevant data is not forthcoming for all the states for all the years. The specification of output is a challenging task. Schooling of children is a factor determined by demand side as well as supply side variables. There are many situations where children have access to schooling and homogeneous supply side factors. In spite of that we come across many children remaining out of school. Children's participation in schools is the outcome of household's decision-making process in the absence of any compulsory education law of the state. So we have decided to include gross enrolment ratio as our output variable.

From the Table 5 we also see that for all the years, technical efficiency is much higher in East zone than in the rest of the zones. Other zones are far behind. The only exception is West zone in 2003-04. Again, in case of North-East zone, technical efficiency is continuously increased in three consecutive years. But in case of South, and West zones, technical efficiency has continuously fallen in the three consecutive years. East Zone again shows stagnancy.

Our DEA efficiency scores are much higher than the standard efficiency indicator for two zones of East and West. It also gives contradictory result for the South zone (except the last year). Efficiency indicators mainly point out to the performance of teaching institutions while DEA scores measure the degree of utilization of the available resources. This discrepancy may be a reflection of the fact that these zones are seriously constrained by the dearth of resources. However whatever resources are available have been efficiently utilized.

Determinants of Efficiency

Having traced down the various indicators associated with the primary education system, it is now necessary to link them up. For this, our ultimate aim is to explain the incidence of efficiency (both efficiency indicators and DEA scores). Thus we link up all the other factors with these two factors separately through regression analysis. However, a standard problem of such estimation lies in the fact that efficiency indicators are truncated variables (lying between zero and one). As such Ordinary Least Squares (OLS) might not be very suitable for this purpose (Maddala 1983). It would be better to

consider certain other forms of truncated estimation procedure. However, we have considered three types of estimation. The first is OLS with White's correction [OLS (HETCOV)]. Next we considered the Jackknife re-sampling technique that tests the sensitivity of the OLS parameters. Finally, we measured a Tobit regression. All these regression results are shown in Tables 7 and 8.

TABLE 7
Determinants of DEA Efficiency Scores

Variables	*Dependent Variable: DEA Technical Efficiency* OLS (HETCOV) N=87	Jackknife N=87	Tobit N=87
Poverty indicator	-119.75**	-122 .57	-132.03**
	(29.43)	(33.28)	(1.5885)
Policy indicator	-11.629	-11.224	-11.332
	(10.46)	(11.611)	(0.36717)
Social indicator	36.962 **	37.152	42.620 **
	(14.79)	(16.770)	(0.56940)
North Region dummy	-17.411*	-17.639	-19.004*
	(5.562)	(6.1481)	(0.36147)
South Region dummy	-11.647	-11.989	-12.821
	(7.102)	(7.8955)	(0.43040)
East Region dummy	13.512*	13.635	13.780*
	(5.981)	(6.6604)	(0.40581)
North East dummy	-8.4854	-8.4065	-9.5611
	(7.259)	(8.1749)	(0.40306)
Constant	98.079**	98.598	98.700**
	(13.18)	(14.828)	(0.75885)
Log-likelihood	-388.40	-388.40	-373.38

Note: Figures in parentheses represent standard errors.
** Indicates level of significance at 1 percent
* Indicates level of significance at 5 percent

It is clear from these tables that DEA scores are better related with the indicators than the efficiency indicator that is based on non-formal arguments. As expected, poverty has a negative effect on technical efficiency. Lack of adequate resources will tend to have a negative impact on technical efficiency scores. A particularly notable feature is the significant positive relation with social indicator. Normally, it is argued that more emphasis on social good may have an adverse impact on efficiency. In education, more emphasis on equity does not result in a deterioration of overall efficiency. However, public policy indicator does not seem to affect efficiency in a significant way. Among the various zones, North zone has a significantly lower efficiency while the East zone has a significantly high efficiency.

TABLE 8
Determinants of Efficiency Indicator

Variables	Dependent Variable: Efficiency Indicator OLS (DETCOV) N=87	Jackknife N=87	Tobit N=87
Poverty indicator	0.37986	0.36307	0.38329
	(0.2295)	(0.26293)	(1.5000)
Policy indicator	-0.0655	-0.0695	-0.06804
	(0.0663)	(0.0739)	(0.36490)
Social indicator	-0.0645	-0.0576	-0.065652
	(0.0897)	(0.10052)	(0.54410)
North Region dummy	0.0602	0.05726	0.06034
	(0.07251)	(0.08026)	(0.35469)
South Region dummy	0.07341	0.0710	0.068326
	(0.0990)	(0.11010)	(0.42924)
East Region dummy	0.00095	0.0023	0.000993
	(0.0790)	(0.08739)	(0.40243)
North East Region dummy	-0.05092	-0.05119	-0.05116
	(0.0739)	(0.08190)	(0.39899)
Constant	0.47641**	0.47868	0.47731**
	(0.0949)	(0.010626)	(0.69057)
Log-likelihood	21.22	21.22	18.52

Note: Figures in parentheses represent standard errors.
*** Indicates level of significance at 1 percent.*
** Indicates level of significance at 5 percent.*

Conclusion

Our analysis of the primary education system in India reveals certain disturbing features. First, the system is seriously jolted by the lack of adequate resources that are necessary to boost up a decent standard. There appear wide zonal discrepancies in this regard. Second, discrepancies with regard to social and policy indicators are more or less uniformly distributed. However, resource use efficiency (as measured by DEA) and standard efficiency indicators indicate wide inter-zonal differences. The results from these two approaches are conflicting and contradictory. Nonetheless, DEA scores show better correlation with the other variables considered by us. Poverty infringes upon efficiency in a negative way. Social indicators are also positively related with efficiency improvement. Among the zones, North zone shows the worst while East zone shows the best picture. Policy indicator fails to have any significant effect on the level of efficiency. In all, the picture is alarming and requires immediate policy action.

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Public Spending on Higher Education in Northern States (India)

Post-Reform Levels and Trends

Angrej Singh Gill*
Jaswinder Singh Brar**

Abstract

The study provides in detail the various aspects of public spending on higher education by the Northern States of the country during the post- reform period, i.e. 1991-92 to 2004-05. The studys is confined to six states, viz. Haryana, HP, J&K, Punjab, Rajasthan, and UP, and examines the public spending on higher education by these states in absolute and comparative terms, both at the current prices and constant prices in the national and regional context. It highlights the growth, trends, and changes in each of these states and for the northern states as a whole. The public expenditure has been analyzed in terms of overall budgetary spending, overall educational budgets, state incomes, and per capita incomes of the concerned states. It also focuses upon the distribution of the expenditure within the northern states. The analysis brings out the gross inadequacy of the spending in numerous respects. The higher education sector has suffered setbacks and actually experienced the resources loss. The study builds up a strong case for bettering availability of public resources to the sector in order to expand the human capital base of this region.

Introduction

Economic growth, human capital and education are critically inter-connected variables in any politico-administrative set-up. The nature and pace of economic growth have strong positive correlation with the supply of human capital. The countries which invested heavily in education realized higher growth rates than those which neglected it (Romer, 1990; Barro and Sala-i-Martin, 1995; Barro, 2001). Education has universally been recognized as the most important contributory factor in the production of human capital. Therefore, education is being considered increasingly as an important means or instrument for improving a nation's economic and social welfare (Dhesi, 1979).

* Department of Economics, Punjabi University, Patiala, E-mail: deepakgill167@yahoo.co.in
** Centre for Research in Economic Change, Punjabi University, Patiala
E-mail: brar_jas@yahoo.co.in

Education contributes to the socio-economic development of the individuals by way of endowing them with the means to improving their knowledge, skills, capacity and capability for work, and enriches the political and the cultural life of the community. The educational development in the process strengthens the community's ability to exploit technology for social and economic advancement. There has been a surge in the demand for highly skilled and technologically competent workforce with the emergence of knowledge based and technologically driven economies (Gupta, 2008).

The various levels and types of education are organically linked and dependent. They act as the inputs and outputs for each other in working of an education system. All the levels and types of education have their own sort of contributions in the process of economic growth and development. Higher education greatly impacts the all round development as it empowers the individuals with necessary competence for achieving important personal, social, and higher level professional goals. Higher education generates natural externality; improves productivity, governance; and strengthens civil society and helps in the attainment of vertical and professional mobility (Psacharopoulos and Woodhall, 1985); Psacharopoulos, 1988; Heggade, 1992; and Todaro, 1995). It has been realized that the challenges to the present social order in the form of globalization needs to be addressed appropriately and this is possible only through strengthening the higher education for all intents and purposes. It has, therefore, become imperative for the developing countries like India, to give due importance to both quantitative and qualitative expansion of higher education. The expansion and growth of the higher education sector depends crucially, if not entirely, on the input of financial resources into the system. It is important to analyze the flows of financial resources made into higher education.

The process of structural change in the education sector in the country started with the adoption of new education policy in the mid-eighties (GOI, 1986; GOI, 1991). The process gained momentum with India adopting new economic policy in 1991. The mutual roles of the state and market in the economic sphere have been redefined and readjusted. The thrust of the reforms essentially has remained on supplying the various goods and services on the principle of cost plus basis. The process of economic reforms widened and deepened over the period and almost all of the economic sectors experienced substantial changes with the globalization and privatization of economic activities. The economic reforms in their stabilization phase have worked through the controlling of the fiscal deficits. The public authorities at various levels tried to maintain the overall level of public expenditure by adjusting the expenditure levels across the various sectors (Brar et al, 2008).

The education sector in general and the higher education sector in particular got severe impact as the governments started to freeze the budgets for higher education. In order to outline the alternative methods of mobilization of resources for higher education, the government appointed two committees, one for the central universities, known as Justice K. Punnayya Committee (UGC, 1993) and the other for technical education known as Swaminathan Committee (AICTE, 1994). Both of the committees suggested

several measures to mobilize the non-governmental resources for higher education like (a) raising the levels of fees and funds collected from the students, (b) introduction of self-financing courses, and (c) student loans. Many other committees were constituted to deal with issues pertaining to financing of higher education. The prominent among those were: UGC (1997), UGC (2000), Ambani-Birla Report (GOI, 2000). Interestingly, all the committees made recommendations almost on similar lines with central place for the market in the form of imposition of user charges, introduction of self-financing courses, and more space for the entry of private players. Consequently, many universities made upwards revision in the levels of fees and funds to be charged from the students.[1]

Government of India, in 1997, for the first time classified the higher education as a non-merit good and elementary education as a merit good (GOI, 1997). And, it was reiterated time and again that there was no need to give government subsidies to the non-merit goods. However, later on the government reclassified higher education into a new category called "Merit 2 good", which is not essential to be subsidized at the same level as the merit good (Srivastava and Amarnath, 2001). The rising level of fees and funds as user charges has raised a number of issues about the affordability of education by the students belonging to the weaker sections. The problem of exclusion of the meritorious and the economically weaker became serious and started attracting the attention of policy planners. Moreover, it was also felt that if this process became intensified, it would be unhealthy not only for the harmonious development of the society but also difficult for the country to maintain its position in the knowledge society. Therefore, it was felt that public spending on higher education needed to be balanced in some manner and the proportion of population receiving higher education enhanced. Such type of thinking has been articulated by the two subsequent reports: (a) U.R. Rao; and (b) National Knowledge Commission. The former committee recommended that the fees and funds charged from the students should not be higher than the one-third level of per-capita income of the state (Ramachandran, 2004). The latter recommended that the country must enhance the number of universities to 1500. This would enable India to attain a Gross Enrolment Ratio (GER)[2] of at least 15 percent by 2015 (GOI, 2006). It has also been felt at the national level to provide quality infrastructure in the higher educational institutions by the adoption of various specific schemes (GOI, 2005). So, the higher education sector in the country has witnessed strong shifts in terms of policy approach and understanding during the post- reform period.

The financing of higher education in the country has been analyzed in a number of studies (Albrecht et al, 1992; Rao, 1992; Ansari, 1994; Tilak, 1995; Indira, 2006; Rani, 2007). Some of these studies have dealt in detail with the supply of public expenditure on higher education in India (Tilak, 1990; Dhar, 1991; Prakash et al, 1993; Brar, 1999). However, there has been a lack of any comprehensive study which examines the public expenditure on higher education in northern states of the country. The study is an attempt to fill this gap. This is important because these states as a whole constitute about 28 percent of the geographical area of the country (SAI, 2004-05), about 30 percent of the population as per Census 2001, and a little below 28 percent of aggregate GDP of the

country (Economic Survey, 2004-05). But, the Gross Enrolment Ratio (GER) in higher education in these states was 9.81 percent as compared to 9.97 percent in case of All India (SES, 2004-05). It is despite the fact that the North India is having a fairly large network of higher educational institutes with 85 universities, 24 deemed universities, 3 institutes of national importance, 28 research institutes and 2223 colleges (SES, 2004-05).

