HIGHER EDUCATION POLICY NOTE
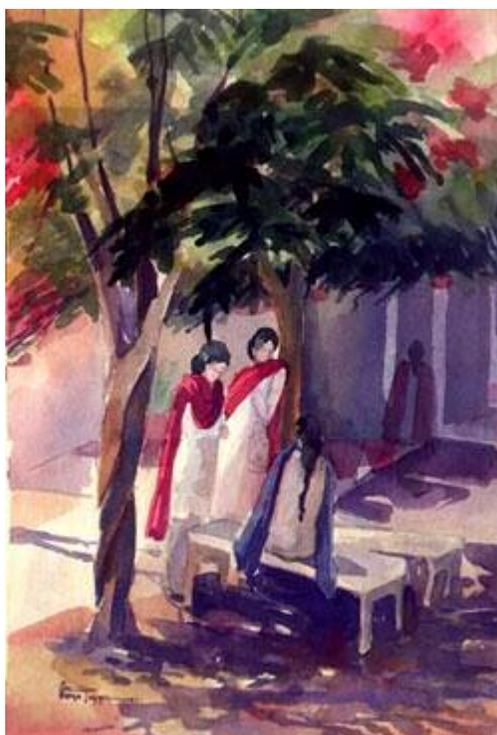
Pakistan

An Assessment of the Medium-Term Development Framework

Report No. 37247

HIGHER EDUCATION POLICY NOTE

Pakistan: An Assessment of the Medium-Term Development Framework

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ABBREVIATIONS AND ACRONYMS

AIOU	Allama Iqbal Open University
BOT	Build-Operate Transfer
CASE	Center for Advanced Studies in Engineering
CARE	Centre for Advanced Research in Engineering
CEO	Chief Executive Officer
CHEBA	Consortium for Higher Education Benchmarking Agency
COE	Center of Excellence
CDWP	Central Development Working Party
DAI	Degree Awarding Institution
DBFO	Design-Build-Finance-Operate
DDWP	Departmental Development Working Party
DET	Department of Education and Training
ECNEC	Executive Committee of National Economic Council
EFA	Education For All
EMIS	Education Management Information System
ESM	Education Simulation Model
ESR	Education Sector Reform
GER	Gross Enrollment Rate
GIK	Ghulam Ishaq Khan (Institute of Engineering)
GNI	Gross National Income
GoP	Government of Pakistan
HE	Higher Education
HEC	Higher Education Commission
HEC	Higher Education Certificate
HEIs	Higher Education Institutions
HEMIS	Higher Education Management Information System
HESS	Higher Education Subsector
HSC	Higher Secondary Certificate
ICT	Information and Communication Technology
ISO	International Organization for Standardization
IUAA	Inter University Academic Activities
LAN	Local Area Network
LEA	Local Education Authority
LUMS	Lahore University of Management Science
M&E	Monitoring and Evaluation
MTDF	Medium Term Development Framework
NEP	National Education Policy
NER	Net Enrollment Rate
NPO	National Productivity Organization
NWFP	North West Frontier Province
OECD	Organization for Economic Co-operation and Development
PERN	Pakistan Education and Research Network
PESRP	Punjab Education Sector Reform Program
PFI	Public Finance Initiative
PN	Policy Note
PPP	Public/Private Partnerships
PRSP	Poverty Reduction Strategy Paper
PSC	Public Service Committee
PSLSMS	Pakistan Social and Living Standards Measurement Survey

QA	Quality Assurance
QAA	Quality Assurance Agency
QAC	Quality Assurance Committee
QEC	Quality Enhancement Cells
R&D	Research and Development
Rs	Pakistani Rupee
SCHE	Steering Committee of Higher Education
SSC	Secondary School Certificate
STR	Student-Teacher Ratio
UGC	University Grants Commission
VC	Vice Chancellor

Contents

Tables

Figures

Boxes

Annexes

EXECUTIVE SUMMARY

WHY THIS POLICY NOTE?

1.   Decades of neglect have drawn universities in Pakistan -- and more generally the higher education subsector (HESS) -- to levels which are incompatible with the ambitions of the country to develop as a modern society and a competitive economy. As it stands now, the subsector does not compare well with its counterparts in the region, and unless profoundly reformed, it may become an obstacle to the continuation of the current rapid economic growth, instead of becoming its main engine.

2.   A rare and unfortunate combination plagues the university segment of the Pakistani HESS: it is both small in size and low in performance. It is an elitist subsector without the excellence (notwithstanding a few exceptions) and the efficiency which usually characterize elitist systems. These quantitative and qualitative ills call for radical transformations. The diagnosis is well known, well documented, and widely shared inside and outside the university community and the country. Several plans and strategies have outlined the situation and proposed solutions. Until a few years ago, however, little had been done to turn these plans into concrete actions. Four essential ingredients were missing: the political will, a reforming framework, the financial resources, and the implementation capacity.

3.   Today these elements are in place with the creation in 2002 of the Higher Education Commission (HEC, also referred to here as "the Commission"), the presence of a strong leadership with clear political backing, and a substantial increase in budgetary allocations to universities. The development by HEC of the Medium-term Development Framework (MTDF, also referred to here as "the Framework") provides a vision and a set of articulated programs to implement it and to carry out the quantitative and qualitative revolution that the subsector needs to emerge from its decay. More precisely, it does so for the university segment of HESS, but leaves aside the non-university portion of HESS, especially the affiliated colleges.

4.   Endorsing, financing and implementing the MTDF requires a long-term commitment on the part of the political leadership, as well as the active involvement of the university community and of the higher education stakeholders, whether from the public or the private sphere. Thus, before such a commitment can be made, it is appropriate to step back and ask the following questions: is the MTDF strategically and technically sound? Is it affordable? Is it implementable?

5.   These are the questions that This Policy Note (PN, also referred to here as "the Note") is trying to address. It does *not* duplicate the MTDF. Instead it provides an assessment of the Framework and complements it by further elaborating particularly sensitive areas which deserve more attention in the MTDF, namely: (i) the issue of quality, (ii) the question of governance and management, (iii) the potential of public-private partnerships, and (iv) the budgetary impact of the measures included in the Framework and their financial affordability. Therefore, the Note is not a comprehensive in-depth review of the entire higher education subsector, yet, to better assess the Framework, the Note cannot avoid delving into some of the main issues that the Framework attempts to tackle.

PROMISING DÉBUT

HEC has launched its attack on the twin challenge of access and excellence by focusing mainly on teaching staff –which constitutes one of the weakest links of the chain of factors contributing to create a successful university environment.

6.   Since HEC is at the origin of the MTDF, and as it would become its main implementer (and actually has begun to do so), it is worth spending some time on how the subsector, especially the university segment, has fared since HEC came on board, as well as the Commission's track record thus far.

7.   At its inception, HEC found a situation where access was extremely limited, with the proportion of the postsecondary age group actually enrolled in universities barely reaching three percent, a very small proportion by any standard. The subsector is fragmented, with two-thirds of the student population in universities and other specialized higher education institutions (HEIs), and one-third in affiliated colleges. The lack of human, institutional, and financial resources in public HEIs hardly qualifies them as providers of postsecondary education. Under qualified teaching staff, outdated and static curricula, and the (related) quasi-absence of high level research has left the HEIs isolated islands of mediocrity that have no stake in, nor an impact on, the surrounding world, whether local communities, the country, its regional neighbors, or its natural competitors. Accountability has had no currency in these institutions.

8.   The HEC could not have been expected to change this bleak situation during the four years of its existence. The situation had causes which will take much longer to uproot. What can be expected from the Commission, on the other hand, is to have begun acting upon these causes. In that respect, the balance sheet is clearly positive.

9.   Immediately after its birth, the HEC launched an unprecedented number of systemic reforms directly aimed at the worst and most immediate issues plaguing the HESS, or, more exactly, universities. The reforms can be classified under the following categories: (i) quality assurance, with an emphasis on human resource development (e.g., expansion of the indigenous and foreign PhD programs), introduction of a new service structure for faculty members (tenure track system), definition of criteria for establishing HEIs, standardization of the four-year undergraduate, MPhil, and PhD programs, computerization of universities, and creation of the digital library; (ii) equity, with a substantial scholarship program and support to institutions located in less-developed areas; (iii) relevance, with a focus on engineering, science, and technology programs; (iv) research, with the Research Grant Program, the fellowship program, and the University Linkage Program; and (v) resource allocation (funding formula).

10.   These positive reforms already have benefited the universities. The affiliated colleges, however, have not received the same extent of attention from the HEC as they are not under the direct purview of the Commission. Yet these colleges enroll one out of three students at the postsecondary education level; their situation in terms of quality is even more desperate, their lack of resources is even harsher, and their governance arrangements are even less adequate than in universities. Therefore, it would be a grave error to continue ignoring the fate of the affiliated colleges which are already the linchpin between secondary and tertiary education, and have an important role to play in building the human capital of the country.

Even though the MTDF --and consequently, this Note-- does not address the issue of affiliated colleges, it is clear that a strategy to bring these institutions to a decent level of performance is urgently needed.

11.   Despite the progress already recorded, and despite the largely publicized increases in the resources allotted to the subsector, HEC's initiatives have not succeeded to mobilize the full enthusiasm of the academic community. They are not even fully recognized in some quarters of the administration, whether at the central or at the provincial level. Two factors can be cited to account for this outcome: the first one is typical of the reactions which follow attempts to introduce accountability, and measures which reward high performers but single out low performers. The second one reflects reaction against the concentration of power in very few hands. The two factors compound their effects, and will need to be carefully taken into consideration when implementing the MTDF.

The recent and unprecedented growth in the HEC budget is merely the beginning of a rehabilitation campaign to restore the capacity of universities to function normally.

12.   Since HEC became active, total spending (recurrent + development) by the Commission grew by 344 percent in real terms between 2001/2002 and 2005/2006. This huge increase, however, must be put into context. First, the increase comes after years of under funding, and still leaves Pakistan lagging behind with less than half of one percent of the GDP spent on its universities. Second, the bulk of the increase is imputable to the parallel growth of student enrollments. In per student terms, recurrent spending has risen only by 41 percent during this same period. At about US$770, government spending per student is still low, and clearly there space for growth.

13.   An overwhelming proportion of HEC's recurrent budget (93% in 2004/2005) has been allocated to University Grants, the main financial instrument of the government to support HEIs. Most of this has been used to hire new academic staff, increase staff salaries, and introduce the new tenure track in accordance with the Commission's policy. A variety of initiatives has been financed in the area of faculty development, including both short-term and long-term initiatives, and indigenous and foreign programs. Promotion of research currently absorbs three percent of the recurrent budget, still a modest proportion, but to be compared with less than one percent three years earlier.

14.   Only 1.4 percent of the total HEC budget was devoted to corporate recurrent spending in 2005/06. The HEC generates 6.5 percent of its revenues through entrepreneurial activities. The substantial increase in HEC's corporate budget has allowed the Commission to build its organizational capacity, and in particular, to develop its staff in line with its expanded powers and functions. As a prudent organization, HEC has managed this development by resorting increasingly to fixed-term contractors, or project employees, which gives it greater flexibility to adjust its staffing to the volume of activities.

15.   Amongst its tools to allocate resources to HEIs on a recurrent basis, the Funding Formula is the most innovative and most efficient. The formula used by HEC is a version of performance-based funding which links the level of funding to the performance of universities, instead of leaving it contingent on political whim, aligning it with historical trends at best. The formula combines parameters assessing: (i) student enrollments, (ii) performance, and (iii) adjustments on account of cost increase and other factors. The first parameter is weighted in relation to the fields of study, thus allowing it to influence enrollments in a way that is consistent with the country's priorities. The second parameter is based on the share of enrollments in PhDs and on the share of PhD faculty.

16.   Even though public higher education institutions count on the Commission, through University Grants, for more than half of their recurrent expenditures, they raise 41 percent of their income from non-government sources, including affiliation (12%) and tuition fees (11%). This is a high proportion, one to be kept in mind when projecting the future and investigating the possibilities to diversify further HEIs' incomes.

A SOLID FRAMEWORK TO IMPLEMENT THE RIGHT MEASURES

17.   The MTDF is embedded in a series of analyses and plans, particularly those issued by the Task Force on Improvement of Higher Education and by the Steering Committee (2002). It also is aligned with the vision developed in the national macro MTDF, which aims at moving towards "a technologically driven knowledge economy for rapid and sustainable growth", and focuses on human resource development and technology to build the future "Pakistan Incorporate".

18.   The successful track record of HEC is a good omen for the future. First, it suggests that the Commission has correctly identified the reasons why the subsector has reached the bottom. Second, it shows that it has the managerial capacity to deal with these reasons and to take any necessary measures for improvement. Finally, it signals that HEC has solid political backup, which translates into financial commitments. All in all, the positive performance of the Commission shows that its plan to continue and bolster initial efforts to overhaul the HESS as laid out in the MTDF is moving in the right direction. The Commission's performance gives hope that the MTDF will succeed where so many earlier plans have not.

19.   The MTDF provides a clear long-term vision of the sector, articulated with the broader economic situation. It identifies three main issues -- namely, access, quality, and relevance. This Note concurs with the MTDF regarding the priority given to these issues. The Framework identifies strategic aims, defines for each of them clear objectives, and lists relevant programs to achieve them, accompanied by appropriate indicators. By putting faculty development as its first priority, adding access, learning and research, and relevance to this first strategic aim, and retaining leadership, governance and management as its first cross-cutting strategic aim, the MTDF has selected the appropriate targets.

20.   The main weakness of the MTDF is that it does not cost out the proposed reforms and measures, therefore casting doubt on their realism hence on their credibility. Both the absence of a price tag and the subsequent lack of a financing strategy contribute to the impression that the Framework was developed in a non-monetary environment. By the same token, the few quantified targets (such as those on enrollments or on faculty development) are often arbitrary, and many other unquantified indicators irrelevant. This Note addresses this weakness by assessing the cost of the measures and laying out funding options.

21.   First, however, three other core MTDF areas need to be expanded: quality, governance, and public/private partnerships. The Note examines how the MTDF deals with these areas, and proposes options to push the agenda further.

ENHANCING QUALITY AND IMPROVING RELEVANCE

If complemented by additional measures such as those suggested here, the programs envisaged in the MTDF — and that HEC has started to execute— have the potential to transform the existing higher education subsector into one with greatly improved tertiary institutions and several world-class programs.

22.   Until recently, the poor quality of the higher education subsector hindered the production of the human capital required to build solid foundations for the knowledge-based economy that Pakistan aims to become. The most important factor accounting for this poor quality is an acute shortage of qualified university faculty linked both to low initial credentials and to limited opportunities for skill upgrades. It also stems from the low level of academic preparation of students graduating from higher secondary education. A third factor is the inadequate learning environment. And lastly, until 2003 no national systematic mechanism for quality enhancement was in place.

23.   Once established, HEC placed quality improvement of the HESS at the center of its agenda. This emphasis is reflected in both the core strategic aim (faculty development) and in the cross-cutting supporting aim (enhancing quality through quality assessment and accreditation) of the MTDF. The cross-cutting aim is to "establish and implement stringent quality criteria developed against international standards to access the performance on both the programme and institutional level." Programs spelled out in the MTDF are an impressive set of initiatives designed to reach these aims.

24.   The MTDF programs include master's and PhD training at home and abroad, short-term training programs for scientific and technical staff, introduction of a tenure track system, and twinning programs

with partner institutions inside and outside of the country for collaborative research and development. The MTDF also encompasses a number of measures aimed to improve curriculum content. HEC has begun working with universities and industry to meet national and international standards. Public sector universities have benefited from grants to purchase equipment (including IT infrastructure, bandwidth, and related services) as well as library materials, and to establish central research labs. One of the most important steps taken by HEC to enhance the quality of the subsector is the establishment of the Quality Assurance Committee and the development of accreditation bodies and mechanisms through the Quality Assurance Agency (QAA), Quality Enhancement Cells (QEC), and the Accreditation Councils. Mechanisms and systems for both institutional and program accreditation are being developed by HEC.