The paper is organized as follows. Besides Section I covering introduction, Section II deals with the methodology and data sources. Section III examines the level of public expenditure on higher education in the Northern States as compared to All India. It also provides information about the distribution of public expenditure on higher education within the northern states (Intra-Northern States). Section IV deals, in detail, with the education budget, higher-education budget, general budget, and state income. Section V provides in comparative terms the per-capita levels of higher education expenditures of the concerned states. Section VI provides a picture on the growth of the various variables. Section VII seems up the main findings.

Data Sources and Methodology

In the country, the financial resources into higher education flow from a large variety of sources, which could be broadly divided into two parts, viz. (a) governmental sources, and (b) non-governmental sources. The governmental sources include contribution from the union government and the state governments.[3] The non-governmental sources include student fees, funds, voluntary donations, and endowments, etc. This study does not take into account the private expenditures of various types incurred by the individuals, households and other private providers of education on either acquiring of education or education development in general. The study deals with the financing of higher education from the governmental sources only, i.e. public expenditure on education. Further, the study is confined to the public expenditure incurred on higher education on revenue account only. It is to be noted that the bulk of the public expenditure on higher education is accrued under the Revenue Account. The data sources provide information about public expenditure on education under two categories, viz. Revenue Account and Capital Account. The Revenue Account consists of the expenditure incurred on items such as administration, direction, and inspection; salaries of teaching and non-teaching staff; scholarships and student aid programmes; maintenance of buildings, apparatus, equipment and furniture; laboratory consumables; games and sports; and teaching and learning material, etc. This type of expenditure has to be incurred every year in order to run the system and hence is called the recurring-expenditure also.

The Capital Account includes the expenditure made on the construction of buildings, libraries and laboratories; purchase of equipment and furniture, etc. It is also known as non-recurring expenditure. It actually represents the physical capital formation side of education system. It is to be noted that out of total public expenditure on higher education in the country by all states and union territories, the proportion of expenditure incurred under the head Capital Account was just 1.82 percent during 2003-04, and in the case of

northern states, it was 1.68 percent (Rs 24.98 crore). Thus, the expenditure incurred under the Capital Account has not been included in the study. The higher education in the study refers to the post-senior secondary level of education, i.e. university and higher education. It does not include the technical education imparted at any stage and level of education.

The various states and union territories of the country have been classified into five regions for the purpose of evaluation and accreditation by the National Assessment and Accreditation Council (NAAC).[4] The regions are: Eastern, North-East, Southern, Northern and Western. The northern region consists of eight states and one union territory, i.e. Punjab, Haryana, Uttar Pradesh, Himachal Pradesh, Rajasthan, Jammu & Kashmir, Uttarakhand, Delhi and Chandigarh. The study is confined to the six states of Northen region viz. Punjab, Haryana, Uttar Pradesh, Himachal Pradesh, Rajasthan and Jammu &Kashmir. It is to be noted that throughout this study, the term northern states or north refers to the just mentioned six states, and the analysis does not include the two administrative units, i.e. Chandigarh and Delhi, through situated in the northern part of the country. Chandigarh being a Union Territory has been excluded from the analysis as the study focuses exclusively on the states. Delhi has been granted the statehood in the formal and technical sense with an elected assembly, but, has limited statehood as the law and order, as subject of constitutional division of powers among the states and the union, stays with the Union government. Moreover, the financing of higher education in Delhi has been fundamentally different from the rest of the states as it is evolved in the framework of the Union Territory, the status which Delhi enjoyed for many decades. The involvement of the MHRD, UGC, and other national level professional and technical bodies is very crucial in creation, maintenance and running of the institutions of higher education in the National Capital Region. Therefore, Delhi along with Chandigarh has been excluded from the present study.

Further, the data sources used in the study do not provide separate information for Uttarakhand for the chosen period of analysis, as it then formed a part of Uttar Pradesh . The study is confined to expenditure which is incurred by the education departments of the respective states on the development of higher education in their respective states. The study does not include the expenditure incurred by the government departments other than the education department such as labour, agricultural, rural development or any other on the formal and on-job training of their respective personnel. The analysis for this paper stretches over the period of 14 years from 1991-92 to 2004-05, including both the terminal financial years. The figures for all the years show actual budgetary spending, except for 2004-05 in which case it is in the form of revised estimates.

The study analysis in a comparative-descriptive manner. The public expenditure on higher education by the northern states has been compared with that of the All States of the country. The central objective of the study is to make a comparative picture of the public spending on higher education by the states only. Therefore, the term All States throughout the study refers to all the states of the country, and does not include the union territories as well as the Union government. The public expenditure on higher education

in northern states of India in absolute terms and relative terms has been analysed at the current prices and at constant prices. And, in order to convert the data from nominal prices to real prices, the implicit (Net State Domestic Product) NSDP-deflators for all the concerned states with 1999-2000 as the base have been used. These types of deflators have been used because separate educational deflators or state specific deflators are not available. The required deflators for the individual states of the north, and for all states have been generated by the current prices and real prices values of the relevant state incomes, i.e. NSDPs. The RBI website has been used to ascertain the current and real price values of the various NSDPs. The share of public expenditure on higher education in terms of government budgets, NSDP, and education budgets have also been examined. In addition, the per capita expenditure on higher education has been calculated. The trend of growth rates, by using the semi-log form, have been computed for higher educational expenditure, overall education sector, NSDP and state budget for the entire period, i.e. from 1991-92 to 2004-05. The study is based exclusively on the secondary sources of data. The data sources are: Analysis of Budgeted Expenditure on Education (MHRD), Selected Educational Statistics (MHRD), Statistical Abstract of India (GOI), Human Development Report (UNO), India Human Development Report (NCAER), Census of India (GOI), and Economic Survey (GOI).

Northern States versus All India

Table1 depicts the public expenditure incurred on higher education by All States and by the northern states of India for the period of 14 years from 1991-92 to 2004-05 on revenue account at current prices. It is clear that the levels of the realized expenditure were successively higher in case of both categories i.e. All States and Northern States, for all the years under study, but for once in each case, i.e. during 2002-03 (Northern States), and 2001-02 (All States). The expenditure movements by and large follow the similar path. The expenditure levels were about 4.12 times higher during 2004-05 over 1991-92 in case of both of the categories. The level of public expenditure on the higher education in case of All States was Rs.1915.20 crore in 1991-92. It went up to Rs.7867.68 crore in 2004-05. In the case of the Northern States, it increased from Rs.390.12 crore to Rs.1609.05 crore during the corresponding years. The proportion of expenditure by the Northern States in All States is almost stable with only very smaller yearly variations, hovering around 20 to 22 percent. It was highest during 1997-98(21.86 percent) and lowest during 2002-03(19.10 percent).

Further, all of the Northern States generally provided more budgetary funds to the higher education (Table 2). Consequently, the level of expenditure multiplied in absolute terms for every state. The level of expenditure during 2004-05 was higher than the level during 1991-92 for all these states as follows: Haryana (4.24 times); HP (3.98 times); J&K (6.16 times); Punjab (3.09 times); Rajasthan (3.44 times); UP (4.78 times); and the Northern States (4.13 times). But, it is to be noted that the higher education sector had not experienced the enhanced flow of resources for each and every year. Interestingly, it was the status in case of each state. In fact, for every state, higher education sector

TABLE 1

Public Expenditure on Higher Education in India: All States vs. Northern States

(Revenue Account) (Rs. Crore) (Current Prices)

Year	*North*	*All States**	*Percentage Share*
1991-92	390.12	1915.20	20.37
1992-93	456.63	2220.51	20.56
1993-94	512.07	2379.50	21.52
1994-95	584.42	2793.88	20.92
1995-96	639.71	3104.49	20.61
1996-97	741.83	3509.35	21.14
1997-98	835.59	3822.04	21.86
1998-99	962.39	4428.07	21.73
1999-00	1237.20	5907.60	20.94
2000-01	1334.87	6800.50	19.63
2001-02	1376.90	6329.77	21.75
2002-03	1332.01	6973.94	19.10
2003-04	1465.71	7180.15	20.41
2004-05	1609.05	7867.68	20.45

* All States refer to all the states excluding the UTs and Union Government.

Source: *Analysis of Budgeted Expenditure on Education*, MHRD, New Delhi (various issues).

TABLE 2

State-Wise Public Expenditure on Higher Education by the Northern States

(Current Prices) (Revenue Account) (Rs. Crore)

Year	*Haryana*	*H P*	*J & K*	*Punjab*	*Rajasthan*	*U P*	*North*
1991-92	52.86	15.44	17.11	79.30	77.56	147.85	390.12
1992-93	57.19	17.00	17.11	86.60	87.60	191.13	456.63
1993-94	64.85	18.22	17.11	90.86	94.78	226.25	512.07
1994-95	74.14	23.30	33.68	104.95	110.84	237.51	584.42
1995-96	89.98	26.61	29.40	121.03	127.53	245.16	639.71
1996-97	98.53	31.58	40.69	123.81	134.94	312.28	741.83
1997-98	115.90	41.37	54.41	135.95	156.45	331.51	835.59
1998-99	114.33	43.80	54.41	163.45	193.82	392.58	962.39
1999-00	146.58	57.71	87.54	211.73	207.04	526.60	1237.20
2000-01	216.24	64.56	95.38	217.09	225.43	516.17	1334.87
2001-02	201.36	63.06	97.75	171.50	320.75	522.48	1376.90
2002-03	181.82	62.22	97.73	259.09	226.66	504.49	1332.01
2003-04	209.71	77.88	92.70	243.78	270.06	571.58	1465.71
2004-05	223.76	61.44	105.27	244.96	266.79	706.83	1609.05

Source: *Same as Table: 1*

experienced a squeeze of budgetary resources twice or thrice, during these years when the level of absolute spending was less than that of the preceeding year. The number of such dips in spending was Haryana (thrice); HP (thrice); J&K (twice); Punjab (twice);

Rajasthan (twice); UP (thrice); and Northern States (once). Such happenings occurred more during the last years of the study and more particularly since 2001-02. Further, the number of dips increases considerably in case of every state when expenditures is examined at constant prices (Table 3): Haryana (four); HP (five); J&K (seven); Punjab (seven); Rajasthan (five); UP (six); and Northern States (twice). It is significant that the absolute level of expenditure registered very small jump, as compared to current prices, at constant prices for every state during 2004-05 over 1991-92, as follows: Haryana (1.55 times); HP (1.35 times); J&K (1.71 times); Punjab (1.24 times); Rajasthan (1.41 times); UP (1.86 times); and Northern States (1.59 times). It shows that the higher education sector in real terms witnessed not only differential but also lesser expansion among the states in real terms.

TABLE 3

State-Wise Public Expenditure on Higher Education by the Northern States

(Constant Prices) (Revenue Account) (Rs. Crore)

1991-92	116.88	38.22	49.23	167.77	168.91	324.24	860.35
1992-93	120.04	38.39	46.88	166.84	185.93	390.55	944.28
1993-94	112.91	34.30	31.85	157.13	150.95	414.47	901.69
1994-95	116.25	39.41	60.02	164.96	164.68	393.04	936.02
1995-96	127.26	41.57	47.33	175.99	173.09	372.82	938.93
1996-97	130.04	45.44	60.98	169.10	167.26	436.64	1005.11
1997-98	142.62	55.58	76.06	173.07	194.86	428.13	1066.40
1998-99	131.00	51.75	63.76	191.16	218.62	461.22	1116.80
1999-00	146.58	57.71	87.54	211.73	207.04	526.60	1237.20
2000-01	206.43	61.81	92.64	202.49	222.34	510.98	1297.96
2001-02	184.03	57.77	89.71	154.00	317.01	505.28	1304.97
2002-03	159.33	54.29	83.73	230.36	208.10	464.06	1203.20
2003-04	176.15	67.01	76.50	210.73	254.87	504.28	1292.99
2004-05	181.28	51.41	83.91	205.76	238.31	602.58	1365.36

Note: The *current* prices have been converted into constant prices by using implicit NSDP deflator with 1999-2000 as the base

Source: *Same as Table: 1*

The size of higher education in terms of involvement of monetary resources varies considerably among the Northern States (Table 4). Out of total public expenditure on higher education by the Northern States, almost 40 percent has been incurred by Uttar Pradesh. In 2004-05, Rajasthan and Punjab incurred between 14 percent and 17 percent of the total public expenditure on higher education. Rajasthan expended nearly 20 percent of the total public expenditure on higher education within the Northern States during the period from 1991-92 to 1998-99. But, in 1999-00 and 2000-01, its share declined to 17 percent, and went up to 23.30 percent in 2001-02 and remained between 17 and18 percent in the subsequent years. The proportionate share of Punjab within the Northern States with some yearly variations declined considerably from about 20 percent during 1991-92 to just 15 percent in 2004-05. The share of Haryana remained between 12 and 16

percent during the whole of the study period. The respective shares of Himachal Pradesh and Jammu & Kashmir were about 4 percent and 6 percent with some year-to-year variations. Thus, UP constituted the largest proportion and HP the smallest proportion of the total public spending on higher education by the Northern States.