25.   While the magnitude of the tasks ahead is daunting, the progress made by HEC thus far suggests that the proposed programs can result in major improvements toward the transformation of the subsector. However, there are no means to precisely account for these efforts, as the MTDF lacks baseline figures and quantified targets as well as indicators related to learning. Such indicators are essential for measuring and assessing actual learning outcomes of students and should be developed.

26.   Higher education institutions need to undertake the following actions: (i) focus more boldly on quality improvement; (ii) put a high priority on better quality teaching; (iii) complete academic reviews of departments, programs, and faculties; (iv) design incentives for outstanding faculty members; (v) establish a mechanism for regular review and continuous improvement of curriculum; (vi) develop an assessment mechanism for student learning; (vii) develop Education Management Information Systems; and (viii) assess the outcome of the programs, including tracer studies of graduates.

27.   Accreditation and quality assurance programs should be strengthened through the following actions: (i) setting high national standards for institutional accreditation through consultation with higher education institutions and professional communities; (ii) reviewing the proposed process and human resources required to effectively implement accreditation, including additional resources for the QAA, QECs, and the Councils; (iii) organizing large-scale training for peer reviewers, Accreditation Councils, and university staff on institutional accreditation; and (iv) establishing a mechanism to ensure the quality and effectiveness of the accreditation process by making the QAA and the Councils autonomous in the long run and HEC as the accreditor of the accreditors.

28.   The MTDF focuses exclusively on universities, Degree Awarding Institutions (DAIs), and Centers of Excellence (COEs), and does not include measures to deal with the poor quality of pre-university and college education. Yet, universities cannot be ring-fenced and insulated from their natural partners in the education stage. As the quality of these levels of education has a major impact on the quality of students at the higher education level, it should receive adequate attention from all parties involved. Therefore, close collaboration among HEC, the provincial authorities, and the Ministry of Education is essential in establishing mechanisms required to improve quality at all levels (including the teacher education).

REINFORCING THE GOVERNANCE AND MANAGEMENT -THE BACKBONE OF THE SUB-SECTOR

29.   Governance and management weaknesses have hampered HEIs' efforts to perform and academic excellence to flourish. Likewise, ineffective governance and management structures and practices are among the most serious challenges to the proposed overall changes in the MTDF.

30.   Weak leadership in the HEIs is common, as exemplified by the way vice chancellors of public universities are appointed (e.g. lack of clear criteria and absence of merit-based factors in selection). Since the vice chancellors are accountable only to the chancellors, the wishes or opinions of syndicate, the senate, and other university institutions are often ignored. These rules and practices make the higher education institutions vulnerable to external political influence. Furthermore, such practices hinder

meaningful participation of other members of HEIs in their governance. Changes are in the offing. The Federal University Ordinance (2002), although not fully implemented, aims to mitigate these pitfalls. Search committees have been approved for universities in Punjab and for federally chartered universities.

31. Another important factor is the complex authority structure of the HESS. While provincial universities have a significant degree of autonomy, they are under the financial and administrative oversight of both the federal and provincial administrations. As to the affiliated colleges, they are under a dual management structure which includes provincial administration as well as universities with which they are affiliated. More generally, coordination of the HESS is made difficult because of its fragmented nature. Overlaps and blurring of responsibilities amongst oversight bodies hinder policy making and planning at the subsectoral level, and leave entire segments such as affiliated colleges without proper supervision.

A prerequisite for the MTDF to succeed is to address upfront the governance and management issues which have plagued the HEIs and have foiled all attempts to revitalize it. Re-establishing effective governance at the institutions and re-mobilizing the academic community around common goals will condition acceptance of the reforms that HEC has started to implement.

32. The creation of the HEC was based on the need to establish a strong centralized structure with authority over the allocation of funding and quality assurance and to transform higher education institutions. The HEC has gained authority since its inception in part because of its own strong and professional leadership, independent Board, and ample funding. The governance and management situation across the HESS, however, has seen marginal improvement during the same period. This can be partly attributed to the multiple levels of authority over the subsector embedded in law, *de facto* administrative arrangements, tradition, as well as the lack of full implementation of the 2002 Ordinance.

33. The MTDF recognizes the seriousness of the governance and management problems and set out "Developing leadership, governance, and management" as one of its core strategic aims. However, it left out several fundamental issues which affect the ability of HEIs and of the whole HESS to foster and maintain changes, including increased cooperation and linkages among the sectors. It would be a tragic loss of current opportunities if, in the face of the extraordinary changes already brought about by HEC and those envisaged in the MTDF, progress was limited by a failure to address key governance and management problems.

34. The following measures could be considered for immediate action to circumvent such problems: (i) introduce transparency and accountability into HEIs administrative procedures, including the appointment of university leadership, strategic and financial planning, and financial management; (ii) improve the effectiveness of management processes and faculty governance; (iii) create a more consistent and inductive regulatory framework for all HEIs, particularly for affiliated colleges; and (iv) clarify and streamline mechanisms by which the amount of HEC annual budgetary allocation is estimated.

CREATING A VIBRANT PUBLIC/PRIVATE PARTNERSHIP (PPP) FOR COMPETITIVE UNIVERSITIES

The private sector already is active in higher education. There is potential for an even larger contribution by private HEIs to broaden access, improve quality, enhance relevance, while alleviating some of the burden on public institutions. In addition, the public sector and private institutions would mutually benefit from reinforcing their partnership: they would respond better to the growing demand, and would make the entire HESS more responsive to market expectations. To reap these benefits, several regulatory and financial steps must be taken to even the playing field, and assure that the quality of services supersedes institutional borders.

35.   Stimulated by a burgeoning demand that the public sector is unable to meet, private sector institutions currently serve almost one-fourth of HEI enrollments. Private institutions are particularly active in the areas of business administration, computer science, and IT -- areas where employer demand is high. HEC already has launched a series of initiatives to bring closer the two providers of higher education. Several avenues are open to shore up these initiatives and bolster their impact.

36.   Improving the regulatory environment for the private higher education sector should be a priority. To illustrate this, the minimum land and endowment requirements currently imposed to private HEIs to establish a campus are unnecessarily tight and could be loosened without risk to the quality of teaching.

37.   More systematic use of information would help to regulate the HESS more efficiently. In particular, more comprehensive and regular information regarding the quality of HEIs and their internal and external efficiency would increase consumer awareness and make both private and public HEIs more responsive to market needs.

38.   Mechanisms by which HEC and private HEIs communicate could be made more systematic, permanent, and efficient. Consultation would be improved if HEIs were represented properly through associations at the national and provincial levels.

39.   Partnership could prove to be a promising method to expand and increase the public HE infrastructure, whether in terms of financing, construction, maintenance, or operation (such as joint management of departments). Variations on this type of partnership exist in the world and have been successful. Such partnerships could be extended to –or tested with-- non-academic, non-core services in which universities have little know-how or comparative advantage (such as food services or dormitory management).

40.   HEC admits that building more and stronger linkages between the HEIs and employers is at the core of a good PPP; however, there are obstacles to putting that into practice. To overcome these obstacles, the Centers of Excellence created in public universities could be established as autonomous bodies with more spending and operational latitude. In addition, creation of private research centers affiliated with public HEIs could be encouraged. Finally, there is need and scope for greater involvement of industry in the development of curricula and practical training for students.

41.   A healthier climate for a successful PPP could be created by improving the regulatory environment of public HEIs. There are two main entry points to accomplishing this. One is to increase accountability in the institutions themselves, in particular amongst faculty staff, as HEC has begun to do. The other one is to increase private responsibility in sharing the costs of public education – a move which the reality of budget constraints also make almost unavoidable.

42.   Finally, financing the system could be revised to even the playing field even more. This could be done by expanding the needs-based scholarship program for students attending private HEIs so as to boost access; a longer-term objective would be to treat (financially speaking) public and private HEIs in a neutral manner.

PROJECTING THE MTDF PRICE TAG AND ASSESSING THE RESOURCES TO PAY FOR IT

43.   Without repeated infusions of budgetary resources, the HEC would not have been able to launch and implement the set of reforms for which it can be credited. The programs envisaged under the MTDF – of which the reforms already initiated largely foretell – will continue to require further mobilization of substantial resources. Yet the MTDF is silent on both the costs of the reforms and those who will bear them.

44.   In attempting to bridge this lacuna, this Note assesses the cost implications of the MTDF, projects the resource envelope expected to be allocated to universities, and infers the resulting gap between costs and resources. A base case is built for the purpose of comparison, and then the sensitivity of alternative assumptions is tested on both the cost side and on the revenue side to illustrate possible options for financing the Framework within reasonable parameters. Simulations go beyond the time horizon covered by the MTDF, spanning the 2005 to 2015 period to offer a longer-term perspective.

Enrollments

45.   Since the costs of universities are, in large part, driven by enrollments, the Note starts by projecting how university enrollments will grow in the future. Simulations are based on the demographic growth rate, the intake into primary education, the transition rates in primary and secondary education, and the pass rate on the examinations opening the door to higher education (Higher Secondary Certificate - HSC).

46.   If all of these rates are assumed to remain stable, the pool of graduates from higher education will be large enough to feed the expansion of university education. This first result may be good news for universities; however, when considering that currently one out of 10 students taking the HSC, and one out of five passing the certificate, do not make it to universities, the other face of the coin is a stark reminder of another reality.

Huge cohorts of youths run the risk of being left aside, without access to postsecondary education, with limited possibilities of complementary (technical) training opportunities, and with even fewer prospects of being absorbed by the labor market.

47.   Addressing this issue is not under the direct responsibility of HEC, and therefore it is not directly dealt with in this Note.   Nonetheless, its enormous and negative potential impact cannot be underestimated. Its nature and its magnitude represent a real danger for Pakistani society and a huge waste of human resources for the economy. This issue will need a global, multifaceted response, and will require the mobilization of many institutions (including affiliated colleges), and a vigorous political commitment to solve it. In that regard, a strategy to organize this response and, in particular, to develop technical and short postsecondary education programs, is an urgent national task.

48.   Assuming past trend will be sustained, enrollments in universities, DAIs, COEs, and distance learning institutions are projected to double by 2010 and triple by 2015, reaching 1.0 and 1.9 million by these dates, respectively.   Accordingly, the enrollment rate in these institutions would rise from 2.5 percent to 6.2 percent of the 17-23 age group, which is in line with MTDF targets.

If left to its "natural" course, the distribution of students by fields of studies would not be consistent with the economic priorities of the country. Actions need to be taken to reduce the attraction of general subjects, with early action essential at pre-tertiary levels.

49.   Under the assumption of unchanged patterns, general universities would bear the bulk of the increase and would cater to 90 percent of the students by 2015. To accentuate this bias, within general universities, some 40 percent of the students would be enrolled in pure science programs, with the remainder enrolled in general areas of studies.

50.   To provide a truly comprehensive view of the postsecondary landscape, affiliated colleges must be taken into account. Then, enrollments would reach 2.3 million by the end of the period and the enrollment rate for the HESS would verge on 8 percent. This dramatic increase is definitely a source of hope,

considering the need of the country to raise the proportion of its highly educated youth to levels close to those reached by its comparators (and its competitors).

Costs, Resources, and Financial Gap

If all the measures carefully crafted by the HEC to rebuild Pakistani universities were to be implemented as scheduled, but, if, at the same time, the resources available to them were to grow not faster than the economy, the financial gap associated with the MTDF would rise to unsustainable levels.

51.   The projection of costs in the base case is built around an estimate of all the measures contained in the MTDF to increase access and improve quality in universities, DAIs, and COE. If all these measures were to be implemented as planned in the MTDF, it would cost a total of about Rs1,120 billion (including both recurrent and development expenditures) over the entire 2005-2015 period. In annual terms, the costs would be multiplied by six between 2006 and 2015. In relative terms, they would rise from .5 percent to 1.4 percent of the GDP, and would absorb close to 70 percent of the entire education budget by the end of the period. Therefore, from a purely cost angle, this is obviously not a viable perspective.

52.   Would the resources expected to be allocated to universities possibly match this bill?   They consist of two components: those allocated by the government, and those generated by the universities themselves (tuition and examination fees, other miscellaneous revenues).   Under the conservative assumption that the former will increase proportionately with the GDP and that the latter will strictly follow the enrollment trend, the budget available for universities would not exceed Rs570 billion, of which 22 percent would be generated from university resources. This would result in a cumulative financing gap for the 10-year period of about Rs550 billion. This is clearly an unmanageable gap, with no reasonable prospect of being bridged under foreseeable fiscal conditions.   Therefore, if the MTDF is to be implemented, alternatives must be found to bring costs and resources within a closer range.

53.   The challenge faced by the government is to allow implementation of the MTDF within existing and expected fiscal constraints, and without jeopardizing the huge efforts needed to come closer to the MDGs. A high case scenario that reduces costs and enhances revenues is simulated to illustrate the possible options which are open. Indeed, alternative scenarios could be built to achieve the same results.

High Case Scenario: Main Assumptions

- Costs: Based on MTDF implementation needs, including the impact of the following cost-reduction measures: (i) increase student/faculty ratio from 19:1 to 25:1; (ii) increase share of private enrollments from 25% to 30%; (iii) change enrollment mix to increase intake in scientific fields.
- Resources:
    (a) Government
        (i)   Total education sector budget as a share of GDP increases from 1.8% to 4% between 2006 and   2015 (and GDP grows at 6% p.a.).
        (ii)   University allocation as a share of total education budget is maintained constant after it hits 21%.
    (b) University resources
        Per student tuition fees increase by 5% p.a.

Costs associated with the MTDF can be trimmed while not compromising quality.   The resource envelope allocated to implement the MTDF must be affordable within the budgetary parameters defined by law for the education sector as a whole.   It also must be compatible with the dire needs of pre-university education so that it does not crowd out resources required at those levels. Thus, an increase in the budget for the entire education sector seems unavoidable.   Additional resources must also continue to be mobilized for universities from other sources as well, particularly from users. When

cost-reduction and resource enhancement measures are taken simultaneously, the simulations suggest that, while remaining substantial, the gap for implementing the MTDF could be bridged.

54.   Solutions must be sought first on the cost side. The first avenue is to improve internal efficiency within the university system. This can be achieved mainly by increasing student/teacher ratios. Increasing the ratio from an average of 19:1 to an average of 25:1 would help to reduce the pressure on faculty staff needs, and would secure substantial savings. Improvements in teaching methods and a more intense use of technology would ensure that quality would not be compromised by this measure.

55.   A second avenue consists of bolstering the provision of university services through the private sector, in line with HEC's strategy and in keeping with the earlier recommendations of this PN, and using the various incentive schemes suggested in both the MTDF itself and this Note. A moderate increase in the share of private enrollments from 25 percent to 30 percent is factored into the projections to reduce the financial burden of the state.

56.   A scenario more faithfully reflecting the government's strategy to move the country towards a knowledge economy must incorporate more energetic measures to increase the relevance of universities. Thus, projections simulate a reduction in the intake in general fields and an increase in the intake in the scientific and technological fields, both of which are in high demand and more related to the kinds of skills that contribute to a knowledge economy. In addition to boosting relevance, this measure (implemented in part through the funding formula) also contributes –marginally--to reining in the cost of the MTDF.

57.   If all the above measures were to be taken simultaneously under the high case scenario, the MTDF could be implemented at a cumulative cost of about Rs965 billion over the period, representing a 10 percent reduction compared to the base case. If the resource envelope was maintained at the level estimated under the conservative assumptions, however, the financial gap would still remain outside of realistic fiscal management: trimming its costs is not going to be sufficient to make the MTDF affordable.

58.   Therefore, it is clear that measures need to be taken on the revenue side as well. The government budget allocated to universities is constrained by the fiscal situation, and it must be consistent with the government's overall strategy to achieve growth and alleviate poverty. Thus, simulations reflect the Fiscal Responsibility Law and follow the projections used to update the PRSP. To that effect, it is assumed that the ratio of the budget for the whole education sector to the GDP will increase from its current 1.8 percent level to 4 percent by 2015.

59.   To be fully realistic, projections also take into account the weight of universities in the entire education sector budget, so that the lower levels of education are not starved of resources. Thus, a cap is put on the share of the education budget allocated to universities. Once this share hits the 21 percent mark, it is maintained at that level, and the envelope for universities increases at the same rate as that for the entire education sector. Under these assumptions, the cumulative government's contribution to universities would arrive at about Rs.680 billion. This would still be far from matching the costs – even reduced -- of the MTDF. Funds must therefore be mobilized from other sources.

60.   Those other sources are the ones universities generate themselves. As it is unlikely that universities will manage to raise a higher proportion of their own incomes from selling services and other market transactions, the most promising –if only possible -- measure is to increase the share of the cost borne by students. Hence, it is assumed that student fees would increase by 5 percent per annum (in per capita terms). Assuming that the affiliation fees collected from colleges would increase at the same pace and other fees and revenues twice as fast, universities' own revenues would reach Rs155 billion over the 2005-2015 period, and would represent 23 percent of the total resources.

61.   Under this scenario, student fees would contribute up to 10 percent of universities' costs by 2015. Although still modest in nominal terms (less than the equivalent of $250 p.a. by 2015), such fees -- added to other indirect costs-- could constitute a barrier for students from lower socio-economic background. Therefore, any plan to increase fees should be accompanied by a parallel, inclusive, scheme to support students through a mechanism combining needs-based scholarships and loans, thus guaranteeing equity of access.

62.   Taken together, the measures to enhance revenues would have a significant combined impact on the budget available to execute the MTDF. In cumulative terms, this budget would reach about Rs835 billion. That would allow the cumulative gap to shrink to about Rs130 billion. Bridging this level of deficit is not out of reach, but would require further cost reduction and revenue mobilization, as well as a sequencing of the ambitious –but justified- MTDF programs.

63.   Even though the Commission –and hence, the MTDF itself-- is almost exclusively focusing on universities, the fact that universities are part of a larger subsector – including the affiliated colleges – cannot be ignored. Thus, the fate of the entire HESS must be examined with the same lens as that used for universities alone. If all cost-reduction measures and all revenue enhancing measures (with a cap of 24% on the education budget allocated to HESS) were implemented simultaneously as assumed under the high case scenario, then the subsector would be left with a notional cumulative gap of about Rs150 billion, resulting from a total bill of Rs.1,120 billion, matched by resources of only Rs.970 billion.

64.   More options to bridge the gap could be considered, both on the cost and revenue side. Measures could be devised to better mobilize users' contributions while ensuring equity of access. A more intense involvement of the private sector would help to lessen the burden on taxpayers. Similarly, schemes to match the universities own resources with fiscal resources could be explored. Finally, given the solidity of the MTDF and the strength of its leadership team, foreign support could be secured. In any case, the government's support for the subsector must remain strong.

COMMUNICATION STRATEGY

The reforms launched by the HEC are bound to change radically the academia culture. Resistance to these changes is likely. To succeed, the HEC must establish its legitimacy, improve its public image, and invest in consultation and communication with the community it is meant to serve.

65.   Acting, even acting well, is not enough. Although the reforms already engaged, and those envisaged, are moving in the right direction, and even though they are expected to yield long-term benefits for Pakistani society as a whole, more is needed for them to succeed. If they are not explained, let alone accepted, their short-term costs could derail the whole process. Introducing more responsibility and accountability often is met with skepticism and resistance, and it requires careful marketing. The HEC needs to engage the academic community, particularly the teaching staff, more fully. But it must also reach out to provincial level stakeholders, including those who staff and attend HEIs. This will be necessary if the reforms are to be seen as a common good rather than an imposed burden. Progressively, the Higher Education Commission will need to adjust its role to that of a facilitator, as envisaged in its original mandate.

66.   The endeavors to resuscitate and bolster Pakistani universities as envisaged in the MTDF warrant support. The systemic reforms already engaged, and those considered in the MTDF are necessary for the universities to move to levels commensurate with the ambitions of "Pakistan Incorporated". Notwithstanding the gigantic efforts also needed to overhaul the other education subsectors, the opportunity to revamp universities cannot be missed.

INTRODUCTION

BACKGROUND

1.   In early 2005 the Higher Education Commission (HEC, also referred to as "the Commission") developed a Medium-Term Development Framework (MTDF, also referred to as "the Framework") for higher education for the 2005-2010 period, which calls for a rapid expansion of the higher education sector, along with a number of important reforms aimed at improving the quality, efficiency, and relevance of the sector. This Policy Note (PN, also referred to as "the Note") is the World Bank's response to a request from the Government of Pakistan (GoP) to provide it with an assessment of the MTDF, along with an estimate of the projected budgetary impact of the Framework, and an elaboration of some specific critical aspects of the MTDF, most notably quality assurance (QA), governance and management, and public/private partnerships (PPPs).

2.   Many countries within (e.g., Bangladesh), or outside (e.g., Morocco) the South Asia Region are in the process of designing a strategy for higher education. The MTDF is the Pakistani version of such a strategy. It is a strong articulate strategic plan, and at the same time, it is also a manifesto of the political will to establish higher education as the engine of socio-economic development in Pakistan. Therefore, the MTDF does *not* need to be duplicated, and there is no point in proposing an overall *new* strategy. Instead, this Policy Note assesses the soundness, consistency, and realism of the objectives and associated programs set forth in the MTDF. It tests them through the simulation of their budgetary impact, and it proposes alternative scenarios for funding the development of universities and the higher education subsector from both public and private sources. It also makes recommendations in some particularly critical areas.

SCOPE OF THE POLICY NOTE

3.   The PN reframes the MTDF strategy in a comprehensive context through a threefold linkage: (i) with the lower levels of education -- allowing a holistic view of the whole education sector; (ii) with the "affiliated degree and professional colleges" (not considered in the MTDF, but which enroll one-third of all postsecondary students) — allowing a complete vision of the higher education sector; and (iii) with macro-level, in particular economic growth and sectoral priorities as established in the PRSP – offering a perspective on the fiscal space in which the higher education subsector operates. The PN complements the MTDF in the following areas:

- *Quality, Relevance, and Accreditation.* The PN puts a special emphasis on: (i) quality assessment with regards to both pedagogical and institutional performance, particularly academic qualification of new students, faculty staff achievements, pedagogical practices, and curriculum contents and relevance; and, (ii) quality assurance and promotion mechanisms, including evaluation and examinations, accreditation systems (self- and externally generated) for both private and public university departments and programs, and external efficiency (Chapter III).

- *Public/Private Partnerships.* The PN makes more in-depth forays into the promising area of private provision of higher education services and public/private partnerships, both for financial reasons and for the potential benefits that such partnerships can yield in terms of synergy for research and development and in terms of enhanced external efficiency. The PN explores further how to promote the role of the private sector (both for- and not-for-profit) in: (i) the provision/management of core academic and non-academic services, (ii) curriculum design, (iii) teaching, (iv) R&D, and (v)

financing. It analyzes how industry/university linkages, academic partnerships, and incubators can be encouraged both in and outside Pakistan (Chapter IV).

- *Governance and Management*. The PN focuses more attention on the institutional and governance arrangement of the sector, particularly through: (i) reintroducing more forcefully the provincial dimension a key one in Pakistan but somehow downplayed in the MTDF; and (ii) devoting more attention to the institutional sustainability of the higher education system where HEC is currently concentrating the bulk of the decision-making power as well as the implementation responsibilities (Chapter V).

- *Costs and Financing of the MTDF*. The PN lays out the budgetary impact of the strategy based on alternative scenarios combining assumptions on: (i) enrollment patterns and internal efficiency, (ii) the role of private providers, and (iii) the respective contributions of public funds and users. This exercise places the budgetary costs of higher education in the context of fiscal space. It also allows one to gauge the relevance and realism of the programs proposed under the MTDF (Chapter VI).

- *Communication*. Taking cognizance of the recent and high visibility of both higher education and the HEC, the Note points out the importance of the process by which the Commission introduces the reforms. It suggests that without a genuine consultation with the subsector stakeholders, the reforms may be met with stiff resistance, and provides some insights in how to organize this consultation.

4.   The PN deliberately limits its focus on those issues and institutions upon which HEC is targeting with the MTDF. Therefore, the Note is *not* a comprehensive review of the entire higher education sector and does not cover specific issues (e.g., internal efficiency) and some institutions (e.g., affiliated colleges) in depth. These may be dealt with in separate studies. Yet, in attempting to assess the MTDF programs, the Note focuses on some of the critical issues to be addressed by the MTDF, and makes some limited forays into areas not under the direct purview of the Commission.

CHAPTER I: COUNTRY AND SECTOR BACKGROUND

COUNTRY PROFILE

5.   The Islamic Republic of Pakistan has an estimated population of 162 million, making it the world's sixth most populous country, and second most populous country in the South Asia Region. Its GNI per capita is US$600, which places it at the 160th rank in the world (World Bank, 2004). The country is divided into four provinces (Punjab, Sindh, North West Frontier Province [NWFP], and Balochistan) and four territories (Islamabad Capital Territory, Azad Jammu and Kashmir, Federally Administered Northern Areas, and Federally Administered Tribal Areas). Pakistan has made significant development progress in the 59 years since its independence in 1947.

6.   During the 1990s Pakistan's progress in reducing poverty and improving the welfare of its people was modest. Slow economic growth – GDP grew by less than four percent per year and per capita real income grew by slightly more than one percent per year – led to a rising poverty rate, now 32 percent, and stagnating social indicators. For instance, the net primary enrollment rate declined from 46 percent in 1991/92 to 42 percent in 2001/02. By the late-1990s, Pakistan was in a position of extreme vulnerability with high and unsustainable fiscal deficits and heavy debt burden, which squeezed public investment and social spending.

7.   In 2000 the government initiated a wide-ranging and ambitious reform program which has resulted in a dramatic turnaround in its macroeconomic situation. GDP growth increased from an average of 3.3 percent over the 1997-2002 period to 8.4 percent in 2004/05. Public debt fell from almost 90 percent of GDP in 2000/01 to 60 percent in 2004/05. Improved fiscal performance and growing fiscal space have enabled the government to increase social and poverty-related expenditure from 3.8 percent of GDP in 2001/02 to 4.7 percent in 2003/04. Results of the reform program have started to become evident in the form of improved development outcomes. For instance, literacy rates among the population 10 years and older improved from 45 percent in 2001/02 to 53 percent in 2004/05, and full immunization rates of one-year-old children increased from 53 percent to 77 percent over the same time period (Government of Pakistan 2005).

8.   Despite these recent developments, Pakistan continues to face formidable challenges. These include substantial disparities in opportunity, particularly for the rural poor and women; lack of skilled manpower and low labor productivity; and a lack of basic infrastructure, including electricity, paved roads, municipal services, and telecommunications which are critical for supporting the delivery of basic services.

PRIMARY AND SECONDARY EDUCATION SUBSECTORS [1]

9.   Pakistan's education indicators are low compared to countries with a similar level of per capita income and countries in the South Asia region. According to the UNDP Human Development Report (2005), Pakistan was ranked 165th out of 177 members in the 2003 education index – the lowest of any country outside Africa. The country's primary and secondary education system faces multiple challenges. These are: (i) low levels of education expenditure (Pakistan is one of only 12 countries in the world that spends less than two percent of its GDP on education); (ii) inefficient use of funds and underinvestment in quality education; (iii) weak governance and service delivery at the national and local levels, as evidenced by high teacher absenteeism, poor supervision, lack of an accountability mechanism between planners and service providers, and constrained capacity; (iv) poor access due to lack of proper physical infrastructure;

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[1] Annex 1 provides a snapshot of the entire education system in Pakistan.

(v) a shortage of trained and qualified teachers: (vi) lack of support for education, especially for girls, in some cases due to cultural and social norms; (vii) inadequate public/private partnerships; and (viii) an absence of standardized data collection and dissemination.

10.   The Gross Enrollment Rate (GER) for primary schools (ages 5-9) was 86 percent in 2004/5 – substantially lower than other countries in the region, including Bangladesh (106%), India (107%), and Sri Lanka (102%).[2] Because of the significant number of over-age children in primary school, the Net Enrollment Rata (NER) of 52 percent is much lower than the GER (Table 1). There also are substantial regional, urban-rural income, and gender disparities in primary enrollments. The NER is highest in Punjab (58%) and lowest in Balochistan (37%). Enrollments in rural areas lag significantly behind those in urban areas (48% versus 64%). Girls have a considerably lower enrollment rate than boys (48% versus 56%), although the difference is significantly larger in rural areas than in urban areas. Low NERs are accompanied by high school drop-out rates, which exacerbate the problem of low education coverage. Fifteen percent of children in the 10-18 year old age group who have attended primary school at some point in the past dropped out before completing primary school in 2001/02. Learning achievements are low, and vary considerably, with the largest gaps being between schools (Das, Pandey, Zajonc, 2006).

Table 1: Pre-tertiary Education: Selected Indicators (2004/05)

	Males	Females	All
Literacy Rate 10 years and older	65	40	53
GER, Primary (age 5–9)	94	77	86
NER, Primary (age 5–9)	56	48	52
NER, Matric (age 14–15)	21	16	19

Source: 2004-05 PSLM (preliminary results).

11.   At the Matric level (ages 14–15) the GER was estimated at 19 percent in 2004/05. At this level the gap between boys' and girls' enrollments in rural areas is much wider than at other levels. Overall, there is a 5 percentage point difference between boys and girls. The gender gap is due not only to the reluctance of some parents to send girls to school, but also to the non-availability of appropriate school facilities for girls in both urban and rural areas.   In addition to poor indicators of education access, the Pakistan school system also faces a serious problem regarding the quality and performance of its education system.

12.   Due partly to the low quality of public schools, the private sector is playing an increasing role in the provision of primary education. However, the two sectors are closely interdependent. A recent study documents how government schooling investments have a positive impact on private sector involvement in Education (Andarabi, Das, Khwaja, 2006). Approximately 30 percent of primary school children go to private schools in Pakistan. This number is much greater in urban Punjab where more than half of primary school children are educated in the private sector.

13.   Based on Pakistan's Constitution, responsibility for the implementation of education in the provinces rests with provincial governments. The Federal Ministry of Education is responsible for the operation of primary and secondary schools in the Federal territories; setting a national vision for

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[2] Data for other countries are for 2003.

education, curriculum standards, and teacher competencies; development of national education policies; and implementation of federal education projects such as the National Education Assessment System and the National Education Management Information System.

14.   In recent years the GoP has undertaken a number of reforms aimed at improving the performance of the education sector and meeting the Millennium Development Goals and goals of Education for All (EFA). At the national level the Federal Government developed an Education Sector Reform (ESR) Program and a comprehensive reform of the country's system of public finance and governance, including the Devolution of Power Program which decentralized education to the districts. The ESR provides a framework for improving the poor performance of the education sector and reducing gender, regional, and income disparities in education. Some provincial governments also have put in place measures aimed at achieving universal primary education and adult literacy by reducing gender disparities and improving the quality of education. These include the Punjab Education Sector Reforms Program (PESRP) and Sindh Education Sector Reform Program. Education of primary to matric level has been made compulsory and free in both provinces.

HIGHER EDUCATION AND THE MTDF

15.   *It is only in the early 2000s that the powerful potential of a healthy higher education subsector began to be recognized by the highest authorities. It is also at the same time that the risk of losing this potential because of the deleterious situation of the subsector became obvious. This double awareness helped to create conditions for radical changes, and propelled the creation of institutions and the assignment of reform-minded leaders. The HEC has initiated reforms and has developed the MTDF, which provides an articulated strategy to push the changes even further.*

16.   In Pakistan the educational pyramid is characterized by a narrow, uneven, and fragile basis: low access, large disparities, poor quality, and weak performance. Under such conditions it is not surprising that the top of the pyramid – higher education -- reflects what is observed at the bottom and echoes the problems known at that level. One aggravating factor is that this level of education has been allocated extremely low levels of resources and has not been considered a priority within the whole education system.