TABLE 4
Percentage Share of Different States in Total Public Expenditure on Higher Education by Northern States
(Revenue Account) (Current Prices)

Year	*Haryana*	*H P*	*J & K*	*Punjab*	*Rajasthan*	*U P*	*Total*
1991-92	13.55	3.96	4.39	20.33	19.88	37.90	100.00
1992-93	12.52	3.72	3.75	18.97	19.18	41.86	100.00
1993-94	12.66	3.56	3.34	17.74	18.51	44.18	100.00
1994-95	12.69	3.99	5.76	17.96	18.97	40.64	100.00
1995-96	14.07	4.16	4.60	18.92	19.94	38.32	100.00
1996-97	13.28	4.26	5.49	16.69	18.19	42.10	100.00
1997-98	13.87	4.95	6.51	16.27	18.72	39.67	100.00
1998-99	11.88	4.55	5.65	16.98	20.14	40.79	100.00
1999-00	11.85	4.66	7.08	17.11	16.73	42.56	100.00
2000-01	16.20	4.84	7.15	16.26	16.89	38.67	100.00
2001-02	14.62	4.58	7.10	12.46	23.30	37.95	100.00
2002-03	13.65	4.67	7.34	19.45	17.02	37.87	100.00
2003-04	14.31	5.31	6.32	16.63	18.43	39.00	100.00
2004-05	13.91	3.82	6.54	15.22	16.58	43.93	100.00

Source: *Same as Table 1*

Higher Education, State Budget and State Income

In any society, the proportionate share of public expenditure on education in the total income has been treated as the most accepted standard indicator of national efforts on development of education. It also shows the relative priority being accorded to education by the state system. Such a scenario has been demonstrated by viewing the public expenditure on higher education as a proportion of NSDP (Table 5). It is evident that the total public expenditure on higher education as a proportion of the total Net State Domestic Product (income) of the Northern States has remained less than 0.40 percent for all the years under the study. In the early 1990s, the proportion was about 0.40 percent but with minor yearly variations it showed a declining trend and ultimately reached to about 0.30 percent during 2004-05. Further, the inter-state analysis shows that this proportion was highest for J&K and lowest for Rajasthan during 2004-05. Moreover, the proportion remained essentially stable in case of J&K and UP. But, it declined considerably in case of HP from 0.61 percent during 1991-92 to 0.34 percent during 2004-05. Similarly, it fell down in case of Haryana, Rajasthan and Punjab also.

TABLE 5

Public Expenditure on Higher Education as Percentage of the Respective NSDPs of the Northern States

(Revenue Account) (Current Prices)

Year	*Haryana*	*H P*	*J & K*	*Punjab*	*Rajasthan*	*U P*	*North*
1991-92	0.43	0.61	0.59	0.47	0.42	0.30	0.38
1992-93	0.39	0.57	0.53	0.43	0.44	0.33	0.39
1993-94	0.42	0.53	0.48	0.39	0.40	0.36	0.39
1994-95	0.38	0.55	0.61	0.39	0.38	0.31	0.36
1995-96	0.39	0.51	0.49	0.40	0.35	0.28	0.34
1996-97	0.38	0.53	0.58	0.36	0.32	0.31	0.35
1997-98	0.37	0.61	0.69	0.35	0.31	0.28	0.33
1998-99	0.34	0.56	0.61	0.38	0.34	0.31	0.35
1999-00	0.38	0.61	0.79	0.43	0.32	0.37	0.39
2000-01	0.50	0.59	0.78	0.40	0.32	0.34	0.39
2001-02	0.42	0.52	0.76	0.29	0.46	0.32	0.38
2002-03	0.34	0.47	0.71	0.41	0.29	0.30	0.34
2003-04	0.32	0.49	0.56	0.34	0.29	0.28	0.31
2004-05	0.30	0.34	0.58	0.31	0.27	0.32	0.32

Note: NSDP stands for Net State Domestic Product

Source: *Same as Table 1*

TABLE 6

Public Expenditure on Higher Education as Percentage of the General Budgets of the Respective States

(Revenue Account) (Current Prices)

Year	*Haryana*	*H P*	*J & K*	*Punjab*	*Rajasthan*	*U P*	*North*
1991-92	2.32	1.44	1.40	1.89	1.90	1.42	1.68
1992-93	2.30	1.39	1.40	2.61	1.77	1.62	1.83
1993-94	2.29	1.31	1.40	2.27	1.75	1.72	1.83
1994-95	1.18	1.44	1.45	1.74	1.64	1.54	1.52
1995-96	1.17	1.14	1.12	1.21	1.15	1.14	1.15
1996-97	1.46	1.47	1.40	1.79	1.60	1.63	1.60
1997-98	1.42	1.74	1.79	2.02	1.71	1.29	1.51
1998-99	1.63	1.31	1.11	1.95	1.67	1.51	1.57
1999-00	2.11	1.51	1.45	2.08	1.54	1.83	1.79
2000-01	3.01	1.48	1.43	1.85	1.50	1.62	1.74
2001-02	2.33	1.38	1.60	1.35	2.01	1.51	1.67
2002-03	1.19	1.12	1.15	1.17	1.13	1.14	1.15
2003-04	2.07	1.39	1.41	1.55	1.43	1.05	1.32
2004-05	1.93	1.09	1.29	1.34	1.33	1.37	1.39

Source: *Same as Table 1*

The importance given to higher education sector becomes further clear by examining the share of higher education budget in the total education budget of the various Northern

States (Table 7). It is evident that the Northern States as a whole have provided between 7.76 percent and 9.89 percent of their total education budget to the higher education. But, the proportion has decreased over the years from 9.53 percent in 1991-92 to 8.90 percent in 2004-05. Within Northern States, there have been strong inter-state variations. Rajasthan, Uttar Pradesh and Himachal Pradesh have provided the lowest proportion (around 7-9 percent), and the other three states i.e. Haryana, HP and UP the highest (around 12-14 percent). But, it is to be noted that the proportionate spending on higher education over the period registered a decrease in varying amounts in case of all the states except UP, in which case it improved marginally. The proportionate decline is more noticeable in case of Punjab, where the decline was to the extent of 3.37 percentage points during 2004-05 over 1991-92. Thus, it is clear that within the education budgets, the higher education got not only less but also experienced shifting away of resources towards other sub-sectors of education.

TABLE 7

Public Expenditure on Higher Education as Percentage of the Total Public Expenditure on Education of the Concerned State

(Revenue Account) (Current Prices)

Year	*Haryana*	*H P*	*J & K*	*Punjab*	*Rajasthan*	*U P*	*North*
1991-92	14.93	7.87	12.39	14.33	8.95	7.45	9.53
1992-93	13.27	7.46	12.39	13.16	8.69	8.43	9.65
1993-94	14.24	6.18	12.39	13.23	8.39	9.14	9.89
1994-95	14.21	8.26	10.11	14.65	7.72	8.13	9.41
1995-96	14.16	7.65	11.46	18.56	7.59	7.35	9.26
1996-97	13.40	7.83	9.77	12.13	6.88	8.17	8.87
1997-98	13.86	7.95	12.52	10.72	7.37	8.01	8.97
1998-99	9.55	6.43	12.52	9.75	7.07	6.92	7.76
1999-00	11.99	7.37	11.36	12.31	6.83	10.16	9.73
2000-01	16.48	7.79	12.16	12.10	7.17	8.77	9.71
2001-02	14.18	7.42	12.42	9.69	9.54	8.09	9.40
2002-03	13.01	6.78	12.42	12.70	6.94	7.55	8.83
2003-04	14.10	8.19	10.62	11.99	7.52	8.17	9.20
2004-05	13.22	6.07	11.29	10.96	6.69	8.61	8.90

Source: *Same as Table 1*

Per Capita Level

The priority accorded to higher education by the various states becomes very clear when we examine the resources allocated to higher education on per capita basis. The per capita public spending on higher education sector has been worked out by dividing the level of higher educational spending by the concerned population. Table 8 and Table 9 depict the per capita public expenditure on higher education at current prices and at constant prices respectively. In case of Northern States as a whole, the said expenditure, in current prices, increased by 3.09 times from the level of Rs.16.63 during 1991-92 to

Rs.51.44 during 2004-05. At real prices, the increase was 1.19 times, i.e. from Rs.36.67 during 1991-92 to Rs.43.65 during 2004-05. Within the Northern States, there were wide variations in the level of said expenditure. At current prices, during 1991-92, the highest amount of per capita spending on higher education was incurred by Punjab (Rs.38.86), followed by Haryana (Rs.31.85), HP (Rs.29.68), J&K (Rs.21.73), Rajasthan (RS.17.48), and UP(Rs. 10.55). But, the relative positions changed over period. During 2004-05, the highest amount of per capita spending at current prices on higher education was incurred by Haryana (Rs.98.74), followed by J&K (Rs.97.14), HP (Rs.96.33), Punjab (Rs.95.52), Rajasthan (Rs.43.92), and UP(Rs. 37.89).

The comparisons of expenditures on per capita basis reveal that the relative ranking of the states remained same during 2004-05 over 1991-92 in case of Rajasthan, UP and HP at fifth, sixth and third position respectively. But, the ranking witnessed a change for Punjab, Haryana, and J&K. The rank of Punjab slipped from first to fourth. Importantly, Haryana has emerged as the top spender and its rank has improved from second to first and that of J&K has gone up from fourth to second. The level of per capita spending at current prices during 2004-05 was higher to that of 1991-92 in the following manner: Haryana (3.10 times), J&K (4.47 times), HP (3.24 times) and Punjab (2.46 times), Rajasthan (2.51 times), and UP (3.59 times). At constant prices, the respective growth levels were as follows: Haryana (1.14 times), J&K (1.24 times), HP (1.10 times) Punjab (0.98 times), Rajasthan (1.03 times), and UP (1.40times). Thus, the growth levels turned out to be quite modest at real prices.

TABLE 8

Per Capita Public Expenditure on Higher Education by the Northern States

(Revenue Account) (Current Prices) (Rs.)

Year	Haryana	H.P.	J & K	Punjab	Rajasthan	U.P.	North
1991-92	31.85	29.68	21.73	38.86	17.48	10.55	16.63
1992-93	33.52	32.12	21.12	41.62	19.20	13.30	18.98
1993-94	36.99	33.85	20.54	42.83	20.22	15.36	20.76
1994-95	41.20	42.57	39.36	48.55	23.02	15.74	23.13
1995-96	49.18	47.81	33.66	55.18	26.06	15.97	24.90
1996-97	52.54	55.82	45.41	55.45	26.90	19.89	28.22
1997-98	60.29	71.98	59.20	59.80	30.42	20.64	31.07
1998-99	58.01	75.03	57.72	70.61	36.75	23.90	34.98
1999-00	72.53	97.35	90.58	89.84	38.27	31.33	43.95
2000-01	104.32	107.28	96.28	89.30	40.62	30.02	50.09
2001-02	94.70	103.26	96.28	70.18	56.31	29.71	46.71
2002-03	83.68	100.40	94.14	104.31	38.93	28.12	44.28
2003-04	94.49	123.85	87.38	96.58	45.40	31.23	47.77
2004-05	98.74	96.33	97.14	95.52	43.92	37.89	51.44

Sources: *Same as Table 1*

Statistical Abstract of India (various years)

TABLE 9

Per Capita Public Expenditure on Higher Education by the Northern States

(Constant prices) (Revenue Account) (Rs.)

Year	*Haryana*	*H P*	*J & K*	*Punjab*	*Rajasthan*	*U P*	*North*
1991-92	70.43	73.47	62.52	82.21	38.07	23.14	36.67
1992-93	70.36	72.53	57.86	80.18	40.75	27.18	39.25
1993-94	64.41	63.73	38.23	74.07	32.20	28.14	36.56
1994-95	64.60	71.99	70.14	76.31	34.20	26.05	37.05
1995-96	69.56	74.69	54.19	80.24	35.37	24.29	36.55
1996-97	69.34	80.31	68.06	75.74	33.34	27.81	38.24
1997-98	74.19	96.70	82.76	76.13	37.89	26.66	39.65
1998-99	66.47	88.64	67.64	82.58	41.45	28.08	40.59
1999-00	72.53	97.35	90.58	89.84	38.27	31.33	43.95
2000-01	99.59	102.71	93.52	83.29	40.06	29.72	48.70
2001-02	86.55	94.59	88.36	63.02	55.65	28.73	44.27
2002-03	73.33	87.61	80.65	92.74	35.74	25.87	40.00
2003-04	79.37	106.56	72.11	83.49	42.85	27.55	42.14
2004-05	80.00	80.60	77.43	80.23	39.23	32.30	43.65

Note: The current prices have been converted into constant prices by using implicit NSDP deflator with base at 1999-2000.

Sources: *Same as Table 1*

Statistical Abstract of India (various years)

Relative Growth Rates

The annual trend of growth rates at real prices for four variables, i.e. public expenditure on higher education, public expenditure on overall education, state income, and state budgets for All States, Northern States and for each of the state within the Northern States is reported in a comparable manner in Table 10. The table clearly shows that during the study period, the trend of growth rate in public spending on higher education in the Northern States (3.73 percent) was lower than that of overall education sector (4.20 percent), NSDP (4.15 percent), and state budgets (5.18 percent). Moreover, in case of all of the four variables the North had recorded under-performance compared to that in the case of All States. The growth rate trend of public spending on higher education in case of Northern States (i.e. 3.73 percent) was 1.01 basis points less as compared to that of 4.74 percent of the All States. However, it is to be noted that the process of neglect of education also happened in case of the All States. The growth of state budgets (5.86 percent) and state incomes (5.14 percent) were more than that of the overall education sector (4.54 percent) and higher education (4.74 percent). But, the only difference is that within the education sector, the higher education sector has recorded a bit more growth than the education sector in overall.

Among the Northern States, the growth rate in public spending on higher education was the highest in case of J&K (6.37 percent) and lowest in Punjab (2.15 percent). The growth in case of the rest of the states was as follows: Haryana (4.25 percent), HP (4.36

percent), Rajasthan (3.90 percent), and UP (3.55 percent). Further, the growth rates of state budgetary expenditures were more than the respective growth rates of higher education expenditure in case of HP, Punjab, Rajasthan, and UP. It indicates that in case of these four states, the higher education sector has got proportionately lower allocations from the incremental increases in the case of the states' budgetary spending. However, the higher education received comparatively more from the budget in case of Haryana and JK.

TABLE 10
Trend Growth Rates of the Public Expenditure on Higher Education, Overall Education, NSDP and State Budgetary Expenditure (1991-92 to 2004-05)

State	Higher Education	Education	NSDP	State Budget
Haryana	4.25	4.64	6.14	3.37
HP	4.36	4.95	6.78	5.40
J&K	6.37	6.53	4.38	6.16
Punjab	2.15	4.41	4.09	5.48
Rajasthan	3.90	5.27	5.47	5.81
UP	3.55	3.28	2.82	4.97
Northern States	3.73	4.20	4.15	5.18
All States	4.74	4.54	5.14	5.86

Note: The current prices have been converted into constant prices by using implicit NSDP deflator with base at 1999-2000.

Source: 1. *Same as Table 1*
2. *Statistical Abstract of India* (various years).

Summing up

The foregoing analysis highlights that the budgetary allocations by the Northern States to higher education sector, both in absolute and relative terms, fell short of the economic size of the region. The Northern States collectively accounted between 20 and 22 percent of the total higher educational expenditure of All States of the country. The higher education sector had not experienced the enhanced flow of resources for each and every year. It had happened in case of each and every state. For every state, higher education sector experienced dips in levels of budgetary resources, twice or thrice. The number of dips increased considerably in case of every state at constant prices.

Out of the total public expenditure on higher education by the Northern States, the highest proportion (about 40 percent) was incurred by UP and the lowest by HP. Rajasthan and Punjab accounted between 14 percent and 17 percent of such expenditure. But, the relative shares of these two states declined considerably over period. The share of Haryana remained between 12 to 16 percent. The respective shares of HP and J & K were about 4 percent and 6 percent. The Northern States on an average have spent less

than 0.40 percent of their state income on higher education. The proportion declined to about 0.30 percent during the later years of the study. Further, this proportion was highest for J&K and lowest for Rajasthan. The proportions remained essentially stable in case of J&K and UP. But, they declined in case of HP, Haryana, Punjab and Rajasthan.[5]

The share of total higher education budget of the Northern States in overall budget of these states registered a decline. Importantly, it has happened in the case of every state under consideration. The Northern States as a whole have provided between 7.76 percent and 9.89 percent of their total education budget to the higher education. But, the proportion has decreased over the years. Rajasthan, Uttar Pradesh and Himachal Pradesh have provided the lowest proportion (around 7-9 percent), and the rest three, i.e. Haryana, HP and UP the highest (around 12-14 percent). It is to be noted that the proportionate spending on higher education over period has registered a decrease with varying amounts in case of all the states but for UP in which case it improved marginally. The proportionate decline is more noticeable in the case of Punjab, where decline was to the extent of 3.37 basis points during 2004-05 over 1991-92.

On per capita basis, the public expenditure on higher education in case of Northern States as a whole, at real prices, increased by 1.19 times. During 1991-92, at current prices, the highest amount of per capita spending on higher education was incurred by Punjab (Rs.38.86) and the lowest by UP (Rs. 10.55). But, during 2004-05, the highest amount was incurred by Haryana (Rs.98.74). The real growth rate in public spending on higher education in the Northern States (3.73 percent) was lower than that of overall education sector (4.20 percent), NSDP (4.15 percent), and state budgets (5.18 percent) during the study period. The trend growth rate of public spending on higher education in case of Northern States (3.73 percent) was less than that of All States (4.74 percent). The growth rate in public spending on higher education was the highest in case of J&K (6.37 percent) and lowest in Punjab (2.15 percent). But, it is to be noted that the education sector got neglected even in the case of All States also. Here, the growth of state budgets and state incomes were more than that of the education sector in over all and higher education.

The higher education sector in the Northern States has suffered setbacks so far as the budgetary allocations are concerned. The loss of public resources would seriously disturb the resource equilibrium of the various institutions with far reaching consequences for the qualitative as well quantitative growth and expansion of higher education. The region would be deprived of from the immense and multifarious social benefits which accrue from the growth of higher education. It is worth mentioning that the foundation of education sector including the higher education rests on the continued and enhanced supply of public resources. The private resources could at best supplement the public resources but no where they succeed in replacing the latter.

The advanced countries too have been spending significant proportion of their budgets and national income on education, either through the direct provisioning of the service or through the large number of indirect types of schemes and policies. The Northern States has to seriously re-examine their overall approach and understanding

towards the higher education. The state withdrawal from higher education and general politico-administrative apathy has to be ended in order to compete in the emerging knowledge society. The situation demands the transformation of the high economic growth into higher education inclusive growth. It could happen only when there is liberal public funding of higher education. Therefore, there has been a dire necessity to enhance the supply of public resources to higher education in a time-bound manner in a comprehensive policy framework which could be ensured through certain points increase in annual allocations on continuous basis along with enhanced productivity of resources.

Notes

The authors acknowledge with thanks the highly useful comments suggested by the anonymous referee on the earlier submission. The present version is a revised one. The usual disclaimer applies.

1. A recent study by V. Rani (2007) shows that, in case of Punjabi University, Patiala, the funds from government sources (in 1990-91) were 90.04 percent and from the students 9.96 percent of the total recurring cost of the university. However, the funds from the government registered a drastic decline and reached 27.68 percent till 2004-05 whereas that from the students these increased to 72.32 percent.
2. GER (Gross Enrolment Ratio) is defined as the percentage of enrolment in higher education to the estimated population in the age group of 18 to 23 years.
3. The 42nd Constitutional Amendment of 1976 has shifted the subject of education from the State List to the Concurrent List of the Constitution. So, higher education in India has been financed by both the union government and the states/UTs.
4. The 35 states and UTs of the country have been classified by the NAAC into five regions, with number of states and UTs given in brackets, as follows: **Eastern-Region (06)** – Bihar, Chhattisgarh, Jharkhand, Orissa, West Bengal, Andaman and Nicobar Islands; **North-Eastern Region(08)** – Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, and Tripura; **Northern-Region (09)** – Haryana, Himachal Pradesh, Jammu & Kashmir, Punjab, Rajasthan, Uttarakhand, Uttar Pradesh, Chandigarh, and Delhi; **Southern-Region (06)** – Andhra Pradesh, Karnataka, Kerala, Tamil Nadu, Lakshadweep and Pondicherry; **Western-Region (06)** – Madhya Pradesh, Maharashtra, Goa, Gujarat, Daman and Diu, Dadra and Nagar Haveli (Manjunath, 2006).
5. It has been recommended to allocate at least 1.5 percent of NNP/NSDP to higher education and balance to the other levels of education other than higher education (GOI, 2005) out of the allocated 6 percent of GNP on overall education sector as was recommended by New Educational Policy(GOI, 1986 &1991). However, this objective has remained elusive (Tilak 2006).

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RESEARCH ABSTRACTS

Caste Factors in the Labour Market

Title	Caste Factors in the Labour Market: A Study of IIT and HBTI Graduates from Kanpur at the Entry level.
Research Scholar	Aarti Srivastava*
Supervisor	Prof. Binod Khadria
Department/University	Zakir Hussain Centre for Educational Studies, School of Social Sciences Jawaharlal Nehru University, New Delhi
Degree Awarded	Ph.D
Date of Award	September, 2005
Availability of Thesis	Jawaharlal Nehru University, Library

A nation's strength is predominantly determined by its natural and human resources. The key actors in the latter are the knowledge workers. The expansion of service sector is one of the stages of economic growth. A new society is emerging in the 21st century, where knowledge is the primary 'production resource; especially our scientific and technical manpower, which is extremely competitive globally. Technical education is one of the most crucial components of resource development with great potential both for adding value to products and services and for improving the quality of life. Undergraduate technical education is the first tier process where one learns the basics and the methodology of performing technical tasks. There has always been a strong link between the quality of technical education and industrial productivity. The broad objective of technical education system is to supply qualified and more competent manpower, thereby creating scientific temper in society and meeting societal needs. With rising quality consciousness and price competitiveness the quality of 'workforce' has come to acquire major significance.

The study of the relationship between caste and the economy has not received much attention. In analyzing the problem of employment discrimination, 'internal labour markets' play a central role. They do so by selecting workers at the 'ports of entry' and by conferring privileges upon them. This can be properly sustained only if there is continuous supply of well-trained technical personnel, sourced from all sections of society. The study attempts to find out the role of caste in the educational performance of the students who enter the labour market via the technical institutes, and examines pre-market differentiation, if any, while imparting the technical

* Department of Foundations of Education, National University of Educational Planning and Administration, New Delhi-110016, email: aarti@nuepa.org.

education. To study the operational market differentiation a 'graduate follow-up survey' of Indian Institute of Technology (IIT) Kanpur and Harcourt Butler Technological Institute (HBTI) which is located in the formers vicinity, was undertaken. With the use of information technology, two batches were tracked through e-mail for cross sectional and longitudinal advantages. The study is mainly empirical, based on primary data collected by administering structured questionnaires to final year engineering students and to two previous batches, the sample size being 310.

The Indian economy has survived a full decade of the new policy regimes. The precise effect of the reforms implemented so far in various segments of the Indian economy need assessment with empirical rigor to plot their pace and pattern of recent years, specially keeping the socially disadvantaged groups in mind. The question is whether to take an overall view of identifying caste as the 'real group' or an individual. Thus to consider 'caste' as a definable attribute for certain groups offers a dim solution. Caste assumes two different meanings, an empirical and an ideological one. The caste system, a pan Indian institution, is above all a system of ideas and values, a formal, comprehensible system, which comprises the specialization and interdependence of the constituent groups. In the contemporary time, we see the same system as professional education 'specialization' interdependence of various horizontal and vertical segments of the market, keeping in mind the economy of the nation. This relationship links division of labour (vertical) with hierarchy (horizontal) with economy in the labour market.

It is important here to distinguish between the inequalities due to occupation, education and income, from those due to caste and gender. The two types of inequalities are no doubt intertwined in their operation, but they are different in their origin and in their legal and moral bases. The educational system provides the credentials for entry into the new class, including the higher levels of occupational system. Moreover, occupational ranking is correlated, though not in any simple or straightforward way, with educational attainment and qualification. Thus this study has been undertaken to generate more empirical evidence on the long-term consequences of caste factors in admission and entry in the labour market of fresh technical graduates.

Segmentation in labour market essentially is either horizontal or vertical. The former involves separating complete production system in which labourers have some common characteristics. This aspect has been looked at by taking two types of engineering institutes – IIT which caters to national talent and HBTI which is confined to one state. On the other hand vertical stratification refers to the division of labour market on the basis of personal characteristics such as sex, age, experience, education. However, the above two types of stratification are not always mutually exclusive.