17.   Compared to other countries in the region or to other countries with similar levels of development three decades ago, Pakistan is lagging, both in terms of economic development and in terms of the performance of the higher education subsector. Worth being noted, though, private rates of returns to higher education stand substantially higher in Pakistan than in neighboring countries (Riboud, Savchenko, Tan, 2006). The areas of dysfunction are diverse: access, quality, performance, teaching staff and pedagogic methodology, internal and external efficiency, equity, governance and management, monitoring and evaluation, and, last but not least, funding. To fully grasp the HEC's vision of universities and to better gauge the MTDF which reflects this vision, it is worth first to return briefly to the circumstances which gave birth both to the Commission and the Framework.

The Pre-HEC Era

18.   If higher education in Pakistan has come to such a low, it is not by lack of planning and strategizing in the subsector. This situation has attracted the attention of many scholars, administrators, and policy makers who have noticed that better off countries also are investing heavily in higher education. There is

little disagreement regarding the diagnosis of the higher education subsector, and some of the harshest descriptions of the ills which plague it come from the academic sanctorum itself.[3]

19.   Since Independence almost a dozen reports and six major education policies have been produced. Since 1957 eight five-year plans were issued, the last one covering the 1993-98 period, after which the government moved to annual development programs. All of these plans and programs[4] acknowledged the dire situation of higher education, put a high priority on the subsector, and credited it with central responsibilities to lift up the nation to high economic and social levels. But none allocated commensurate resources to fulfill these responsibilities. During these 43 years of planning, allocations for development expenditures on higher education were both meager to start with, and shrinking. Worse, the average execution rate of these allocations did not exceed 75 percent during the whole period.

20.   The lesson is clear: drafting and issuing plans and strategies is not a sufficient condition to reverse the situation of a neglected and damaged sector. The year 2002 marked a turning point with the first steps towards creating the necessary conditions for a vibrant higher education sector. First came the publication of the Task Force Report on Improvement of Higher Education in Pakistan (January 2002) which was followed immediately by the appointment of the Steering Committee on Higher Education and by the subsequent creation of the HEC (September 2002).

21.   The strength of the Task Force derives from the diversity of its members who included representatives from both public and private higher education institutions (HEIs), federal as well as provincial decision-makers, and from the expatriate Pakistani community.[5] It also comes from the fact that it was notified by a Minister for Education. Finally, the Task Force report was submitted to the President of Pakistan, thus gaining a broad legitimacy.

22.   There is no need here to list and comment on all the valuable conclusions and recommendations of the Task Force Report[6]. It is enough to note its main recommendations:

(a)   The first item on the Task Force list of priorities is *governance and management at the university level*; the first recommendation in that area is to grant universities *autonomy* and ensure their *accountability*.   Two measures were proposed to do that: (i) establish an independent governing body; and (ii) set up an independent system of management.

(b)   The Task Force advocated the creation of a central body for "facilitating *quality assurance* (…) and for linking funding by the Federal Government for public universities to the quality of performance".

(c)   The Task Force recommended an enhancement of the *government grant* by Rs5 billion annually, and the creation of a Rs20 Billion *endowment* to support research, staff development, and financial assistance to deserving students.

23.   Many other less strategic suggestions were provided in the report. However objective the Task Force was, and however sound its recommendations are, the hindsight one obtains four years later is that it

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3 Analyses made by external agencies (including UNESCO and the World Bank) generally concurred with the conclusions of domestic diagnosis.

4 Including the National Education Policy (1998-2010) and the Education Sector Reform (2001-2004).

5 In particular those gathered in the Boston Group.

6 Task Force on Improvement of Higher Education in Pakistan (2002) http://www.tfhe.net/resources/pakistan.htm[3].

missed the access and equity variables of the HE equation, as well as its budgetary dimension. In addition, the report made only timid incursions into the issue of relevance. This indeed does not diminish the fact that the report triggered a series of innovative moves, and that the public awareness of the magnitude of the problems gained currency after it was issued.

24. Further to its notification by the President in March 2002, the Steering Committee on Higher Education (SCHE) issued a report on "Higher Education Reform" in a six-month time. The mandate of the Steering Committee was to develop an implementation plan following the recommendations of the Task Force. In so doing, the SCHE had no choice but to tackle the financial issues. Using a broad-based and consultative approach, the Committee squarely presented the equation to its commissioner and stated that the reforms would require doubling university budgets. In addition, it proposed some concrete measures in the area of university governance.

The Higher Education Commission (HEC)

25. The creation of the Higher Education Commission by Ordinance No. LIII of 2002 was the first concrete result emanating from the work of the Task Force and the Steering Committee (see also below, chapter V). Since 1974 the federal grip on higher education was assumed by the University Grant Commission (UGC). The UGC role was mainly that of a coordinating body, coupled with the allocation of grants to universities. But its functions were not clearly defined and, in particular, it had no real power to enforce financial discipline amongst universities. Likewise, the relationship with provincial authorities was ill defined.

26. The HEC is placed directly under the Controlling Authority of the Prime Minister "or as the case may be", the Chief Executive. It is entrusted with a large array of powers so that it can fulfill its mandate, broadly defined as the evaluation, improvement, and promotion of higher education and research and development (R&D). Yet "higher education" in the Ordinance is defined as "education at bachelor and higher level degree courses including postgraduate certificates, diplomas, and research and development activities". By default it therefore excludes colleges even though the latter are (at least in theory and at least in grades 13 and 14) providing what is commonly considered higher education. At the other end of the spectrum, however, HEC has responsibility for R&D.

27. Notwithstanding this limitation in coverage, the Commission's powers stretch from policy formulation to the review of the financial requirements of public HEIs to fund allocation to the institutions. These powers include – among others -- causing of evaluation, the determination of equivalence and recognition of degrees, the prescription of conditions under which non-public institutions may open and operate, and support of the development of linkages between institutions and with industry. Such a broad set of prerogatives (they cut across all themes addressed in this Policy Note) obviously puts the HEC in the best position to develop and implement bold reforms; the Ordinance gives it the legitimacy, instruments, and resources it needs to do so. Yet the Ordinance clearly emphasizes the advisory role of the Commission and its capacity as a facilitator and guiding entity. It also specifically mentions consultation with the HEIs -- although only in the case of plans for the development of higher education.

28. Still a young institution, the HEC already has a legacy. Since its inception it has been startlingly active and has shaken up the world of the universities. The MTDF reflects the fact that, in addition to its power of action, HEC also has a vision and a strategic capacity.

29. As self-proclaimed by the HEC itself, the Commission has launched "a sea change of initiatives." The initiatives/reforms include: (i) quality assurance, with an emphasis on human resource development (e.g., expansion of the indigenous and foreign PhD programs), introduction of a new service structure for

faculty members (tenure track system), definition of criteria for establishing HEIs, standardization of the four-year undergraduate, MPhil, and PhD programs, computerization of universities, and creation of the digital library; (ii) equity, with a substantial scholarship program and support to institutions located in less developed areas; (iii) relevance, with a focus on engineering, science, and technology programs; (iv) research, with the Research Grant Program, the fellowship program, and the University Linkage Program; and (v) resource allocation (funding formula). Several of these initiatives are reviewed in the following chapters of this Policy Note.

The MTDF (2005 -2010): An Overview

30.   *As epitomized by the tenure track reform, the MTDF is mostly concerned with insuring quality and the development of a highly qualified faculty body. All the measures envisaged in the Framework respond to recognized, specific problems and correspond to real, justified needs. The MTDF, however, narrowly targets certain universities and puts a premium on first-tier institutions and research. While this priority has a rationale, it will be important as enrollments swell to cater to the other tiers of the higher education universe, and to allow non-research oriented institutions to flourish as well.*

31.   The MTDF is a five-year plan, issued in early 2005 by the HEC. The MTDF identifies the major issues faced by the higher education subsector – now recognized as one of the engines of economic development -- and offers a long-term vision and ambitious strategy, which the HEC has begun to implement. While the MTDF is clearly targeting universities and DAIs, in line with the HEC mandate, colleges also are mentioned occasionally in the document.

32.   The Framework is organized around four "core strategic aims": (i) faculty development, (ii) access, (iii) excellence in learning and research, and (iv) relevance to the economy, as well as three cross-cutting aims: (i) governance and management, (ii) quality assessment and accreditation, and (iii) physical and technological infrastructure development.   The strategic aims fully cover the areas that need to be addressed to make the universities functional and competitive again.

Figure 1: MTDF Strategic Aims

Core	Faculty Development	Improving Access & Learning	Excellence in Research	Relevance To National Priorities
	Leadership, Governance, and Management			
Support	Quality Assurance: Standards, Assessment, Accreditation			
	Infrastructure Development: Physical, Technology			
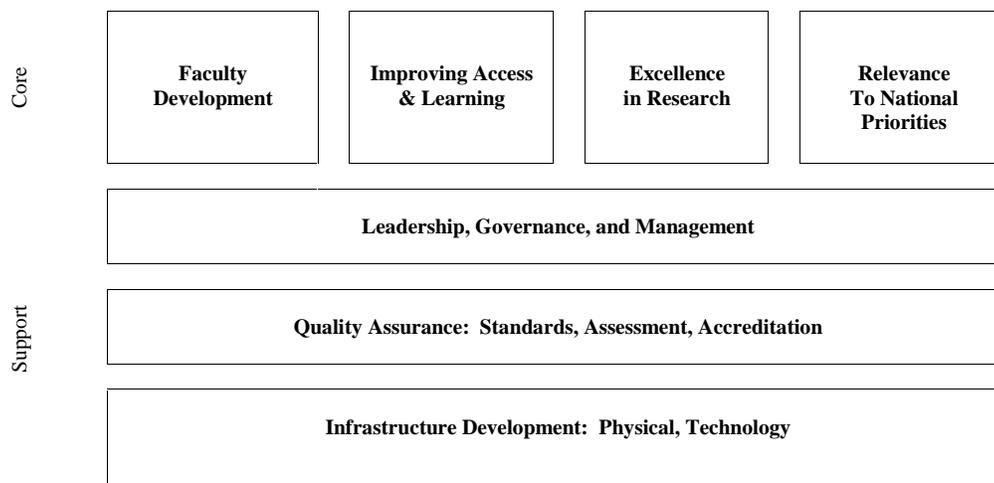
Source: HEC 2005

33.   For each of these seven strategic aims, specific objectives, major programs, and performance indicators are proposed. This structure is in line with the various kinds of logical frameworks in use in the

world. It allows both the further definition of precise activities and projects to implement the MTDF, as well as the development of a Monitoring and Evaluation (M&E) framework to follow up the progress made in achieving the targets. In addition, the MTDF develops a vision of the role of the HEC, as "the key driving force for the provision of accessible and world class higher education." To become such a force, the HEC intends to play a threefold role: "evaluate, improve, and promote higher education and research and development".

34.   In the MTDF, the HEC sees itself setting the rules and criteria, and evaluating the HEIs, while also promoting them. But it is not completely out of the implementation business (especially when it comes to quality assurance). The other striking aspect of the MTDF is the Framework's heavy bias towards the top tier of the higher education world and towards research. This emphasis is clear throughout the document. The implicit assumption behind this priority is that research and excellence are the forces which will both allow universities to contribute more directly to economic growth and pull the entire sector upwards, through demonstration effects. This is one possible way to energize the subsector, provided the rules are made clear, apply to all, and their implementation is transparent.   Following is a brief review of each of the Core Aims"some of the areas will be elaborated in further detail in the following chapters[7].

35.   Often treated as one component of access and/or quality objectives, it is not by accident that "*Faculty Development*" is presented in the MTDF as the first core aim of the strategy. This is a logical response to the low level of qualification which currently characterizes faculty staff across the board and largely contributes to the low quality of higher education. Programs to train new faculty as well as existing ones, to re-hire retired faculty, and to recruit from abroad are all sensible measures. Institutionalization of the tenure track is also an appropriate measure, even though it needs to be fully explained and implemented with extreme transparency. However, making the increase of the percentage of faculty members holding a "terminal degree" an objective may be excessive, as good teaching does not necessarily imply a "terminal degree", especially as the latter is measured by a PhD, as stated in the MTDF. The fixation on PhDs also could become an obstacle for achieving another objective, namely attracting faculty from the productive sector who often do not hold this kind of diploma. Therefore, without compromising on the need to acquire more qualified faculty, more flexibility may be warranted.

36.   The second core aim – "*Improving Access*"-- is also rational given the very low level of current enrollments. Strangely enough its quantification comes in the MTDF as a program (instead of an objective), and it is more problematic in the absence of a solid projection model. In fact, increasing access "to five percent over the next five years and 10 percent over the next 10 years", understood as increasing the gross enrollment rate, seems over-ambitious given both the capacity and financial constraints. The projections presented in Chapter VI of this Policy Note lead to targets of 5.4 percent and 7.7 percent for the entire HESS (and 4.0% and 6.2% if only universities are taken into account). This being said, the complementary objectives set under the general aim are those needed to expand access radically, regardless of the exact quantitative target. These complementary objectives include both supply-side measures -- physical elements, distance education — and demand-side ones (including alleviating financial barriers to students from low-income families).

37.   The third core aim of the MTDF -- "*Promoting Excellence in Learning and Research*"-- is clearly biased towards research. The 14 objectives and 16 programs listed to achieve this aim also are mainly relevant to research activities, and within the latter, science and technology labs are particularly concerned (social sciences and business studies are mentioned as objective #14, almost as an add-on). The transition towards a four-year undergraduate program is indeed a key measure to rationalize teaching at that level, but the measure is already well engaged.

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[7] Annex 2 provides a summary of MTDF aims, objectives, programs, and indicators.

38.   The main objectives under the fourth core aim --"*Ensuring Relevance*"-- are the promotion of university/industry collaboration. Looking at the programs proposed to achieve these objectives, however, research again has primacy.   Offices of research, technology incubators, and R&D centers are all instruments to encourage research. Likewise, "National Centers" which are designed on a formula which has shown its potential in several countries are also research oriented. However, the only program targeting relevance on a larger scale is the "vocationalization" of higher education through internships in industry and engagement of business managers in HE decisionmaking. This interpretation of relevance remains somehow restrictive in view of the larger issue of producing the type of graduates most needed by the economy.   Relevance also entails defining streams of study and instruments to dispatch students according to perceived needs as well as development and updating of curricula to adjust to emerging needs (actually, this point is addressed under the 6th core aim).

39.   "*Developing Leadership, Governance, and Management*" – the fifth MTDF core aim — includes a list of 11 objectives, all targeted towards HEIs.   The list is very relevant considering the current weaknesses in university management.   It begins with the development of a core of university administrators – a prerequisite to improve the current situation. Its main emphasis, however, is on training and accountability which are also fundamental ingredients to making the HEIs more efficient and responsible.   It is noteworthy that no measure is considered to improve the relationship between institutions and the authorities under which they operate (HEC/Provinces) and that there is no specific action aimed at more autonomy. Finally, to achieve these objectives, only three programs are proposed, and they seem to fall short of the ambitious objectives.

40.   With the 6th core aim –"*Enhancing Quality: Quality Assessment and Accreditation*", the MTDF is dealing with one of the major – and most successful -- tasks embarked on by the HEC. This area is dealt with in detail in Chapter IV of this Policy Note. In line with the Ordinance, according to which the HEC mandate is to "cause evaluation of the performance of institutions", the MTDF insists on the definition of criteria (and compliance with them).   It also underscores the importance of informing the public, thus responding to the concern regarding transparency of the market, and on capacity building within institutions so that they can take an active part in the entire quality improvement process.

41.   The last core aim –"*Physical and Technological Infrastructure*"-- is in fact a composite of two aims: the first involves an estate strategy and covers conventional development of facilities and equipment to accommodate the huge expansion of enrollments. The second focuses on the development of an information strategy and is devoted to networking, computerization, and digitalization throughout the university system to boost the quality of teaching and research. The programs devised to reach these objectives are fully appropriate.

42.   Although the MTDF strategy calls for spectacular increases in the resources allocated to the sector, and part of these will need to be drawn from external sources, the MTDF is silent on both the cost of all the measures it recommends and on the way to finance these costs.   Despite its cost-blindness, the MTDF contains all the necessary ingredients of a genuine strategic framework to revamp universities in Pakistan. The financial issues left aside by the MTDF are addressed Chapter VI of this Policy Note.