It is perhaps relevant to draw a distinction between labour market 'discrimination' and labour market 'segmentation'. In labour market, 'discrimination' arises when some individuals are paid less than others (wage discrimination) or are less likely to be employed (job discrimination) because of factors, such as gender, race, appearance or other personal characteristics unrelated to their abilities. 'Segmentation' on the other hand, refers to division of labour market into separate

branches of engineering in which mobility is limited. Besides, discrimination is usually involved in segmentation since some factors must determine which particular social group has access to which particular labour market segment, where discrimination exists as discrimination segmentation. By and large, empirical results prove that educational differences are the most common characteristics of differentiating various segments.

The study has been undertaken in Kanpur, the largest metropolitan with high literacy rate in the state of Uttar Pradesh, historically the original home of the caste system. The city also houses the oldest engineering college in the state along with the world famous Indian Institute of Technology, one being a national institute catering to students at national level while the other being a state engineering college having students primarily from Uttar Pradesh. Being an industrial city, 'industrial – institutional' linkages are already well formed here. Two separate questionnaires were designed to cull out information from final year students and fresh entrants in the labour market from both the institutes. The questionnaires captured both quantitative and qualitative information. Inputs from the training and placements were also considered, as this department is an integral part of the institute and serves as a link between institute and labour market. It is also the marketing section of the institute to launch its students in the job market.

The results of the study show that caste does have an important role to play in the pre- market performance of students in both the institutes, though it is neutralized in course of time with performance as the sole criterion for upward mobility in the labour market. This is a critical input for policy formulation as technical and professional education may be used to address the challenge of the prevalent caste system in our nation. Various parameters with respect to caste have been studied with the help of percentages, cross tables, correlation and regression analysis. The qualitative explanation brings to light the economic, sociological and psychological factors with the help of case studies. Educational system promotes individuals solely on the basis of merit, which is only judged by one's capacity to pass an examination. The basic ability, which is primarily tested at the entrance level, emerges and remains the main criterion for one's upward mobility in the labour market. Educational credentials act as surrogates for qualities, which the employer regards as important indicator of higher level of performance. This characteristic of education provides an urge to obtain more education as the only way of securing a competitive advantage in the labour market

The scope of the current study is vast and therefore becomes its limitation too. The study offers immense potential for research with respect to gender, region and other types of technical and professional education. The labour market is dynamic and therefore a static study has chance of becoming obsolete too soon, unless data is maintained and tracer study undertaken as a follow-up.

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An Investigation into the Role of British Council Libraries in Higher Education in India

Title	An Investigation into the Role of British Council Libraries in Higher Education in India
Research Scholar	M. Lalitha*
Supervisor	Prof. G. Devarajan
Department / University	Department of Library and Information Science, University of Kerala, Thiruvananthapuram
Degree Awarded	Ph. D
Year of Award of the Degree	2006
Availability of Thesis	Kerala University Library, Thiruvananthapuram
Number of Pages	490

The role of networked libraries in promoting higher education in developing countries is multi-dimensional: they have to provide quality information and quick access to information, manage information, educate the users and also facilitate teaching and learning. The network is expected to act as an intermediary between scientific information and users, and has to develop innovative facilities to meet this end. In a country like India, which has 293 universities and university-level institutions, over 13000 colleges, about 7.5 million students and over 3,50,000 teachers, such libraries play a key role in satisfying the ever-increasing demand, supplementing and supporting the work done by the university libraries. But, in India, the universities and colleges suffer mainly from lack of vision and finance. The system has expanded considerably but in unplanned ways. Resources were never committed to match the good intentions and well-meaning policy pronouncements. As a result a vast majority of the campuses across the country today present a break picture rundown and ill maintained buildings, libraries without books and journals, and laboratories without equipment. Academic libraries also suffer from the same ills that plague the universities and colleges, and are not able to perform as well as they are expected to.

It is here that libraries like those run by the British Council come to the help of students. However, not many studies have been done so far on the British Council libraries in India and studies at a country level are few and far between. Moreover, no studies have been undertaken recently concerning the British Council libraries alone, in spite of the fact that the last two decades have witnessed tremendous changes with

* State Council of Educational Research & Training (SCERT), Vidya Bhavan, Poojappura, Thiruvananthapuram 695 012. E-mail:rlsshome@gmail.com

regards to library policy, book collection, book selection, range of services and even the target audience. Research and reports on British Council libraries in India have so far restricted themselves to the marketing of their services or something in general about the services. Hence the present work, "An Investigation into the Role of British Council Libraries in Higher Education in India", attempt to trace the history of the British Council in India, with special emphasis on their library work and the work, done by these libraries to promote higher education in India.

The research used a content-context-process framework to investigate the role played by British Council libraries in higher education in India. The major objective of the research was "to study and critically evaluate the aims, structure and functions of British Council libraries in India and analyse their role in promoting higher education in India and in fulfilling the educational and informational needs of the higher education sector in India." Initially, based on the researcher's direct observation and participation in the Council's activities for over a seven-year period in the British library network, this thesis used a variety of published information, policy documents, and interview data to examine the policies adopted by the British Council for its libraries and the possible benefits it has given to the various academic user groups in India.

In order to attain this goal, specific objectives were formulated (i) to trace the origin and evolution of British Council Library Network in India and critically evaluate its performance in relation to promotion of higher education (ii). to study how policy formulation for British Council libraries is shaped by changing needs in higher education sector in India; (iii) to ascertain information needs in the sector of higher education in India and find out how far the British Council libraries meet these needs; (iv) to study how the structure and organization of the British Council libraries relate to user needs in India; (v). to examine their policies regarding book acquisition, classification, distribution and service standards, and compare these with the corresponding policies and practices in Indian libraries; (vi) to analyze the major aims and goals of British Council libraries and evaluate how the work in higher education sector in India is related to them; and (vii). to study the perceptions and responses of Indian users regarding the organization, collection and services of British Council libraries.

A questionnaire was administered only in the British Council library, Thiruvananthapuram, taking it as the representative of the 11-library British Council Network. Over 500 questionnaires were distributed to British Council Library members, Comprising students, teachers and researchers studying/working in the various colleges, university departments and research institutions in and around the city. There were 350 students in the group.

The methodology used in the study included literature search and questionnaire survey supplemented with interviews on a selected basis and analysis of the British Council and library records and policy documents.

The resultant thesis has been organized eight chapters: Chapter 1: Introduction, highlights the research questions and objectives; Chapter 2: Review of Related Studies, covers various monographs, studies, articles and in-house publications of the Council;

Chapter 3: Role of Libraries in Higher Education in India, presents a review and analysis of libraries in the higher education sector in India; Chapter 4: British Council Libraries: International Scenario; Chapter 5: The British Council Libraries in India, trace the evolution of the Council libraries worldwide and in India; Chapter 6 British Council's Library Policy: Analysis, examines how the Council's policies have brought about the slant towards education; Chapter 7 Analysis covers the survey conducted ; and Chapter 8 is on Findings and Suggestions, these are five appendices also

The British Council was set up to disseminate a wider knowledge of the United Kingdom abroad, to promote the knowledge of the English language and to develop closer cultural relations between the United Kingdom and other countries. But unlike some of the other cultural institutions of diplomatic representations, it has embraced a broader definition of what culture is than its founders ever envisioned. The setting up of a library network in India bears testimony to this. The analysis of the Council's policies suggests that the British Council libraries in India, in spite of being a public by virtue of their collection and membership norms, have increasingly- and perhaps unintentionally-acquired a slant towards higher education in general and students (i.e. the Council's T3 category) in particular, despite the frequent and often abrupt changes in policy direction. Moreover, in India, the Council's libraries have increasingly become the visible face of the Council's various activities. This phenomenon is in contrast with the Council's operations elsewhere (for example in countries like Egypt, Africa or Europe) where the thrust is seen to be more on the Council's stated objectives of propagating English culture and language rather than on library-related activities. This can be attributed to certain unique characteristics of the Indian academic environment, especially in larger Indian cities, viz. (i) clarity about their needs, (ii) the wide prevalence of English language as a medium of instruction in higher education, and also (iii) the Council's unwavering customer focus and innovation.

Major Findings

The research finding suggest that the British Council libraries seem to participate directly in the university's teaching, research and the development of new knowledge by

(i) providing equitable access to information and recorded knowledge
(ii) acquiring, organizing and making available information resources appropriate to the users' educational needs.
(iii) teaching information skills to all library users as the basis for lifelong learning; and
(iv) playing a central role in promoting learning by providing expert and innovative access to information and the worldwide knowledge to a wide range of users within and even outside the higher education sector through high quality services and collections.

The study showed that British Council libraries contribute to India's development in the field of education by providing:

- the students and teachers in the higher education with what they need. This is done through the maintenance of a visible and widespread library network in India. Appropriate resources are concentrated on libraries where they are most needed and used by priority groups that include students from the higher education sector;
- the students, especially postgraduate and professional students, with a stock designed to meet their education and information needs. The stock is replenished and updated regularly for this purpose;
- quality information for study and for professional updating through books, journals, CDs, websites etc;
- library members, which include students of higher education sector, with a professionally acceptable level of service. In addition to the traditional services like reference and lending, online services beneficial to students, especially those doing postgraduates and research are also provided to them through the network.
- library resources as identified through various surveys and other feed-back mechanisms. Information and thought content (primarily of British origin) are made accessible to the right people (including postgraduate and professional students) at the appropriate time, which are adequate and up-to-date enough to be effective; and
- access to online and managed learning opportunities which are affordable and work related.

The findings showed that the British Council libraries in India conform to the norms laid down for academic libraries by various authorities (e.g. Radhakrishnan, Kothari, UGC) that state that an academic library should ideally be a provider of information and also don the role of an educator, educationist and facilitator.

This research also studied the perceptions and responses of a stratified sample of more than 350 users (teachers, students and researchers from educational and research institutions) in a British Library to assess the extent to which the library met the user needs. This empirical data, jointly with various other data sources mentioned earlier lead to specific recommendations for further strengthening the activities of the British Council libraries:

- Adopting strategies for more effective user interaction and education and strengthening the "Know your Library" sessions.
- Introducing new focused services (eg. developing the general service for students like Internet and electronic journals) with an initial induction and training on research methodology and use of databases, followed by personalized support to the students' research needs.
- Keeping in touch with the universities in the locality / area, study the curriculum and provide what is relevant, and establish closer links with libraries in the higher education sector, thus becoming learner centric rather than institution-centric.

It was also found that a vast country like India can never be effectively served by just ten or eleven British Council libraries, that too unevenly scattered all over the country. More information centers are to be opened in areas not adequately represented by the present network so as to fully cover the Indian academic community. More frequent user education programmes and open houses are to be conducted to create greater awareness among the users about the sources available and services offered, and services to the teachers are to be improved.

Suggestions for further research include assessing the British Council libraries' actual contribution to education and students by studying how the services affect students' cognitive and effective outcomes; the impact of electronic resources, particularly in comparison to traditional library resources; the needs of British Council libraries' users; the roles the British Council libraries play in the lives of readers, especially the sociological aspects; analytical study of the circulation statistics to find what kind of reading generates most interest; and the sharing of cultural experiences as promoted through the physical manifestation of the British Council's 'cultural diplomacy'.

An area for further research (that would be of relevance to university libraries in India) will be the processes that have enabled British Council's libraries to wield a greater influence among the academic community in India despite being public/ specialist/ contact libraries with a small membership base and reach.

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BOOK REVIEWS

Gupta, ASHA (2008): ***Education in the 21st Century – Looking Beyond University.*** Shipra Publications, Delhi, 2008; Pages 319, Price Rs. 750.

As the title of the book suggests, the author Dr Asha Gupta has tried to analyze the contemporary higher education (HE) and to look 'beyond the traditional concept of the university to understand the rapid changes occurring in the realm of HE and to find causes behind them.'

In this endeavour the author covers a whole range of issues such as emerging trends in higher education; the idea of a university then and now; status of higher education in India and role of private initiatives and vocationalization and the role of technology etc.

Asha Gupta has outlined that the objective of her book is "to understand the causes and consequences of the transformations taking place in higher education without which it is difficult to grasp the rapid changes taking place in the area of higher education at individual, societal and global levels."

The objective is truly vast, ambitious and admirable. The author in writing the book has put into a large amount of effort and scholarship for which she deserves credit. The book covers many other issues, like quality, autonomy, regulation of education, lifelong learning, global trends in HE, role of technology and other concerns that have come to the forefront of higher education. She has almost dealt with the whole gamut of higher education in her analysis.

In order to discuss these issues, the author sometimes makes very broad generalizations which distract the reader from the main issues under considered. While referring to the entry of the corporate world into the area of education, she writes: In reality the capitalist state does not want the students to attain 'real education' or full intellectual growth. This tendency is rather odious when she generalizes it in the Indian context: We should realize that in the era of globalization and market economy, economic and other incentives can yield better results than rigorous regulatory devices.