CHAPTER II: SPENDING PATTERNS IN HIGHER EDUCATION

TRENDS IN HIGHER EDUCATION SPENDING

43.   This section looks at spending patterns in the Pakistan higher education sector for the period 2001/02 to 2005/06. In this section, as in the rest of the Note, the higher education sector is defined as those postsecondary institutions that come under the purview of the HEC – ie., all universities and DAIs, with the exception of the Allama Iqbal Open University (which receives only a small amount of HEC funding).[8]   The analysis excludes the large number of affiliated colleges in the Pakistan postsecondary sector as these are not funded by the HEC but instead are funded by provincial governments.

44.   ***Between 2001/02 and 2005/06, total spending (recurrent + development) by the Commission -- which accounts for almost two-thirds of HEI revenues -- grew by more than 340 percent in real terms. Yet, this huge and unprecedented increase comes after years of under-funding, and still leaves Pakistan lagging behind with less than half of one percent of GDP spent on its universities. The bulk of the increase in spending has been accompanied by parallel growth in student enrollments. As a result, per student recurrent spending rose by only 41 percent over this same period, and what we are witnessing is more a rehabilitation campaign to restore the capacity of universities to function normally.***

Components of Higher Education Spending

45.   All federal government funding to the Pakistani higher education sector (ie., universities and DAIs) is provided through the HEC's budget. The HEC has both a recurrent and development component. The HEC's recurrent budget is set as part of the government's budget exercise each year and consists of five line items:

- University grants. This consists of the bulk grant provided by the HEC to public HEIs to finance their staffing and operations.

- HEC corporate spending. This consists of funding for all aspects of the operation of the HEC, including staffing, operating its national and regional offices, transportation, and IT.

- Inter-University Academic Activities (IUAA). This includes spending by the HEC on a range of cross-sector activities in the HE sector, including the HEC digital library and the Pakistan Education and Research Network (PERN).

- Promotion of research. This includes a range of research-related spending by the HEC, including support for scientific journals, funding for the National Research Program for Universities, and the visiting scholars program.[9]

- Allama Iqbal Open University (AIOU). This involves grants paid by the HEC to the AIOU to finance its staffing and operations.[10]

46.   The HEC development budget is set each year by the Planning Commission. Through its development budget, the HEC provides funding to HEIs for a variety of capital works and other projects,

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[8] Although private universities/DAIs come under the purview of the HEC, they are not included in this spending analysis as they do not receive any government funding.

[9] This funding is in addition to "direct release" research grants that are paid directly to HEIs. In 2005/06 funding for the promotion of research made up around 78% of total research funding, while direct release funding made up 22%.

[10] In 2005/06, only about 15% of the IIOU budget was provided by the HEC.

including purchase of equipment, foreign faculty hiring programs, establishment of new departments and centers, curriculum development, IT upgrading, and faculty development.

47.   Authority to spend the development budget monies varies by project size. Small projects (ie., those under Rs40 million) are approved by the HEC's Departmental Development Working Party (DDWP), while projects between Rs40 million and Rs400 million are approved by the Planning Commission's Central Development Working Party (CDWP), and projects above Rs400 million are approved by the Cabinet-level Executive Committee of the National Economic Council (ECNEC).

Recurrent, Development and Total Higher Education Spending

48.   In 2005/06 total higher education spending stood at Rs21.7 billion. This is up from just Rs3.9 billion in 2001/02, an increase of more than 450 percent in just four years (see Table 2:   ). Both components of higher education spending – recurrent and development spending – increased significantly between 2001/02 and 2005/06, with the former growing from Rs3.5 billion to Rs10.5 billion and the latter increasing from Rs423.9 million to Rs11.2 billion (although much of the increase between 2001/02 and 2002/03 was due to funding transfers from other budgets rather than new spending).[11]   In 2005/06 recurrent spending made up 48 percent and 52 percent of total higher education spending.

Table 2: Recurrent, Development and Total Higher Education Spending
2001/02 - 2005/06

Indicator	Fiscal year				
	2001/02	2002/03	2003/04	2004/05	2005/06
Total Higher Education Spending (Recurrent + Development)					
Nominal Total Higher Education Spending (Rs Millions)	3,904	8,385	10,804	16,771	21,743
Real Total Higher Education Spending (Rs Millions)	3,906	8,132	10,021	14,236	17,346
Higher Education Recurrent Spending					
Nominal Recurrent Spending (Rs Millions)	3,480	4,120	5,836	7,831	10,543
Annual Percentage Change (%)		18%	42%	34%	35%
Real Recurrent Spending (Rs Millions)	3,480	3,996	5,413	6,647	8,431
Annual Percentage Change (%)	N/A	15%	36%	23%	26%
Higher Education Development Spending					
Nominal Development Spending (Rs Millions)*	424	4,265	4,969	8,940	11,200
Real Development Spending (Rs Millions)*	424	4,137	4,608	7,589	8,957
Annual Percentage Change (%)	N/A	876%	11%	65%	18%
Number of Higher Education Development Projects (#)	32	147	217	321	N/A

*Note *: About Rs.3 billion of the increase in development spending between 2001/02 and 2002/03 was due to transfers to the HEC budget from the IT&T and S&T Divisions (Rs1.7 billion and Rs. 1.3 billion, respectively).*

Source: Higher Education Commission.

49.   In real (inflation-adjusted) terms, total higher education spending grew from Rs3.9 billion to Rs17.3 billion between 2001/02 and 2005/06 (Table 3). Real recurrent higher education spending grew from

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[11] The Rs3.84 billion increase in the higher education development budget between 2001/02 and 2002/03 was made up of an increase of approximately Rs450 million in the UGC development budget (from Rs425 million to Rs879 million), an additional Rs500 million in development funding provided to the HEC upon establishment and transfers to the HEC budget from the IT&T Division (Rs1.666 billion) and the S&T Division (Rs1.29 billion).

Rs3.5 billion to Rs8.4 between 2001/02 and 2005/06 – an increase of 140 percent, while real higher education development spending grew from Rs424 million to around Rs9 billion over the same period.[12] The number of development projects associated with this spending increased by a factor of 10 between 2001/02 and 2004/05.

50. The development budget has been used to finance a range of initiatives, including faculty development, construction of hostels, construction and repair of educational infrastructure, as well as improvements to HEIs' IT infrastructure. In 2004/05 the bulk of development spending went into general universities (46%), engineering universities (19%), and HEC projects (18%).

51. Higher education spending in recent years increased significantly as a share of GDP, total GoP spending, and total education spending over the 2001/02-2004/05 period (Table 3: . Although increases in HEC recurrent and development spending since 2001/02 – the last full year of the UGC – have been significant, these spending increases represent "catch-up" for years of sustained underfunding of the HE sector in Pakistan, which led to a degradation of the quality of university research and teaching. A 1992 assessment described the situation in Pakistan universities as follows:

> The resources available to universities and colleges are insufficient to allow these institutions to perform the functions they were established to provide. Universities have very little money for research and essential research support, scientific equipment, computation equipment and supplies, programmers, technicians, research associates, and access to the international network of scholarly documentation). There is little money for direct support of teaching… -Library holdings are severely deficient. The professional activities of faculty members, such as presenting papers at university conferences overseas and holding international conferences in Pakistan's universities, receive only meager support… [T]here is no money for faculty to conduct community outreach activities (World Bank 1992).

Similar arguments were echoed 10 years later by the Task Force on Improvement of Higher Education in Pakistan.

Table 3: Higher Education Spending Relative to GDP, GoP Budget and Total Education Spending 2001/02 - 2004/05

Indicator	*Fiscal year*			
	2001/02	*2002/03*	*2003/04*	*2004/05*
Higher Education Spending/GDP (%)	0.1%	0.2%	0.2%	0.3%
Higher Education Spending/GoP Budget (%)	0.5%	0.9%	1.1%	1.6%
Higher Education Spending/Total Education Spending (%)	6.9%	10.7%	11.2%	14.4%

*Sourc*e: World Bank calculations.

52. Despite the recent significant increases, government spending on higher education (including both HEC spending on universities/DAIs and provincial spending on affiliated colleges) in 2004/05 represented only 0.4 percent of Pakistan's GDP (0.3% if one looks only at HE spending without affiliated colleges). As can be seen from Figure 2, this figure is similar to Asian countries such as Indonesia and the Philippines, but below Asian countries such as India and Malaysia and non-Asian countries such as the United States, Norway, and Chile.

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[12] In reality, the growth in real development spending was more on the order of 100 percent given that much of the increase between 2001/02 and 2002/03 involved reallocations from other budget line items, rather than new spending.

Figure 2: Ratio of Public Spending on Tertiary Education to GDP, Selected Countries

53.   In 2004/05 public spending on HE represented some 14 percent of the total Pakistan education budget. Recurrent public per student HE spending in Pakistan, which stood at $US770 in 2005/06 ($US1,600 if both recurrent and development spending are taken into account), is well below the average for OECD countries in 2001 ($US7,000+ measured in 1995 dollars), but close to countries defined as global peers of developing Asian countries ($US900 measured in 1995 dollars; Perkinson, 2005).

54.   In the early years of the HEC, much of the increase in higher education spending was absorbed by an expansion in student enrollments (Table 4). Despite significant increases in higher education spending, per-student spending levels rose by a relatively small amount. In contrast, more recent years have seen large increases in per-student spending. This is true no matter what measure of spending is used – recurrent, development or total. In 2005/06 total higher education spending per-student measured almost Rs96,000 (almost Rs 77,000 in real terms). This was up from Rs82,000 the previous year (Rs70,000 in real terms) and Rs29,500 in 2001/02. As enrollments are projected to triple within the next ten years, the issue of the link between this increase and the rate at which the budget for HE will be adjusted, will need to be addressed up-front. Allocation formulas pegging the budget to the number of students (as the one used by HEC) ensure the link is maintained, but they do not guarantee the budget will be available.

Table 4: Trends in Higher Education Per-Student Spending, 2001/02 - 2005/06

Spending Indicator	Fiscal year				
	2001/02	2002/03	2003/04	2004/05	2005/06
Enrollments					
Enrollments (#)	132,226	155,995	180,422	204,054	226,756
Total Higher Education Spending (Recurrent + Development)					
Real Total Higher Education Spending (Rs Millions)	3,904	8,132	10,021	14,236	17,388
Real Per-student Total Higher Education Spending (Rs)	29,524	52,132	55,544	69,766	76,682
Higher Education Recurrent Spending					
Real Higher Education Recurrent Spending (Rs Millions)	3,480	3,996	5,413	6,647	8,431
Real Per-student Higher Education Recurrent Spending (Rs)	26,318	25,614	30,002	32,577	37,183
Higher Education Development Grants					
Real Higher Education Development Grants (Rs Millions)	424	4,137	4,608	7,589	8,957
Real Per-student Higher Education Development Grants (Rs)	3,206	26,519	25,542	37,189	39,499

Note: *Note: Enrollment data are based on administrative data supplied to HEC. They differ from enrollment data generated by the Statistical section of the HEC. These data are used because they provide a consistent time series on enrollments for calculating per-student public spending. Real amounts are calculated using 2001/02 as the base year. Source*: Higher Education Commission.

55.   A key focus for the HEC will be to ensure that equity goals and objectives remain front and center and that the benefits of increased spending on education are shared by – and indeed benefit disproportionately – groups for whom opportunity has heretofore been limited. While there is no doubt the higher education sector has been neglected for many years, the same is also true of other subsectors such as colleges and schools. It is also a reality that spending on higher education disproportionately benefits those from higher income groups. This is supported by data from the Pakistan Integrated Household Survey (1998/99) which shows that per-capita consumption of public spending on tertiary education was 19 times higher among families in the top expenditure quintile than among families in the lowest expenditure quintile (World Bank 2002).

56.   Spending on tertiary education also benefits men more than women. According to Sabir (2005) men in Pakistan consistently benefited more from public spending on tertiary education than did women. This was true in all provinces. Indeed, in one province the per capita benefits to men in the top expenditure quintile exceeded those of poor women by a factor of 186:1(Sabir 2005). The rapid increases in spending on higher education will need to be accompanied by similar increases in spending at the lower levels of education, so that the already significant gap between per-student spending at the higher education level and earlier levels of education does not widen even more.

Trends in Higher Education Recurrent Spending by Category of Expenditure

57.   The bulk of spending on higher education is on university grants. In 2005/06 spending on university grants totalled Rs9.2 billion, while research funding totalled Rs342 million. HEC corporate spending totalled Rs183 million and IUAA totalled Rs158 million (Table 5).

Table 5: Higher Education Recurrent Spending by Category of Expenditure (Nominal)
2001/02 - 2005/06

Spending Indicator	Fiscal year				
	2001/02	2002/03	2003/04	2004/05	2005/06
Total Higher Education Recurrent Spending Rs Millions/%)	3,480 (100%)	4,120 (100%)	5,836 (100%)	7,831 (100%)	10,543 (100%)
• HEC Corporate Spending (Rs Millions/%)	55 (1.6%)	105 (2.5%)	118 (2.0%)	186 (2.4%)	310 (2.9%)
• University Grants (Rs Millions/%)	3,335 (95.8%)	3,908 (95.0%)	5,320 (91.2%)	7,141 (91.1%)	9,206 (87.3%)
• IUAA (Rs Millions/%)	4 (.1%)	4 (.1%)	78 (1.3%)	158 (2.0%)	535 (5.1%)
• Promotion of Research (Rs Millions/%)	0 (0%)	6 (.1%)	210 (3.6%)	240 (3.1%)	342 (3.2%)
• AIOU (Rs Millions/%)	86 (2.5%)	90 (2.2%)	110 (1.9%)	110 (1.4%)	150 (1.4%)

Source: Higher Education Commission

58.   All components of the higher education recurrent budget – university grants, IUAA, HEC corporate spending, and research funding – have increased in recent years. The bulk of the increase has gone into university grants, which grew from Rs3.4 billion to RS9.2 billion between 2001/02 and 2005/06. Over that same period, spending on the promotion of research rose from zero to Rs342 million, HEC corporate spending rose from Rs55 million to Rs310 million, and IUAA spending rose from Rs4 million to Rs535 million. Despite the significant increase in spending on university grants, their share of recurrent spending on higher education fell by more than 10 percentage points between 2001/02 and 2005/06.

Spending on University Grants

59.   University grants grew by a factor of almost three between 2001/02 and 2005/06, an increase of 176 percent in nominal terms. University grants (adjusted for inflation) rose to Rs7.3 billion (Table 6). More importantly, per-student grants grew by 29 percent and have provided some catch-up for years of reduced government spending.

Table 6: University Grants per Student, 2001/02 - 2005/06

Spending Indicator	Fiscal year				
	2001/02	2002/03	2003/04	2004/05	2005/06
University Grants (Rs Millions)	3,335	3,908	5,320	7,141	9,206
Per-student University Grants (Rs)	25,221	25,049	29,485	34,994	40,599
Real University Grants (Rs Millions)	3,335	3,790	4,934	6,061	7,362
Real Per-student University Grants (Rs)	25,221	24,296	27,348	29,704	32,467
Percentage Change in Real University Grants/Student, 2001/02-2005/06 (%)					29

Source: Higher Education Commission

60.   This additional funding has been used by public HEIs to hire new academic staff, raise the salaries of faculty and staff in accordance with the new salary scale, and finance and introduce the faculty tenure track program. According to the HEC plan, the small proportion of faculty currently in the tenure track (about 1%) would be increased to 30 percent within the coming 10 years. In addition, the increase in recurrent budget has been invested in non-salary expenditures required to operate HEIs, including utilities, the acquisition of fixed assets, and maintenance of infrastructure.

61.   One key HEC policy innovation has been the introduction of a formula-based funding system for the payment of recurrent grants to HEIs. The new system, which was introduced in 2002/03, provides for a more rational and transparent mechanism for allocating funding to public HEIs. Prior to the establishment of the HEC, funding for HEIs generally amounted to last year's budget plus an increase of four to five percent.

62.   Until 2005/06 funding allocations under the HEC formula took into account four factors, each with its own weighting (Box 1). The two key ones are:

- Enrollments. This component makes up 40 percent of an HEI's recurrent grant and is distributed on the basis of enrollments in different areas of study. Students in engineering/medical studies and science/agricultural studies are funded at three times and two times the level of students in general/social studies.

- Grading and Performance. This component makes up 25 percent of an HEI's recurrent grant. It is distributed on the basis of the number of M.Phil/PhD students (60%) and PhD faculty (40%). This is not really an indicator of performance; instead it should be viewed as a measure of the degree of specialization in postgraduate studies and as a proxy for the quality of the staff, respectively.

Box 1: Components of HEC Funding Formula (2004-2006)

Parameters	Weighting
Across-the-board increase due to cost adjustment	20
On the basis of HEI enrollments (excluding self-finance students)	40
On the basis of HEI grading/performance	25
Adjustment to remove historic inequities	15
Total	100

Source: HEC Recurring Grant Funding Mechanism, Higher Education Commission, p. 14.

63.   The balance of an HEI recurrent grant was determined by a compensation factor to counterbalance previous resource allocation inequalities among universities (15%) and an across-the-board increase in HEI current funding (20%). Beginning in 2006/07, however, these latter two criteria will no longer be considered in determining HEI recurrent grants (but grants paid to individual HEIs will not increase by more than 65 percent or by less than 15 percent from one year to the next). From 2006/07, enrollments will determine 85 percent of an institution's grant, while the remaining 15 percent will be determined by "grading/performance".

64.   An analysis of spending on university grants by type of HEI shows that the share of grants going to general universities, engineering universities, and agricultural universities fell between 2001/02 and 2005/06. In contrast, the share of grants going to institutes or distributed through HEC programs rose from 8.3 percent in 2001/02 to 20.8 percent in 2005/06. The share of grants going to medical universities rose, while that for centres of excellence remained constant (Table 7).

Table 7: Trends in University Grants by Type of HEI, 2001/02 - 2005/06

Indicator	*Fiscal year*	
	2001/02	*2005/06*
General Universities (Rs Millions/%)	55.7%	47.2%
Engineering Universities (Rs Millions/%)	16.4%	14.9%
Medical Universities (Rs Millions/%)	0%	2.2%
Agricultural Universities (Rs Millions/%)	15.7%	11.0%
Institutes/HEC	8.3%	20.8%
Centers of Excellence	3.8%	3.9%
Total	100%	100%

Note: Figures include annual and supplementary grants, research grants, and special S&T grants, but exclude provincial grants. Figure for General Universities includes AIOU funding. Prior to 2002/03, medical colleges were not funded by the HEC.
Source: Higher Education Commission

HEC CORPORATE SPENDING AND REVENUES

65.   ***The Commission's own corporate budget – which represents less than two percent of its total expenditures – reflects prudent management practice. The HEC has built internal capacity while managing its development through flexible means and adjusting its workforce as its volume of activities increased.   In allocating resources to HEIs, the HEC is using an innovative funding formula which combines intakes, inputs, and a proxy for institutional performance.   It is too early to point to significant improvements in tertiary education outcomes as a result of HEC measures, but the significant increase in HE access and in the volume of HEI activities bode well for the future. Programs in the area of faculty staff development are also promising.***

66.   The powers and functions given by Ordinance 2002 to the HEC have entailed a significant increase in the size of the Commission. HEC-budgeted corporate spending grew from less than Rs60 million in 2001/02 to Rs310. million in 2005/06 (Table 8). The HEC receives the bulk of its funding from the government, with the remaining coming from its own source revenues. The latter revenues come principally from attestation fees, revenues from HEC hostels, and private rentals of vehicles to staff. Own source revenues could increase significantly in the future if the HEC requires HEIs to pay the cost of accreditation and quality assurance reviews.

Table 8: Trends in HEC Corporate Spending, 2001/02 - 2005/06

Spending Indicator	*Fiscal year*				
	2001/02	*2002/03*	*2003/04*	*2004/05*	*2005/06**
Total HEC Corporate Spending (Rs Millions)	54.9	104.8	118.2	186.112	310.2
Government Revenues (Rs Millions)	40.4	85.3	110.0	174.0	260.0
Own Source Revenues (Rs Millions)	2.9	5.1	8.2	11.7	20.2
Carry Forward from Previous Year (Rs Millions)	11.6	14.4	0.0	0.4	30.0
Own Source Revenues/Total Revenues (%)	5.3%	4.5%	6.9%	6.4%	6.5%

*: Estimated Budget
Source: Higher Education Commission.

67.   Despite the broadening of HEC functions, Commission corporate spending represented only 3.0 percent of recurrent spending on higher education and 1.4 percent of total spending (recurrent and development) in 2005/06 (Figure 3). Thus, even though HEC corporate spending as a proportion of recurrent spending on higher education almost doubled between 2001/02 and 2005/06, the Commission remains a lean agency.

Figure 3: HEC Corporate Spending Relative to Recurrent and Total HEC Spending, 2001/02 -2005/06
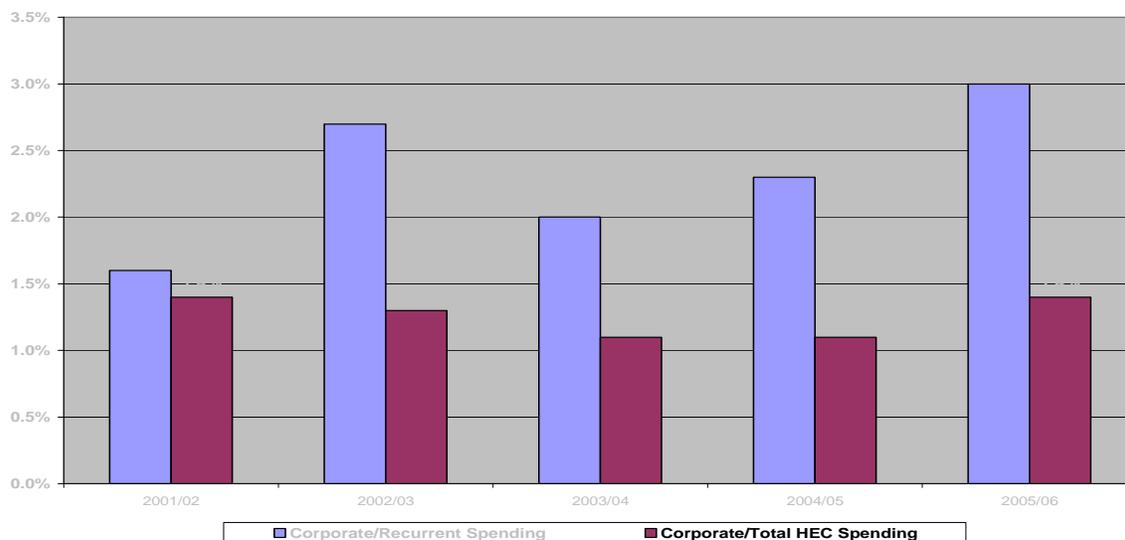
68.   The HEC is a semi-autonomous government agency which enjoys more financial management flexibility than government departments. Unlike its counterparts in the core government sector, the HEC has the power to shift unspent funds from one year to the next, rather than return those funds to the Department of Finance for reallocation. Despite this, the HEC has largely spent its budget allocation within the year it was appropriated. Between 2001/02 and 2004/05, the HEC spent an average of 93 percent of its Main Estimates budget. This has varied over the years, with a low of 85.4 percent in 2004/05 and a high of 99.7 percent in 2003/04.

69.   The significant increase in the HEC corporate budget is to be expected given its new powers and functions which require the organization to develop and upgrade its human and physical infrastructure, as well as its financial and other systems. As a result, the HEC has put considerable resources into building its organizational capability.

70.   In line with its expanded powers and functions, the number of employees at the HEC has grown since the organization's establishment in 2002 (Table 9). Between 2001/02 and 2005/06, the number of employees grew from 370 to 630. Much of the increase has been in the form of limited-term project employees rather than regular budgeted staff. This reflects the fact that many of the employees are working on establishment-related tasks with a finite end date – IT-related upgrades, for example. Between 2001/02 and 2005/06 the proportion of regular budgeted staff fell from 100 percent to 72.2 percent.

71.   The HEC strategy of hiring project staff on limited-term contracts shows good judgment given that many of the tasks being undertaken (eg., in the IT area) are front loaded and will require fewer staff once the establishment phase is complete. Not all project staff are working on establishment projects. Some have been hired to fill vacant "regular budget" positions. The HEC's view is that it is significantly understaffed, particularly at the officer level. These shortages and the use of fixed-term contractors in "permanent" positions can adversely affect policy and operational continuity as well as overall HEC performance.

72.   The HEC views on understaffing are justified by the large number of new functions taken on by the Commission upon its establishment and by the weak capacity of much of the HE sector, which has required the HEC to take on both an operational and catalytic functions. Given HEC's ambitious plans, the planning department would benefit from additional staff. To address the shortage of officer-level staff, the HEC human resources strategy is to convert support staff positions to professional positions over time.

Table 9: Number of Employees and Salary vs. Non-Salary Spending, 2001/02 - 2005/06

Spending Indicator	Fiscal year				
	2001/02	2002/03	2003/04	2004/05	2005/06
Number of HEC Employees					
Regular Budget Employees (#)	370	365	389	424	455
Project Employees (#)	0	0	87	135	175
Total HEC Employees (#)	370	365	476	559	630
Percentage Regular Employees (%)	100%	100%	81.7%	75.8%	72.2%
HEC Salary vs. Non-salary Spending					
HEC Salary Spending (Rs Millions)	34.8	38.9	64.2	79.6	N/A
HEC Non-salary Spending (Rs Millions)	20.1	65.8	53.6	76.5	N/A
HEC Salaries/Corporate Spending (%)	63.3%	37.2%	54.5%	51.0%	N/A

Source: Higher Education Commission.

73.   Increased staff numbers, along with the updated civil service pay scale, helped to lift HEC salary spending from Rs35 million in 2001/02 to Rs80 million in 2005/06. Yet the proportion of the budget dedicated to salaries declined from 63.3 percent in 2001/02 to 51 percent in 2004/05. This very low relative level of the wage bill reflects the increasing expenditure on training, IT consumables, establishment of regional offices, operating costs for the expanded national office, etc.

74.   The HEC has invested a considerable amount in staff training to improve the capability of both existing and newly hired staff. This has included general training such as staff orientation, secretarial training, information security training, productivity enhancement training, as well as more specialized IT and management training. It also has invested considerably in new IT systems, including the Digital Library, the PERN, and additional internet bandwidth. The HEC also has invested heavily in its own IT infrastructure with the installation of a Local Area Network (LAN) as well as external and internal websites. The external website is the most accessed one in the Government of Pakistan.

75.   The HEC has put considerable effort into managing risks and ensuring value for money from its development spending budget. It is currently replacing its outdated financial management system with a double-entry, computer-based one that provides real-time access to financial data, paperless transactions, project data and progress reports, the organization's asset register, and other information. The newly established Monitoring and Evaluation (M&E) Section within the HEC is tasked with monitoring the implementation of all HEC development projects. All projects are tracked and their progress rated based on factors such as project execution, financial discipline, and procurement procedures. Where problems are identified, corrective action is taken. The M&E Section issues Quarterly and annual reports.

Spending on Faculty Development

76.   Funding increases in both the recurring and the development budgets have been used to fund a range of HEC strategies and initiatives aimed at improving access, quality, and relevance in HE. These strategies and initiatives have been directed at a number of key areas. One of these areas has been faculty development. Since its establishment in 2002, the HEC has undertaken a number of initiatives in this area

aimed at raising the number of highly qualified PhDs in the country. Programs with a short-term focus have included short-term visits by international faculty, an international faculty hiring program (1-2 years), a program to hire productive retiring researchers, and training for existing faculty members. Programs with a longer-term focus have included indigenous and overseas scholarship programs.

77.   The short-term faculty hiring program targets Pakistani nationals with postdoctorate foreign experience who are likely to return for at least one semester (Table 10). The long-term faculty hiring scheme was established in October 2003 and is designed to attract faculty for a period of one to two years. To date, 250 individuals have accepted an offer and 140 have joined a public HEI. The Reverse Brain Drain Program targets expatriate Pakistanis with postdoctorate foreign experience who intend to return to Pakistan for two or more months. The program is focused on applicants in agriculture and engineering. To date, overall, these various programs have attracted approximately 230 faculty staff. Given the volume and quality of the Pakistani diaspora on the one hand, and the benefits offered to the returnees, combined with a general improvement of the local situation, the Reverse Brain Drain Program may grow further.

Table 10: HEC Faculty Development Programs, 2002/03 - 2005/06

Number of Faculty Attracted Under...	*Fiscal year*				
	2002/03	*2003/04*	*2004/05*	*2005/06*	*Total*
Short-term Initiatives					
Short-term Faculty Hiring Program	N/A	15	33	13	61
Long-term Initiatives					
Long-term Faculty Hiring Program	N/A	23	79	38	140
Reverse Brain Drain Program	N/A	7	19	2	28
Total Number of Faculty Attracted	*N/A*	*45*	*131*	*53*	*229*

Source: Higher Education Commission.

78.   Over the longer term, the HEC is endeavoring to lift the capability of the HE sector in Pakistan through the creation of indigenous and overseas scholarship programs at both the post-graduate and PhD levels. To date, more than 600 overseas scholarships/postdoctoral fellowships and 1,500 indigenous scholarships have been granted.

79.   The government also has introduced a research grant program for researchers and faculty across all disciplines. Grants last two to three years and can amount to as much as Rs2 million. Funding for meritorious scientists is higher (Rs4-6 million). Applications for the grants are accepted throughout the year and award decisions are based on peer review. To date some 430 research proposals have been submitted, with almost 80 awarded, about 150 declined, and the rest currently under review. Approved subjects cover all disciplines, with a focus on science and agriculture.

80.   The HEC has introduced a range of other faculty development initiatives, including providing re-employment opportunities for retired active researchers/teachers with a PHD, funding sabbaticals, a Presidential Young Innovators program, and short-term training for scientific and technical/research staff. To date more than 700 staff have benefited from HEC-sponsored in-service training (Table 11).

81.   The government also has assisted in the development of the HE sector generally and faculty specifically through the provision of funding for travel grants for scholars to attend conferences. As noted in Table 12, the HEC provided funding for almost 150 conferences between 2002/03 and 2005/06. It also funded travel grants for 535 scholars over that same period.

Table 11: HEC Scholarship Programs, 2001/02 - 2005/06

Scholarship Type	Fiscal year					
	2001/02	2002/03	2003/04	2004/05	2005/06	Total
Overseas Scholarships						
Overseas Scholarships (#)	0	0	130	301	53	484
HRD Program for Strengthening HEIs (#)	0	0	0	0	8	8
Postdoctoral Fellowships (Teaching Staff) (#)	0	0	34	79	0	113
Indigenous Scholarships						
Indigenous Science & Technology PhD Scholarships (#)	27	30	63	21	0	141
Indigenous 5000 PhD Scholarships (#)	0	0	600	750	0	1,350
Merit Science & Technology PhD Scholarships (#)	61	55	38	20	0	174
Total	*88*	*85*	*865*	*1,171*	*61*	*2,270*

Source: Higher Education Commission.

Table 12: Conferences and Faculty Grants Funded by HEC, 2002/03 - 2005/06

Program	Fiscal year				
	2002/03	2003/04	2004/05	2005/06	Total
Number of Conferences Funded by HEC (#)	N/A	47	49	52	148
Amount Disbursed for Conferences (Rs Millions)	N/A	7.9	9.4	13.2	30.5
Number of Scholars Funded for Travel Grants (#)	N/A	91	194	250	535
Amount Disbursed for Travel Grants (Rs Millions)	N/A	4.3	12.9	19.8	37.0

Source: Higher Education Commission.

82.	Although the HEC is still in its early days, indications are that these attempts to raise the quality of faculty in Pakistan are bearing fruit. Data from the HEC show that the number of journal citations from Pakistani academics has increased considerably in recent years – from about 800 to almost 1,300 between 2002 and 2005 (Figure 4).