She also makes some erroneous statements like: 'there is a paucity of reliable data on education in general and higher education in particular' and

'Instead of making higher education accessible to the vast majority, it would be wise to make it more useful and meaningful... higher education should remain higher. It should not be made so cheap or easily available...'

This goes against the author's own statements elsewhere in the book and also against the thinking of educationists and policy makers in India who want the percentage of students of the relevant age group in higher education to increase from about ten at present to about double this figure in the next ten years so that it can compare with the figures in at least advanced Asian countries if not with the USA or European countries.

The Planning Commission of India has allocated substantial funds in the Eleventh Plan for this purpose. This is being done in order that skilled manpower in various areas may be made available for the complex requirements of the country. Towards this end, several universities, IITs, IIMs, and other institutions of higher learning have already started and many more are likely to come up in the next few years.

Covering as it does so many diverse issues, it is natural that the book is loaded with several ideas and references – some well known, and some novel in the Indian context. For instance, she talks of 'click universities' to supplement the 'brick universities' that exist today. The author needs to be complemented far discussing so many diverse issues and concerns of higher education, leaving virtually no issue untouched. Dr Gupta displays her erudition and the considerable labour she has put into researching dozens of books, journals, reports and other documents for her book. She has acknowledged meeting and discussing various aspects with several well-known scholars, both Indian and foreign. In the process, her book has become very cumbersome and complex that it is difficult to comprehend the author's own opinion on various issues. At times it seems that no justice has been done to the issues being considered, and the analysis appears to be rather over-simplistic and shallow.

For example, the book talks of Isaac Newton discovering the law of gravity by watching a falling apple and the overhead motion of the moon around the earth. Firstly the story is apocryphal. Secondly, even if it is true it does not take into account the fact that Newton was one of the greatest mathematicians of his time and invented calculus along with Gottfried Wilhelm Leibniz in 1680s. Thus only a seasoned person who has the necessary technical skills and has delved deeply into physical events can provide answers to the causes of these events.

The author has also made certain puzzling statements. In Chapter 9, she talks of the collapse of communism leading to massification of higher education. Former communist countries like Soviet Union and East Germany, along with China, had (and have today) a large flourishing higher education sector.

Talking of outside funding, the author points out at the inherent danger of this trend. It often dictates the type of academic work or research being carried out in institutions being funded by external sources. This is especially true in western countries but the trend is appearing in certain Indian institutions also, specially the IITs where past alumni donate huge amounts of endowment funds for carrying out research in certain specified areas.

Globalization, internationalism and market economic forces are affecting the education sector, with its attendant problems, according to Dr Gupta. This is also creating the large scale entry of private initiatives in higher educaton with many *for-profit* institutions emerging on the scene. Education has become big business not only in USA, UK, and Australia but even in India, especially in Karnataka, Maharashtra and elsewhere. This necessitates introducing *employable* courses like commerce, management, law, IT, engineering, and hospitality, and there is a mushroom growth of private institutions that charge hefty fees from students. The author writes that there is a debate whether *for-*

profit higher education institutions should be legally allowed. The debate has long been settled in India where the Supreme Court has ruled in favour of private educational institutions. As a result, hundreds of such private institutions have come into being in order to meet the ever increasing demand of higher education which the state alone cannot meet.

But the author is right when she writes that because of trends towards globalization and market economy, issues of autonomy, efficiency and effectiveness of privatization of HE have come under scrutiny.

In the concluding chapter entitled "Looking beyond Universities", the author attempts at looking at alternate models of HE and its various aspects like *massification*, privatization, commercialization of education, distance, anytime, anywhere education, etc.

Education in the 21st Century is a comprehensive and informative book that touches upon many diverse areas of HE and gives interesting facts bout them. It also gives a brief account of some ancient institutions like *Nalanda* and *Taxila* that existed in India around 700 BC.

The book would be valuable for those who are interested in the various issues and problems of higher education. However, its quality would have improved if the large number of typos present in the book had been screened out by careful editing and proof reading.

4, Mall Apartments, Mall Road
Delhi-110054

Ravi P Bhatia
ravipbhatia28@rediffmail.com

Masemann, VANDRA; Bray, MARK & Manzon, MARIA (Eds) (2007): ***Common Interests; Uncommon Goals – Histories of the World Council of Comparative Education Societies and Its Members.*** Springer, Comparative Education Research Centre, The University of Hong Kong; China; ISBN 978-962-8003-10-6; Pages 384; Price (undecipherable)

Presented in 31 chapters, with three major sub-themes title: (1). The World Council of Comparative Societies (WCCES); (2) WCCES Member Societies; and (3) Lessons from the Histories, the present publication carries a history behind the histories recorded and unfolded. Comparative Education is a relatively new area like many other academic areas that grew and developed as responses to either certain specific needs of a society or as part of the world movement. While the present subject area grew and developed in the United States of America since it wanted to keep pace with Europe if not exactly excel its achievements, the WCCES was founded in Canada. It brings together a number of national, sub-national, regional and language-based comparative education societies. The basic idea behind this "Discipline", if it could be called discipline, remains the same. Those wish to compete need it the most. While most other areas have their origins in

basic human curiosity, this area somehow differs from them in its goals. It is precisely for this reason that it needed a World Council, and as expected, its origin lies in one of the advanced countries in the world.
The goals of the World Council are:

- To advance education for international understanding in the interests of peace, international co-operation, mutual respect among peoples and observance of human rights, and
- To improve education systems so that the *right of all to education* may be fully realized.

The statutes of the Council specify two professional goals as well, namely:

- To promote the study of Comparative and International Education throughout the world and enhance the academic status of its field, and
- To bring comparative education to bear on the major educational problems of the day by fostering co-operative action by specialists from different parts of the world.

The statutes further the role of WCCES to enhance the status of the subject area.

The first sub-section has 8 chapters that give the chronological history of the WCCES, mostly written by its Presidents or office bearers. These histories are authentic as they have been written by the ones who not only are insiders but also active participants in its development and growth. Since I too figure as part of a research project sponsored by Michel Debeauvais, when he held the reins of the WCCES, I can vouchsafe the authenticity and sincerity of each of the Presidents and senior functionaries.

The present publication, however, is the result of the efforts made in the University of Hong Kong as part of the activities of a centre set up for the Studies in Comparative Education. As one could easily surmise, this centre is one of ways by which China can remain abreast of the advances made in the developed world.

The second sub-section deals with the histories of some thirty individual societies in the rest of the world. Interestingly, all these societies do not have uniform goals and their achievements differ from society to Society. For instance, Indian society of Comparative Education is dysfunctional and its members have no vision of the Potential this area has and neither does the government feels interested in its development.

Of late, India too has shown a desire to develop its educational system and as a proof of this desire, it has enacted a slew of educational laws ranging from making education as a fundamental right, but unfortunately, neither the government nor its people have sown any desire to learn from others. The proof of lack of desire is that the government of India has yet to have a Department of Comparative Education in any of its national institutes.

The concluding chapter of the book is suitably titled: Lessons from the Histories. Two of the editors namely Mark Bray and Maria Manzon, in a chapter written by them, titled **Comparing the Comparers** explain the meaning and purpose of writing this book.

The chapter shows clearly what WCCES has achieved and where it continues to show chinks in its armor. Read the quote:

"The World Congress itself has mirrored in microcosm some of the economic power, and networks of political influence of the world outside of the comparative education. Some of the strains of that external divided world are likely to become more visible in the politics of the Council"

The title of the book itself reflects the division in goals and purposes. "The Congress itself is evidence that people will work together to achieve not only common but uncommon goals as well".

One wonders whether we in India are as yet ready to learn from this book and the subject area, or continue to frame laws to start new institutions without a vision or preparing an infrastructure or ground for any meaningful achievement.

I am sure this book will become, in due course of time, not merely a guide for future development of systems but an eye opener for those societies that have as yet to elect a model or frame one to act upon. This book is a monumental achievement in a much neglected area in most of the world.

Pocket A-4/ 206,
Kalkaji Ext, New Delhi

R P Singh
profrpsi@gmail.com

Antoine Gioan PIERRE (2008): ***Higher Education in Francophone Africa – What Tool Can Be Used to Support Financially Sustainable Policies.*** Africa Region Human Development Department, The World Bank, Washington, D.C.; ix+36, ISBN 978-0-8213-7470-2.

Contemporary policy debates in French-speaking countries of Africa have largely focused on the issue of access to higher education and research institutions in response to ever increasing trend of student population every year. While increasing the demand of access to higher education is clearly important, the issue of "how" to meet this demand in a situation where financial resources do not cover current requirements, is a challenging task before the policy makers for establishing balanced policies that are relevant, financially sustainable and socially acceptable.

The present working paper is mainly focused on the funding of higher education and does not emphasize the qualitative match of education supply to economic and social demand, although this does have a major impact on the economic, social and operating costs of the higher education and research sector.

Considering the state of crisis in a situation of wider disparity between available resources and the requirements vital to providing high quality education, the present paper provides the understanding of different situational factors related to achieve a

balance that satisfies social demand, economic reality, budget constraints and educational requirements.

By analyzing the structural factors in Francophone countries, the author to an extent provides a strong basis of his argument for the explanation of this complexity against the existing facets: inadequate coordination between policy formulation and implementation, absence of medium and long term sector development approach, less motivation of technical and financial partners for financial support as a result of low social and economic rate of return, and mock autonomy of the higher education sector.

About the methods of resource allocations, author has suggested that the institutional capacity building mechanism as well as institutional autonomy are must for affording real budget allocation decision authority with regards to the matter of reforms and allocation of resources for higher education sector.

The absence of proper information system, capable of providing essential management data for the entire sector of higher education, as per the author, is one of the major obstacles for the formulation of financially sustainable policy for higher education in Francophone Africa.

Before advocating for the modification of the existing structure of management and planning of higher education and research sector, this analytic paper highlights the important constraints that undermine the development of the sector and make the policy choices difficult.

Critically examining the varying degrees of the constraints in all Francophone African countries as drawn from high social demand and limited market demand to inflexibility nature of budget allocation for higher education, this paper addresses these issues effectively by providing viable alternative solution to the given problem.

The whole situation of the entire Francophone Africa's higher education revolves around three key issues: *student population trend, unit education costs, and resource mobilization*. The author presumes that the proper coordination and management of these factors can lay the foundation for financially sustainable and socially acceptable policies for Francophone Africa.

Taking the issue of increasing trend of student population in these countries, as projected in this paper, the expected cost for higher education would amount to US$4 billion for the period 2006-15. Based on this projection, it is assumed that the additional funding requirements on the part of national budget could be around US$3 billion for the period 2006-15, which poses really a difficult situation for all the countries to meet this demand. In order to manage the system effectively, the author has provided realistic tools or mechanisms, like controlling the expansion of student flow into higher education through selective university process based on standard to obtain the *baccalaureat* (practised only in University of Niamey in Nigeria and University of Antananarivo in Madagascar), regulation of student flow at secondary education level by introducing short-term technology based courses which would cater to the market needs, limiting the number of years of study in higher education through effective scholarship system, allowing the private sector for higher education through the contractual type approach.

These claims to manage student population of the author are strongly drawn from the previous empirical studies in these countries.

An effort has to be done to reduce the education unit cost to manage the increases in the population with a limited budget allocation. The management of internal resources concerns aspects, such as personnel costs, social expenditure on students, and operating costs and teaching related expenditure. It is clearly evident that more than 45 percent of the resources earmarked for the operation of the higher education sector, are allocated to student assistance, which as a result reduces the available resources for other areas of expenditure. Cutting the social expenditure on students scholarships to the extent of budgetary capacity based on certain norms and encouraging the private funding in student housing and food services through attractive incentive systems, seem to be effective measures to budget reallocation. Similarly, optimizing expenditure for other aspects, as teaching and operating costs, need to be done by installing some new measures like implementation of wage bill and controlling of overstaffing in the organization, in order to increase the effectiveness of the system. These effective measures can provide flexibility to refocus the available resources and put them to the most effective use.

In the last part of the paper, the author focuses on meeting the financial requirements of the higher education through effective use of resource mobilization tools, such as introduction of short-term vocational and market oriented courses, where students financial contribution for the courses make it possible to increase the self-generated income. Mobilizing the external aid or funding for meeting the financial requirements of higher education is another suggested measure.

Lastly, the author has emphasized validity and strongly that all these suggestive viable tools can be effectively used for making a long-term financially sustainable policies for higher education only when greater autonomy is given to the operational units.