Figure 4: Number of Article Citations by Pakistani Academics, 2002-2005
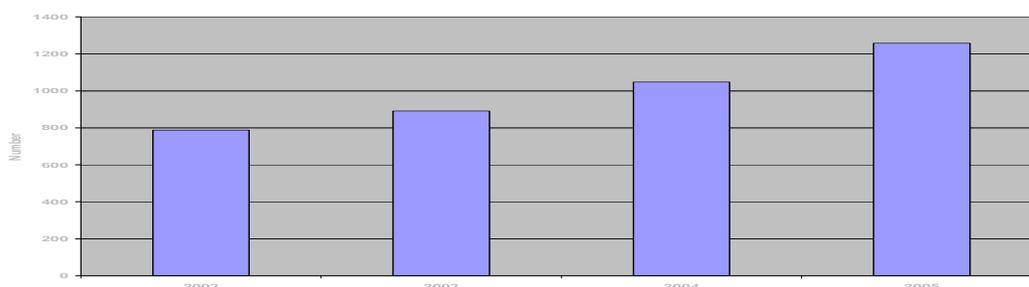
Source: Higher Education Commission.

83.   *Public higher education institutions in Pakistan have begun to diversify their sources of revenues. More than one-third of their revenues are generated through non-governmental sources. Of those, however, user charges are still a small portion, leaving HEIs vulnerable and still largely dependent upon public grants. While HEIs certainly need to mobilize additional funding through various conduits to provide competitive services, it appears that there is also some room to increase efficiency, in particular by reviewing staffing policies and increasing the proportion of faculty staff.*

84.   Public HEIs receive grants mostly from the HEC (university grants as described above). They also receive grants from provincial governments. The latter represented less than three percent of the total government revenues before 2002/03, but now account for about eight percent. Public HEIs also generate their own third-party revenues (examination, tuition, self-financing, and other fees).   University grants are provided through the recurring grant funding mechanism and through the direct payment of research.

85.   Public HEI revenues increased from about Rs7 billion to about Rs19 billion between 2001/02 and 2005/06 (Table 13). This was due to both an increase in university grants provided by the HEC/provincial governments as well as a rise in HEIs' non-government revenues. University grants from the HEC/provincial government grants grew from Rs3.5 billion in 2001/02 to about Rs12 billion in 2005/06. Government revenues represented 63 percent of public HEI revenues in 2005/06 (up from 53%).

Table 13: Public Higher Education Institution Revenues, 2001/02 - 2005/06

Spending Indicator	*Fiscal year*				
	2001/02	*2002/03*	*2003/04*	*2004/05*	*2005/06*
Total Revenues	6,652	7,731	10,800	13,394	18,644
• HEI Government Revenues (Rs Millions)	3,513	4,104	6,284	7,948	11,716
• HEI Non-government Revenues (Rs Millions)	3,140	3,627	4,515	5,446	6,928
Nominal Revenue per Student (Rs)	50,309	49,557	59,857	65,641	82,219
Real Revenue per Student (Rs 2001/02)	50,309	48,066	55,521	55,718	65,749
Government Revenues/Total Revenues (%)	53%	53%	58%	59%	63%
Non-government/Total Revenues (%)	47%	47%	42%	41%	37%

Note: HEI government revenues include HEC and provincial grants.
Source: Higher Education Commission.

Figure 5: Distribution of HEI Non-government Revenues by Source, Public HEIs, 2005/06

12.5%

10.7%

40.9%

35.9%

■ Tuition/Self Financing Fees	■ Examination Fees
□ User Charges	□ Other Indigenous Sources
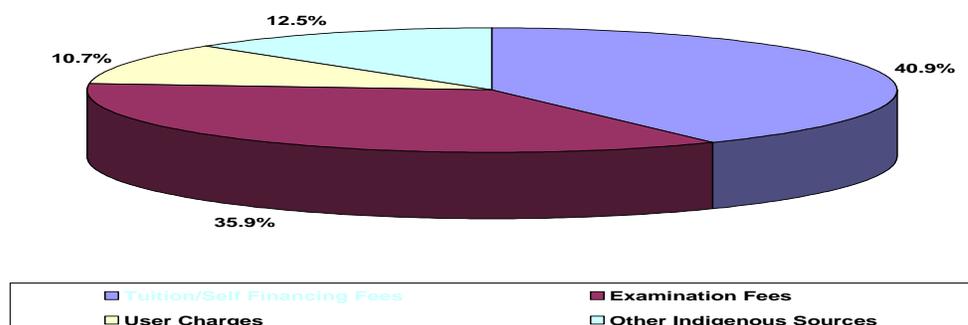
86.   Non-government revenues rose from about Rs3 billion in 2001/02 to about Rs7 billion in 2005/06. They represented 37 percent of total revenues in 2005/06 – down from 47 percent in 2001/02. Revenues from self-financed/self-support students have decreased in importance in the three years following 2001/02 (to less than 1% in 2004/05), but rose substantially in 2005/06 to five percent. In 2005/06 tuition/self-financing fees made up 41 percent of public HEI non-government revenues, while examination fees made up 36 percent. User charges and other revenues made up the remaining 23 percent (Figure 5).

87.   As can be seen from Figure 6, public HEIs' government revenue growth has considerably outpaced growth in non-government revenues in recent years, with the former rising by 234 percent and the latter by 121 percent between 2001/02 and 2005/06. It is important that the HEC ensure that government revenues are seen by HEIs as additional to non-government revenues and not as a substitute, especially given the already relatively low level of tuition fees for students at public HEIs, and the phasing out of the self-financing option.

Figure 6: Growth in Public HEI Government and Non-government Revenues, 2001/02-2005/06
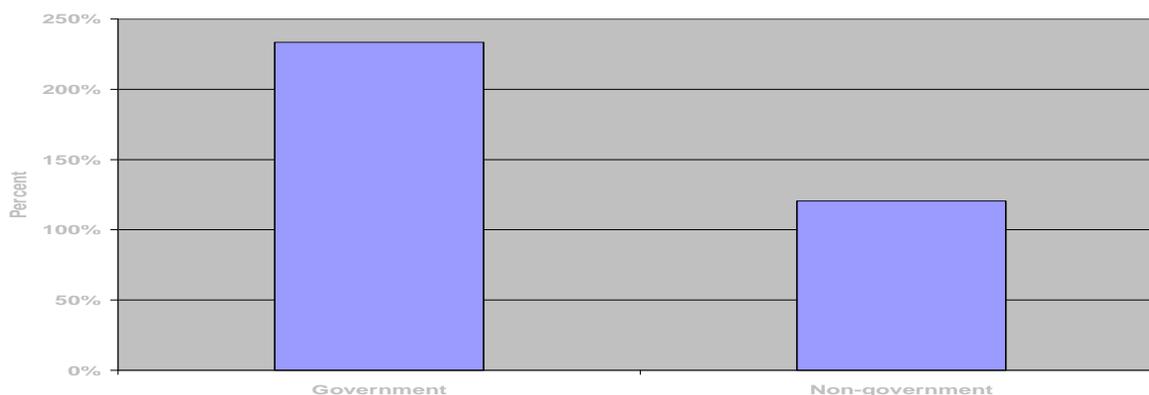
88.   Total spending by public HEIs stood at Rs18.5 billion in 2005/06 (see Table 14). This was up nearly Rs5 billion over the previous year. In 2005/06 spending on salaries totalled Rs12.1 billion while non-salary spending totalled Rs6.5 billion. Spending on salaries made up approximately two-thirds of total spending by public HEIs, while non-salary spending made up the remaining one-third.

89.   On a per-student basis, nominal public HEI revenues (government and non-government) rose from Rs50,300 to Rs82,000 between 2001/02 and 2005/06 (to Rs65,400 in real terms). A comparison with selected private HEIs for 2004/05 (Figure 7) shows that public HEI unit costs are below those in a number of private HEIs (e.g., LUMS, GIK, Iqra University, Foundation University), but are above those in a sereral other private HEIs (including Jinnah University for Women and the University of Lahore), and, as noted above, they are rising. More analysis of individual HEIs and comparisons across types of HEIs would need to be conducted to get a better handle on the relative efficiency of public and private HEIs.

Table 14: Spending by Public Higher Education Institutions, 2001/02-2005/06

Spending Indicator	Fiscal year				
	2001/02	2002/03	2003/04	2004/05	2005/06
Spending by Public HEIs					
Total Public HEI Spending (Rs Millions)	6,456	7,431	10,233	13,271	18,549
Nominal Public HEI Spending per Student (Rs Millions)	48,823	47,637	56,716	62,004	81,802
Public HEI Salary vs Non-Salary Spending					
Salary Spending (Rs Millions)	3,531	3,930	5,525	8,719	12,088
Salary Spending/Spending (%)	55%	53%	54%	66%	65%

Source: Higher Education Commission

Figure 7: Unit Costs, Public HEIs and Selected Private HEIs, Pakistan, 2004/05
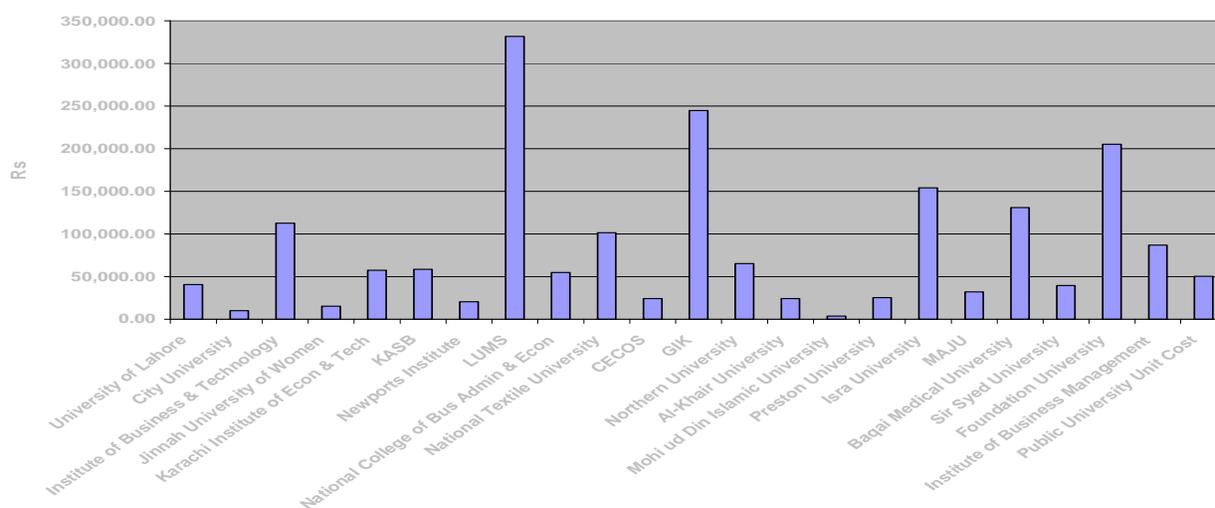
Source: Higher Education Commission

90. Figure 8 provides a broad comparison of spending per student at Pakistan public HEIs and those in a range of OECD and non-OECD countries. It shows that spending per student in Pakistani HEIs is much lower than OECD countries, and even lower than most Asian peers such as India and the Philippines.

Figure 8: Spending on Tertiary Education Institutions per Student in $US, Selected Countries
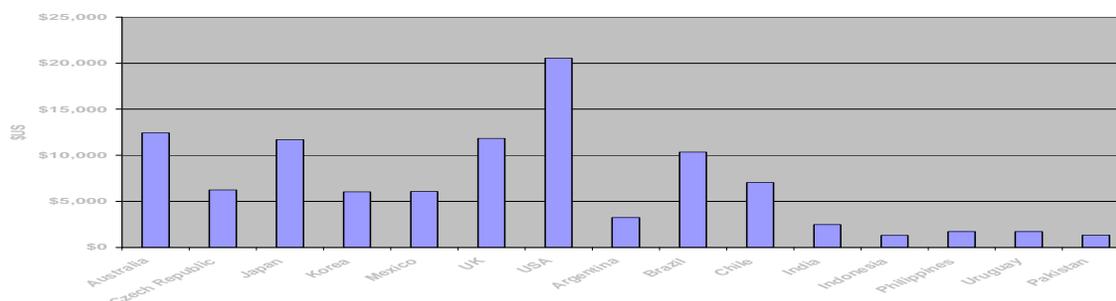
Budgetary Planning at HEIs

91.   While the universities have begun the process of institutional and budgetary planning, the HEC needs to continue encouraging the universities to develop their own five-year strategic and budget plans on the basis of enrollment projections, staff and faculty requirements, and budget forecasts. Also, training needs to be provided to appropriate university staff on strategic and financial planning and recommendations on mechanisms for five-year budget projections which allow universities to examine different budget scenarios and link them with plan goals. The introduction of modern management practices in universities would result in more efficient and effective use of available resources. In order to perform these additional functions, however, the planning section of the HEC itself needs to be strengthened.

Public and Private Student:Teacher Ratios

92.   In 2003/04 the ratio of teaching staff to students in public HEIs stood at 19:1. This compared to 13:1 in private HEIs. Overall, the student:teacher ratio stood at 16.3:1. Consistent data on teacher:student ratios are not available for HEIs in Pakistan. Nonetheless, other data suggest the student:teacher ratio has remained relatively constant since 2001/02. As can be seen from Figure 9, the student:teacher ratio in Pakistan compares favorably to many peer Asian countries and even some OECD countries.

93.   The number of (full-time) teaching staff at public HEIs increased from about 9,300 in 2001/02 to about 14,300 in 2004/05, while non-teaching staff increased from about 29,100 to 41,800 over the same period. Public HEIs have high ratios of non-teaching staff to teaching staff and these remained near constant at around 3:1. This compares to 1:1 for private HEIs. There has been little progress in reducing these ratios at HEIs – they have remained at 3:1 since 2001/02. The HEC should encourage HEIs to seek efficiencies by, for example, reducing the number of non-teaching staff relative to teaching staff. Benchmarking the performance of public and private HEIs on indicators such as staff ratios and other efficiency measures would provide the HEC with valuable information to drive efficiencies in the sector.

Figure 9: Student:Teacher Ratios in Tertiary Education, Public Universities vs. All HEIs in Other Countries
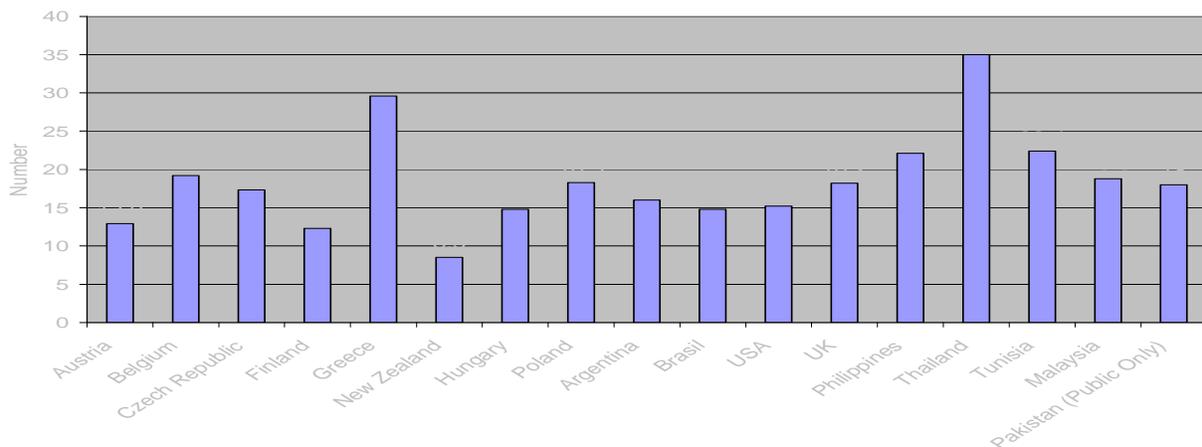
CHAPTER III: QUALITY, RELEVANCE AND ACCREDITATION

94.   Given decades of neglect of the higher education system in Pakistan, problems related to quality assurance and quality improvement are substantial. Pakistan did not have an accreditation, quality assessment, or improvement process in place at the national level until 2003. Since then, the HEC has launched several quality initiatives, many of them elaborated in the MTDF with a view to systematize and reinforce these initiatives.