On the whole, this World Bank paper comprehensively analyzes the casual factors for the present state of crisis pertaining to the higher education and available resources in Francophone Africa. This analytical study on Francophone Africa provides ample evidence for the policy makers and planners of other countries undergoing similar kind of experience for developing a financially sustainable policy of higher education. Putting much emphasis on the involvement of private sector in policy making and regulating financially sustainable higher education and research systems, the study throws light on the need of change in policy perspective. However, the paper makes it a doubtful issue on giving more autonomy to the operational units of higher education for effectively managing the available finances and at the same time maintaining the quality in higher education and research systems. This issue has not been focused strongly by the author. It needs to be addressed urgently for achieving autonomy to build an effective framework for the policy formulation in higher education under the dynamics of market dominated private forces.

Research Scholar
NUEPA, New Delhi

Pankaj Das
daspankaj4@rediffmail.com

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Warning SUSANNE (2007): ***The Economic Analysis of Universities: Strategic Group and Positioning.*** Edward Elgar Publishing Limited (UK), Pp. 202. ISBN 978-1-415-84542-833-4 (Hardbound)

This book is the outcome of the dissertation work done by the author at the Department of Economics, University of Konstanz, Germany. The position of public universities in the higher education sector of Germany has been analyzed in the book, both from theoretical and empirical standpoints. Teaching and research quality have been considered as the two main strategic variables of universities to determine the position of a university in a national higher education sector. To test the theoretical reasoning, data from German public universities have been used for the study.

The first chapter of the book introduces the line of the argument of the book. Here, the author provides information about inputs, process and output of his research in a summary form, including a brief introduction to the higher education sector of Germany, theoretical and conceptual outlook of the model applied, the variables and methodology of the study and empirical evidences of the analysis.

Some stylized facts and institutional information on German higher education have been presented in chapter two of the book. The general framework underlying the chapter is a production-theoretic framework which assumes that institutions of higher education can be seen as modern production units that use capital and labour as input factors and producing at least two outputs, i.e. teaching and research. The Germany's higher education sector compresses of two groups, namely Scientific Universities and Universities of Applied Sciences and the present analysis excludes the later group as it differs substantially from the former in providing teaching and research. Universities of Applied Sciences offer practically-oriented education and focus on the application of scientific methods, whereas the group of Scientific Universities includes all classical universities, colleges of theology, colleges of education, colleges of arts and music. The data on number of institutions, growth of enrolment, degree and diploma holders, publications in different disciplines, faculty-wise doctoral degree awarded, are presented from various secondary sources. The chapter also provides information on the basic inputs of institutions, like staff and expenditure. Faculty-wise per student expenditure and per student staff data have been presented to get a clear-cut picture on these two basic inputs. Finally, the chapter ends with posing the different aspects like teaching, research and financing of higher education sector of Germany in the international context. The data provided from OECD on these aspects show that Germany has crossed half the way to compete in the international arena of the higher education sector.

The next chapter reviews the literature on positioning of universities, with a special attention on the two main attributes, namely teaching and research. The theoretical arguments and empirical evidences concerning the degree of heterogeneity across universities on these two attributes have been focused here. There are theoretical

explanations for how universities allocate resource to teaching and research. The two approaches examined more in detail are the concept of strategic groups from management theory and the differentiation models from industrial organizations for analyzing the heterogeneity among universities. The theoretical literature discussed here has done well in identifying the basic trade-off that all universities face, i.e. the trade-off between improving teaching and research. The important reason for the existence of this type of trade-off is the scarcity of resources. If universities place too much emphasis on teaching, the quality and quantity of research output declines, causing the reputation of the university to suffer. On the other hand, if the university over invests in research, the quality of teaching declines and enrolment declines. The theoretical literature analyzed here has correctly stressed the importance of the trade-off between research and teaching but has failed to understand how individual universities strategically behave, whereas the empirical research, based on the Data Envelopment Analysis (DEA), reveals the extent of diversities among various universities in Germany. Heterogeneity in performance across universities is significant, but it seems to be greater in research than in teaching. Hence, these empirical results contradict theoretical studies that have identified heterogeneity in teaching-related dimensions but have ignored heterogeneity in research which has been focused in detail in the following chapter.

Chapter four transfers the concept of strategic groups from business firms to universities, focusing on performance differences by examining teaching and research quality as strategic variables influencing a university's position. Different returns to teaching quality and research quality lead to a group structure in the sector of higher education. After a detailed discussion on the teaching and research as two strategic variables of universities, the chapter derives two testable hypotheses relating to this. These are: (a) Heterogeneity across universities is greater in research than in teaching; (b) The effect of research quality on productivity is greater in the high ranked group than in the low ranked group and (c) The effect of teaching quality on productivity is greater in the high ranked group than in the low ranked group.

While the first hypothesis concentrates on the strategic dimensions of teaching and research, the second hypothesis originating from the concept of strategic groups, tackles heterogeneity in performance across groups. Both the hypotheses have been tested in chapters six and seven with the help of Data Envelopment Analysis (DEA), cluster analysis and the Zivot-Andrews test. The concept of strategic groups turns out to be an appropriate framework for analyzing the structure of the German university system in terms of strategy and performance. Hence, the message from the chapter is that the well known elements of competitive analysis as performance, strategy, and structure apply not only to ordinary profit making firms but also deliver a suitable framework for analyzing the structure of higher education, if universities are mainly public funded, as in Germany.

Chapter five develops a two-dimensional formal differentiation model to reveal positioning of universities in equilibrium. Taking into account the stylized facts of German higher education, especially public financing and students paying no tuition and fees, the model concentrates on teaching and research as separate tasks of universities and

predicts equilibrium with maximum differentiation in one dimension and minimum differentiation in the other dimension. To analyze the positioning in the university sector, the author has used a three-stage game. Universities first choose teaching and research quality, in the second stage they decide on student support levels which are independent of teaching and research qualities but capture additional services a university provides for a student. This includes the provision of cheap public transportation, subsidizing housing etc. Based on these actions of the university, in stage three, with complete information students choose which university to attend. Backward induction solves the game applying the concept of a non-cooperative Nash equilibrium. The third stage of the game is solved by deriving a demand function for the two representative universities. Two hypotheses derived in this chapter are (a) Universities attach greater weightage to teaching than to research; (b) The probability that a university will be in the high-ranked group is mainly influenced by research quality, while teaching quality asserts only a minor influence. Chapter six tests the first hypothesis by analyzing the weights of the DEA model for teaching and research. Similarly, chapter seven tests the second hypothesis by running Probit regression and then evaluating the influence of research quality and teaching quality.

Based on data from 1997 through 2000, chapters six and seven test the hypotheses derived from the theory of strategic groups and the positioning model for German universities. Applying the non-parametric method of Data Envelopment Analysis (DEA), chapter six empirically reveals not only heterogeneity in teaching and research but also overall performance differences across institutions of higher education. DEA is the most appropriate method for performance measurement in the presence of multiple inputs and multiple outputs where no output prices are available. This method not only reveals the overall efficiency of a university but also provides a score indicating the degree of efficiency for each university. DEA is a non-parametric method to determine an empirical production function using linear programming. Considering the multiple input and multiple output character of a university, the basic idea is to generalize the single input and single output case. However, to explore the hypothesis of higher barriers of mobility in research than teaching, separate DEA models are used to provide scores for these two dimensions. The descriptive statistics of the teaching and research models suggest the existence of higher barriers to mobility in research than in teaching and also the heterogeneity across universities. The descriptive statistics of the teaching models also show that there are more changes over time in teaching than in research scores. This suggests that it is more difficult to change positions in research than in teaching and provide evidences for higher barriers to mobility in research than in teaching which supports the first hypothesis of chapter four as discussed earlier. The results obtained from the analysis of the multipliers from the overall DEA model are consistent with the third hypothesis from the positioning model of chapter five. Finally, a positive correlation between teaching and research results implies that both dimensions should be considered simultaneously.

Chapter seven examines the performance differences among universities with econometrics methods by considering teaching quality and research quality as strategic variables, controlling for given university characteristics, competitive factors and environmental variables, which are not under the command of university management. The result confirms that the impact of research quality and teaching quality on performance is heterogeneous as stated in the two hypotheses earlier. Processing General Least Square (GLS) regressions illustrates the positive impact of teaching quality and research quality on performance. However, normalized coefficients reveal that the effects differ in size, in particular the effects of higher quality research are greater than the effects of higher quality teaching. Additionally, the results from quantile regression have suggested heterogeneity of the impact of these two variables. Computing conditional predicted probabilities reveals a higher research quality effect, not only compared to the impact of teaching quality but also higher heterogeneity of the variable over the interval of research quality. Further, the differences in the influences of the two strategic variables on membership of the high-ranked university groups support the positioning model as stated in the fourth hypothesis earlier.

The book concludes by remarking on the theoretical and empirical results on positioning and strategic groups in a university sector and describing the recent developments in Germany's higher education sector. The theory suggests and empirical analysis confirms that it is rational for Germany universities to choose teaching quality and research quality such that these institutions of higher education differ from each other and form a group structure within the sector. This study sets out from the causal observation that universities in Germany are heterogeneous despite several decades of policy making directed at creating and sustaining homogeneous conditions in Germany's higher education sector. The present study analyzes how these universities actually differ both in theoretical and empirical terms of a publicly funded university system. For further strengthening of the relevance of the results of this study, the author has briefly provided the recent developments in Germany's higher education sector which clearly indicate that the German university system is about to become more openly heterogeneous than it used to be.

The theoretical models and empirical tools used in the present study of Susanne Warning is very rich and no doubt the findings of the study will help the policy makers of the country to minimize the degree of heterogeneity among universities in Germany. The study combines theory with empirical tests and is a first and useful attempt to shed some light on heterogeneity as the result of university decisions in a system politically designed to create and sustain homogeneity. The ideas, arguments and the theoretical and empirical tools developed in this book will be useful for further research in the higher education sector not only in Germany but also in rest of the world. Hence, with an exclusive combination of economic analysis and institutional data, this book will prove invaluable for anyone with a particular interest in the area of economics of higher education.

Research Scholar
NUEPA, New Delhi

Pradeep Kumar Choudhury
pradeepnuepa@gmail.com

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Nair, K. N. and Nair, P. R. GOPINATHAN (2008): ***Studies in Local Level Development-7, Higher Education in Kerala – Micro-level Perspectives.*** Daanish Books, Delhi.

The state of Kerala is known the world over for its outstanding achievements in the field of social development. It has in fact been consistently head and shoulders above the other states of India in terms of human development index. Therefore, researchers have taken abeen a good deal of interest in Kerala's development experience, and often described Kerala as the most researched Indian state. Despite this, the fact remains that the very high level of development in terms of literacy in the state has not actually led to a similar development in education, particularly in higher education. It is only now gradually gaining adequate attention. In view of this, this sleek and very well-brought out volume, containing five in-depth studies of the different facets of higher education in the state, is indeed a welcome addition.

The first paper presented as chapter two of the volume is by N. Ajith Kumar, entitled "Private Cost of Medical and Para-medical Education in Kerala". It is based on primary data collected from a sample of 283 final year students pursuing MBBS, BDS, B. Sc. and B. Pharma. courses in the year 2000 in the regular stream in the state. Details are given as to how private costs of medical education are estimated, and correctly points out that these should include not only the fee and non-fee components of academic cost, but also non- academic costs involved for maintenance like stay, hostel fees etc. Such estimates of private costs are worked out for each of the different courses and also for resident and non-resident students separately. The paper then goes on to discuss the capacity of the parents and the students to meet the private cost of medical education. This is done on the basis of estimated private costs and the distribution of households on the basis of income obtained by extrapolating 1994 NCAER data in this regard. The paper contains also a fairly detailed analysis of financial and non-financial barriers to entry, including costs of entrance coaching, sources of finance, socio-economic background of parents and educational background of the student. The in-depth and detailed analysis in the paper warrants the conclusion that medical education perpetuates the present social and income divide and does not help social and occupational mobility. The additional inferences are drawn that this sort of educational exclusion affects quality, is the reason for medical professionals not having empathy with patients, and unwillingness to go to rural areas. This should be taken note of by policy-makers. It has, however, to be pointed out that there are certain caveats regarding this otherwise good piece of work. Firstly, as pointed out by the author himself, the study proceeds under the questionable assumption that the opportunity cost of not joining the course is zero. Secondly, one is also a little hesitant to use the results of a study of different medical and paramedical courses in which the sampling technique used is such that the sampling fraction for one course- the B. Pharma. - is as high as 0.94 while in the case of MBBS it is as low as 0.25. Thirdly, it seems that the figures of the average annual non-fee academic expenditure per student given column 1 of Table 2.4 are erroneous. Lastly one also wonders whether income from plantations,

prominent in Kerala's economy, is included as agricultural income. This is possibly not as such and that may partly explain the marked exclusion of children of parents from the agricultural sector in medical and paramedical education.

The next paper, the longest of the five in the volume, by A. Abdul Salim is entitled "Opportunities for Higher Education – An Enquiry into Entry Barriers". It focuses on medical and engineering education and is written with the twin objectives of analysing the level of participation of various socio-economic groups in higher education in these two fields and also to identify the entry barriers to higher education in these two sectors. It is based mainly on primary data collected from the 267 students who appeared in the entrance exams for these courses in 1998-99 and belonged to six localities – two each from urban, semi-urban and rural areas- of Kozhikode district. The paper is split into four sections besides an introductory one. Section one gives the objectives of the study, defines the concepts used and describes the methodology followed. It stresses that private costs should include both academic and non-academic costs, and lays emphasis that costs incurred on coaching for preparing for the entrance examination be also included. Section two first gives an overview of the equality of opportunities in higher education in the state on the basis of earlier studies and then goes on to discuss in considerable detail the extent of participation of the different socio-economic groups in higher education, evaluating also the ability/inability of parents to meet the costs of the fields of higher education chosen for study. An interesting feature of the paper is that in the entire study, results are given for each of the three types of regions and analysis is carried out separately for aspirants cleared the entrance examination and also for those who did not. A very detailed analysis of the major financial and non-financial entry barriers to higher professional education is then carried out on the basis of the primary data. The concluding section admirably summarises in two pages the main results of the many issues taken up for study. The main findings of the study that professional education in Kerala is heavily biased against the rural population, backward and depressed communities and lower income groups and that entrance coaching is a major factor determining chances of entry to professional education, are along expected lines. Some of the other findings, like the one on page 61 that if we consider the occupation of grandparents there has been considerable occupational mobility over generations, and the one in Table 3.3 on page 67 indicating that 89% of those who did not surmount the barriers remained in the state for studies and that 52% of them got admission on merit to other courses, should be of considerable interest to policy-makers. Despite all this, one is, however, constrained to point out certain lacunae about this paper too. Firstly, as admitted by the author himself, this study takes the opportunity cost to be zero, despite agreeing that it is conceptually important to consider this aspect too. Secondly, one is at a loss to understand the statement made on page 61 that unearned income is relative income. Thirdly, the repeated statement in the paper that economic background and status is not a major factor affecting entry into institutions of higher education seems somewhat puzzling in view of the finding at various places in the study that low income of the family and the high cost of professional education, including preparation for entrance

examination, act as deterrents to children from poorer families from getting into professional higher education. Lastly, though most of the data collected seem to have been fully analysed, there are at least two counts on which a little more could have been done. For one thing, in view of the well-known and pitiable plight of the tribals in the state, the data for the 30-strong SC/ST group could have been analysed separately.For another, the discussion and results on page 84 and in particular table 3.19 giving factors identified as barriers to entry to professional education by parents/students would have been much more interesting if these had been given separately for students and parents perspectives.

The next two papers discuss the issue of dropouts in higher education in the state. The first of these is by C.J. Sivasakaran and B.V. Suresh Babu and is entitled "Wastage in Engineering Education in Kerala". The study ascertains the failure and dropout rates among students of engineering in the state, identifies the reasons for such failure and suggests remedial action. Data for the study were collected from official records and through interviews in three engineering colleges, one each from the government, government-aided and private unaided sectors. The study was carried out in 2003-04 on students admitted during 1994 to 1998, taking their final examinations between 1998 and 2002, and who would have had a number of chances to clear back papers if any. The term wastage is used to denote students completing the course work but failing to clear the examinations even after four repeated attempts. All those with back papers on course completion are referred to as incompletes. It is interesting to find that in the records of 2151 students analysed in the study, 11% were incompletes and 9% constituted wastage. The study clearly brings out, after detailed analysis, the factors responsible for this wastage and incompleteness in higher education in professional spheres in the state. Shortcomings in the entrance examination that enable students with inadequate skills in mathematics to get admitted, the fact that admissions to the courses continue for months even after the regular admission date is over, and the prevalent system of promotions in these engineering colleges allowing students to get promoted with too much backlog of papers are among the important reasons. It is also to be noted that 80% of those who had backlog of papers to clear were from among those admitted under various quotas; and among those admitted on merit, wastage was nil. The conclusions and recommendations of the study are put together in the last two pages. One only wishes that Diagram 4.1 on page 81 was more clearly drawn.

The other paper dealing with the dropout issue is entitled "Drop-outs from Arts and Science Colleges in Kerala" by George Zachariah. It defines all those who are admitted to a programme, but leave without appearing in the final year examination as dropouts. Data are collected from two colleges offering both undergraduate and post-graduate courses-one from Malappuram attached to the Calicut University and another form Alappuzha attached to the Kerala University. It is correctly stressed that dropping out not only affects the particular student dropping out, but also results in considerable wasteage of national resources since the seat of the dropped out student has to be kept vacant and hence remains unutilised. A detailed comparative analysis is carried out on the basis of

dropouts data collected about the undergraduate students of the 2000-03 batch and post-graduate students of the 2001-03 batch from these two colleges. Interesting comparisons are made between the two colleges covering, the different courses offered, males and females, and also between the different castes and communities. It is also pointed out that the dropouts as, defined in the paper may not actually reflect the dropouts proper defined as those who originally planned to obtain a degree, but subsequently failed to do so. This is clearly brought out by the fact that two-thirds of the dropouts in the study actually join other courses and 21% of dropouts in fact do so on grounds of marriage. All these results coupled with the fact that four-fifths of the students considered cleared their examinations in their very first attempt, makes the author infer that there is not much evidence to support the view that wastage at college level is very high in Kerala at least as far as Arts and Science courses are concerned. It is suggested that dropouts, as defined, can be reduced considerably by proper sequencing of admission dates; it needs attention from policy-makers. A footnote on page 123 explaining how it is inferred that genuine dropouts come to 57% of total dropouts study, while Table 5.6 on page 122 shows that 5.7% of dropouts do so for reasons other than joining another course or getting a job or marriage, would have been very much in order.

The last paper by C. Krishnan, entitled "Distance Higher Education in Kerala: Students' Assessment", is easily the best in the volume. It not only critically examines Distance Higher Education in the state from the user's perspective, but also links up these results with studies in this regard in different parts of the world. It is based on primary data collected in 2001 from a stratified random sample of 650 students pursuing higher education through the distance mode in the Calicut, Kerala, Mahatma Gandhi and Indira Gandhi National Open Universities in the state of Kerala. After giving a detailed analysis of the sampled students in terms of sex, age, occupational status, social status, educational background, area of residence, marital status etc., it gives an extensive critical assessment of the system by the students and concludes by giving a large number of suggestions to improve the system. It is encouraging to find that the distance stream is catering to the low income groups, women and rural areas in a big way and that the OBCs are taking considerable advantage of it in the state. While it is also good to see that two-thirds of the students find the administrative staff helpful, the evidence that 90% find the facilities inadequate, lessons not well-prepared and that in many cases even containing mistakes, persons conducting contact programmes having little understanding of the distance mode, reducing contact programmes to lecture classes, lack of importance given to assignments except in the case of IGNOU, and some of the centres not even having sanitary facilities for females, should be a wake-up call for those running these programmes. What is even more disheartening is the fact that of the three universities in Kerala taken up for the study, Calicut University which has the largest percentage of students in the distance stream, comes off the worst in this regard. One would, hence, entirely agree with the conclusion drawn by the author that the vast potential of distance education has not been fully exploited by institutions run by conventional universities, at least in Kerala. All, however, may not entirely agree with the set of detailed suggestions

given by the author to improve the system. An instance of this kind of suggestion that the distance learning institutions be given full autonomy to design their own curriculum.

A few comments are in order on the volume as a whole. They say that well begun is half done. The very first chapter is actually an introduction to the volume and should have been thus entitled. Further, slightly greater care should have been taken in the presentation of this chapter; the title of which indicates a footnote which is simply not there and talks of three authors for the paper on 'Wastage' in engineering education, whereas the paper as well as the list of contributors indicate that there. It only two authors, with the name of Raveendran being not there. It has also to be pointed out that though there is a five-page index at the end of the paper, it is not a well-prepared and does not figure on the contents page. It also goes without saying that the inordinate delay between research conducted and the publication of the results as later as a decade in one of the cases, reduces the topicality and relevance of the results in this age of rapid economic and social transformation, which could have easily been avoided in this era of electronic convergence.

In conclusion, it has to be said that researchers working in the field of educational development in Kerala will find the publication extremely useful and quite illuminating.

Centre for Policy Research
Dharm Marg, Chanakyapuri, New Delhi-110021

K. R. G. Nair
krgnayar@yahoo.com

Jamil SALMI (2009): ***The Challenge of Establishing World-Class Universities – Directions in Development.*** Washington DC: World Bank, pp. 115 (paperback), Price: US$ 22.00 ISBN: 978-0-8213-7865-6

One of the important effects of the international university rankings, is the realisation by many countries the need to develop world class universities that figure in the world rankings. World-class universities has become a catch phrase and has started figuring in the higher education agenda of many countries. Some also think that it is an elite concept and not consistent with the goals of massification of higher education.

What is a world-class university and what are its characteristics? Jamil Salmi who is perhaps responsible for a major shift in the World Bank policies in favour of higher education and author os some important studies on higher education, including the Bank's policy paper, *Constructing Knowledge Societies* (2002), has come out with yet another important paper on world class universities. In the present short paper, Salmi describes: (a) What does it mean to be a world-class university, (b) How to establish a world class university, and (c) what are the implications for the World Bank.

Alden and Lin have identified earlier a set of characteristics of a world-class university. According to them, a world-class university is one, which has an international

reputation for its research and teaching, has a number of research stars and world leaders, and visitors of international standards. It is a university, which identifies and builds on its research strengths and has a distinctive reputation and focus, generates innovative ideas and produces basic and applied research in abundance, produces rather ground-breaking research outputs recognised by peers and is honoured with awards and prizes like the Nobel prize. It attracts the most able students and retains the best and talented staff from the international market based on merit, and produces the best graduates. Such a university necessarily has a high proportion of post-graduate students in the courses being conducted and research, and operates in a global market. It is international in its activities with research links and student and staff exchange programmes. It should have a very sound financial base with diversified sources of funds along with large endowment and capital funds, which enable the university to provide a high quality research and educational environment. It has a first class management team with strategic vision and plans for implementation. Its graduates occupy high places in power and influence in the society. It has a long history of superior performance in making a big contribution to society. As a result, it is recognised by other world-class universities and also by the global society at large as a truly world-class university. The world-class university continually benchmarks with top universities worldwide and has the confidence to set its own agenda.

Salmi sums the several characteristic features into three major aspects that define a world-class university. These are: concentration of talent in terms of outstanding faculty and top students, abundance of resources with diversified sources of funds, including endowment funds, that allow payment of best salaries to its staff; and an appropriate system of governance that includes overall regulatory framework, competitive environment and a high degree of academic and managerial autonomy. The author further says that it is not enough for a university have all the three aspects in abundance; it is equally important to ensure the best combination of these three features. Only those universities that ensures the best combination of these three features, can become truly world-class university.

World-class universities can be either developed by nurturing the existing ones, or establishing new ones. It may look easy to nurture the existing universities to the level of world class, but in many cases institutional habits, cumbersome governance structures, and bureaucratic management practices stand as big stumbling blocks. While the second option, i.e., setting up of a world-class university from scratch may be difficult, given that it takes several years, may be decades if not centuries, to develop a world-class university, Salmi proposes a third strategy, i.e., a world class university can be evolved by merging some of the best existing institutions. Mergers, as a strategy not only ensures economies of scale, but also enriches academic environment. This may be one of the best options developing countries can think of.

Salmi also provides a useful summary checklist of questions -- at the national level and at the institutional level – that need to be answered to guide the quest to establish world-class universities. Salmi also suggests that World Bank might help developing

countries in establishing world-class universities by providing technical assistance and financial support and by facilitating international linkages etc., brokering with other national and international institutions.

Salmi's short book is highly instructive and policy makers around the world will feel immensely benefited from reading it. It serves more than as a set of guidelines and a manual of setting up world-class universities. While Salmi reminds that countries when planning for the establishment of world-class universities, should at the same time plan for expansion of tertiary education to cater to larger sections of the society. He does not discuss how world-class university as a concept might conflict with the strategy of equitable expansion of higher education in developing countries, a challenge many developing countries are faced with. World-class universities, it is presumed, cannot but be only pockets of excellence in a country. The idea of developing a world-class higher education system as a whole may seem to be utopian. Salmi's main effort through the book, is to simplify the big challenge of establishing world-class universities. After reading the book, many may feel that it is not a 'big' challenge, certainly not an insurmountable; any one can think of establishing a world-class university. I do not know whether Salmi wants to convey such a message.

NUEPA
New Delhi

Jandhyala B G Tilak
jtilak@nuepa.org

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