95.   Quality improvement and quality assurance touch on almost every aspect of the process. It is much more than meeting some minimal standard measures of inputs – number of faculty members with PhDs, books in the library, ratio of computers to students. And if quality assurance is to be carried out effectively, it must be seen as important to those involved, impart critical information to tertiary institutions, employers, and the public, and be meaningful to all these stakeholders.

96.   Quality refers to "fitness for purpose" – meeting or conforming to generally accepted standards as defined by quality assurance bodies and appropriate academic and professional communities. Quality assurance is the planned and systematic review process of an institution or program to determine whether or not acceptable standards of education, scholarship, and infrastructure are being met, maintained and enhanced.

97.   Overall, the HEC programs as spelled out in the MTDF are an impressive set of initiatives designed to enhance and improve quality dramatically in higher education. The breadth of the tasks proposed, and the progress made to date, is laudatory. While the magnitude of the tasks ahead is daunting, early HEC efforts suggest that the MTDF, and the other programs initiated by the HEC, should result in major progress toward the transformation of higher education in Pakistan.

CURRENT SITUATION

98.   The situation described in this section is, for the most part, the one prevailing *before* the HEC launched its initiatives. Therefore, instead of commenting the MTDF itself, it briefly reviews the issues that the Framework and the other initiatives launched by the Commission aim to tackle.

99.   **Quality of faculty members, performance, and faculty development programs.** The overall quality of faculty members has been low as measured by: the number of faculty members with PhDs, publications in refereed journals, international recognition, research grants received, or teaching evaluations (to the extent they have been undertaken). Part of the problem over the last decades relates to the fact that teaching and research in tertiary institutions have not been attractive option for the brightest graduate students given low salaries, low status, poor working conditions, and limited support services. There were few incentives to be productive in research, service or teaching and very little accountability. In addition, universities have not emphasized the need for PhDs in hiring faculty. Only about 25% of faculty members (excluding distance education) have PhDs. Consequently, there is an acute shortage of qualified university faculty, and many of those teaching have second jobs in order to make ends meet. Opportunities for existing staff to upgrade their qualifications were limited. The ability to produce the additional faculty needed for the future was inadequate with only 290 PhDs produced in 2002/03. Until recently, funding for research was limited. Research output was very low even at the best institutions.

100.   **Teaching, learning and assessments**. Teaching and learning have not been emphasized, with few institutions evaluating or rewarding good teaching. Rote learning is encouraged in contrast to problem-solving, leaving students with limited skills in analysis and assessment – weaknesses that affect their success in the work force once they graduate. Quality and depth of knowledge of the subject area are assumed to be indicated only by the results of examinations, and the exams are such that they reward

memorization rather than problem-solving ability. High pass rates are regarded as indicative of good pedagogy. Thus teaching to the examinations is the usual method. Examination results assume greater importance and "legitimacy" than is warranted. The examination system itself is rife with irregularities, making the value of results questionable.

101.   **Primary and secondary education**. The quality of preparation and training of primary and secondary students is low – especially in rural public schools. The Report of the *Task Force on Improvement of Higher Education in Pakistan* noted that "The product of our Secondary and Intermediate education systems is poorly prepared for the rigors and demands of higher education," and that "The credibility of the Secondary and Higher Secondary School Certificates has been diluted to the extent that they are not considered adequate measures of student's competence." The poor quality of the students is indicated in the low pass rates at the intermediate level (26%) and BA level (34%). Students from private schools fare better than those in public schools – they are primarily from upper income families who can afford to pay the fees. Despite the clear evidence that students, on the whole, are not well prepared for universities, the poor quality of students is not considered a major problem in part because of the intense competition for university places and thus the generally good quality of students admitted.

102.   **Colleges**. It is generally agreed that the quality of the colleges is very low, with poorly trained teachers, inadequate laboratories and ICT capacity, and consistently low budgets. Yet, about one third of students who attend universities are trained at the colleges; therefore improving quality at this level is critical to improving university learning. The quality of the college curriculum is the responsibility of the universities with which they are affiliated. The degree of that oversight varies considerably but for the most part it is limited to approving new programs and carrying out examinations with little or no emphasis on improving the quality of teaching, infrastructure, or student learning.

103.   **Universities**. The present quality of higher education is very low as measured by teacher qualifications, publications, participation in international conferences, teaching and learning, or significant research findings. As a consequence, not a single university is ranked among the top 500 of the world, and the pass rate on the Federal Public Service Commission examinations has declined to 7.5% of those taking it from one third fifteen years ago, an indication of the decline in educational quality over the years.

104.   **Curriculum content**. The responsibility for curriculum development is the prerogative of the Ministry of Education and the curriculum committees for undergraduate education, and of the HEC for graduate and post-graduate education (*Education Act of 1976)*. Consequently, there is limited freedom for university faculty to change curriculum contents. In addition, partly due to historical reasons, curriculum is seen primarily as a mechanism for national integration and thus its quality has not received sufficient attention.

105.   **Relevance**. One of the major issues faced by the sector is its lack of relevance to the national needs. The business sector is particularly critical of higher education's lack of relevance. Interviews with employers, parents, students, and graduates, conducted by the Task Force (2002) in Lahore and Peshawar concluded that the quality of graduates produced was "less than adequate" and that graduates exhibited poor communication skills, poor reading habits, narrow vision and limited world view, lacked a spirit of inquiry, and the ability to apply their knowledge. In addition, there are no graduate tracer studies to assess the relevance of training, and no systematic mechanism to assess relevance.

106.   **Educational materials, computers, laboratories, and libraries.** Higher education has a long history of inadequate library (years behind in purchases) and computer facilities, limited availability of teaching aids, lack of access to the Internet, poor quality and outdated texts and other reading material. Laboratories, for the most part, have been poorly equipped and with much of that outdated.

107.   **Internal evaluation mechanisms.** Very little has been done in terms of internal evaluations at universities, although a few institutions have conducted quality audits of some of their programs, faculties, and departments and two have reviewed their institutions as a whole. There is no tradition of academic program quality reviews in the universities. Similarly, there is little effort to evaluate faculty members internally, to hold them accountable for their teaching and research, or to reward outstanding teachers, or those who provide especially useful service to the university, community, the nation, or produce exceptional research.

108.   **Education Management Information System (EMIS).** Education Management Information Systems are currently very limited and data collection at the national and institutional levels is poor. This makes quality evaluation limited and long term planning difficult. However, plans are underway to update and expand these systems at both the university and central levels.

109. **Accreditation and quality improvement of universities and instructional programs.** Pakistan lacked an accreditation system until recently. There was no process to set standards for institutional accreditation and no process to evaluate programs and faculty quality. Until recently, there was confusion about whether the quality review process would be one of accreditation (requiring minimal national standards and targeting international standards) or audits (review based on an institution's or program's own standards). However, a decision has been taken to carry out both institutional accreditation of all universities and program accreditation of up to fifteen professional programs. No action has been taken in the area of academic reviews by universities.

ASSESSMENT OF MTDF AND PROGRAMS UNDER IMPLEMENTATION

110.   The MTDF has put quality improvement and relevance at the center of the national agenda. An overall aim of the MTDF is to: "establish and implement stringent quality criteria developed against international standards to assess the performance on both the programme and institutional levels." The MTDF goals are reflected in a number of important new initiatives. They include faculty development programs such as research support, masters and PhD training in Pakistan and abroad for current faculty, support for post-doctoral fellowships. Programs have been established to provide incentives to improve teaching and research quality. These include a tenure track system, competitive research grants, and other incentives. Efforts have been made to attract Pakistani academics working abroad to Pakistan. In addition a Foreign Faculty Hiring Programme has been established, designed to attract foreign faculty members. A rich Digital Library has been developed.

111.   **Faculty development.** Faculty development is the first priority in the MTDF. Programs have been established to improve faculty quality, creativity, and output. They are well prepared, articulated, and seem to be adequately funded. They include:

- Masters and PhD training in Pakistan and abroad for faculty.
- A Young Faculty Support Program to provide M.S. and Ph.D. support to outstanding students in priority disciplines.
- Short Term Training Programs for Scientific and Technical Staff designed to enhance the technical skills of personnel to operate sophisticated equipment.
- A Digital Library to increase faculty access to research information in public and private universities.
- Hiring of faculty, including non-Pakistanis, from abroad for short-term (1-3 month) and long-term (1-5 year) to meet the immediate faculty deficiencies.
- Re-hiring of the current PhD-level faculty who are due to retire in the next few years based on their productivity.

- A tenure track system for faculty willing to undergo regular scrutiny of their teaching, research, and service, and to be held to high standards of performance.
- The twining program with partner institutions inside and outside of the country for collaborative research and development. For example, fifteen linkage programs were recently established through the British Council.

112. The MTDF's physical targets are optimistic but reflect the commitment of the HEC to bringing about a major transformation of higher education in Pakistan:

- Increase indigenous PhD production to 1500 per year with plans to send 10,000 students abroad for PhD training over the planning period.
- The percentage of faculty members in Universities and Degree Awarding Institutions having PhD degree is to be increased to 40% in 5 years, and thereafter a 10% per annum increase in percentage should occur yearly.
- 100% of the faculty should have undergone 1-3 month training courses emphasizing pedagogical skills, communication shills and information technology usage skills

113. These programs have been successful to date. Some universities initially resisted the idea of centralized incentives and either opted not to participate in programs such as the tenure track option or did not apply for funding in others. That resistance has diminished. On the whole, the programs mark a significant improvement in the possibilities for faculty development.

114. The scale of the PhD training abroad is creating uneasiness amongst the faculty staff. Part of that is a reflection of concerns about the amount of resources being spent to train academics abroad, part the fear that many will not return and thus the high cost of training abroad will be wasted in terms of any benefit to the universities, the fact that many who do return will go into business or commerce rather than to the universities. Part of the concern reflects the lack of justification for the PhD targets set. No need assessments were conducted. The magnitude of the effort seems to be mostly based on assumptions about how many people can be trained with the resources available in the allotted time. In addition, due to the current lack of supervision capacity, there is a risk that the desired increase in the number of PhD students will come at the expense of quality. The HEC recognized the problem and developed new criteria for PhDs[13] in June 2005 and currently has a new policy on supervision of PhDs under consideration. Therefore, it would be appropriate to: (i) conduct a needs assessment in order to better plan the program, on a longer term basis, (ii) make sure that the PhD programs offered are relevant to the specific problems of Pakistan, (iii) make the selection process very clear and transparent. Regarding the brain drain issue, the MTDF includes attractive packages to attract fresh PhDs to return from training abroad including guarantees of a position, available research support, and high salaries through the tenure track system, plus some disincentives for failure to return. There is also unhappiness about the hiring of foreign faculty, in part because of the fear that they will take jobs away from Pakistani citizens, in part because of the concern over foreign influence on universities. Here too, selection criteria should be widely advertised.

115. The tenure track system is controversial among many existing faculty members. While a number support it, others see no advantage to incumbent faculty members since they are unlikely to be considered for tenure in any case given their age and limited research activity over the years. In the initial legislation, if current faculty members applied for tenure and failed, they would lose their jobs. The more recent version guarantees that if they fail they will remain in their current civil service positions. Some of the

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[13] The policies include minimum credit hours for admission to a PhD program, GRE test results or equivalent, 30 credit hours of course work after the bachelor's degree, minimum grade points, external evaluation of PhD dissertations by at least two specialists, one published article, and other requirements. *HEC Minimum Quality Criteria for M.Phil/PhD Level Studies in Pakistani Universities/Degree Awarding Institutions*, circa August 2005.

opposition seems to be based on limited information about what the HEC is doing, but much of it reflects genuine disagreements with the programs or priorities. It will be important to insure that information on these programs is more readily available and to engage faculty members in a discussion of these issues.

116. The MTDF lists a number of performance indicators which represent an effort to be accountable for the funding provided and efforts made (percentage of faculty members who have undergone teacher training course, number of Postgraduate courses taught per department, quantum of funds obtained from competitive research grants, and number of international journal publications). These need to be finalized with baseline figures and specific targets.

117. **Teaching, learning and assessment.** The MTDF calls for the promotion of "activities to enhance the quality of learning and teaching across the sector." As part of the effort to improve the quality of teaching and learning and its relevance, the HEC has established several bodies to focus on pedagogy as well as several programs for university teachers. They include:

- A National Academy of Higher Education, established in 2002 to improve teaching and learning.
- A Department of Learning Innovation to organize and implement faculty development activities. It has developed written material for teaching and learning including modules on *Curriculum Planning and Development*, *Advanced Teaching Skills*, *Education Psychology*, and *Educational Measurement and Evaluation*. The Department has also developed a number of training programs ranging from a few days to three months. It has offered curriculum based training courses in the Regions.
- Enhancing teaching through professional development with required participation in a teaching and learning orientations course.
- Grants for Educational Research and Innovations in Education.

118. Taken as a whole these early initiatives seem to have been quite successful. However, the performance indicators focus primarily on research and science training. There are few indicators that relate to learning. The HEC should consider outcome measures that will get at the "value added" of education programs and assess the actual learning of students in university programs.

119. **Academic qualifications of students.** This is not an issue taken up directly by the MTDF and the HEC even though it relates directly to the overall goal of quality and that of access. Indeed most administrators and faculty members interviewed did not feel it was a problem. Yet, weak proficiency in English is widely reckoned, and while mitigated at the university level, should be addressed at the secondary education level as well.

120. **Curriculum content.** The MTDF encompasses a number of goals related to the need to improve curriculum content and commits the HEC to "renew and revise curricula against advances in subjects." In addition to the critical importance given to the National Commission Revision Committees in developing a national curriculum, the HEC has begun work with universities and with industry to update the curriculum to meet national and international standards. This should bring about greater understanding by, and commitment of, universities to business and industry needs in curriculum development. The HEC efforts to work with universities and stakeholders on curriculum development are an important step toward decentralizing more authority to institutions.

121. The implementation of an effective accreditation system by the HEC should also stimulate quality improvement in the curriculum. In addition, the work of the HEC with the National Committee on Examination Systems should lead to a more effective examination system focused on problem solving rather than rote learning and produce information that will be useful to planners and teaching staff in assessing both the curriculum and the quality of teaching and learning.

122.   The recent establishment of Accreditation Councils in several areas including computer science, agriculture and education shows promise in raising quality in these areas and may be an effective mechanism for quality improvement, since the process puts the onus for change on the universities while calling for world-class standards, rather than centralized curriculum development.

123.   **Relevance:** Ensuring the relevance of university education to employment and economic development, including industrial linkages, is one of core strategic aims of the MTDF. The proposed programs under the MTDF include: support to university collaborative programs (with matching contribution from industries); research grants for University-Industry Technology Support Programs; establishment of Research and Development Centers in Frontier Technology areas (with collaboration of industry); and establishment of National Technology Incubator Parks in universities to facilitate the acceleration of technology commercialization in the country and encourage entrepreneurship among the newly emerging class of technology graduates. The HEC is also initiating linkages with business and employers in ways that should help foster relevance of the curriculum. At the local level, the HEC has been encouraging relevance in research with some notable results in areas such as date palm farming, auto centers, and mining. These programs are innovative and have been implemented in a short time period.

124.   Proposed performance indicators include: number of joint university-industry projects, number of technology incubators established; number of patents issued to university, faculty and students; and total yearly income of university from commercialization of research. The indicators are relevant to measure success of the proposed programs, but need to be quantified and framed in a timeline.

125.   **Educational materials, computers, laboratories, libraries**. The HEC has made a good start in improving the infrastructure of public higher education with small to medium size grants for equipment and library material through grants up to Rs1 million. The HEC has funded more than 36 central research labs open to researchers in the area. In addition, the Digital Library has given faculty and students access to 17,000 journals. Efforts to increase access to computers are underway and additional funding to upgrade laboratories has been included in the current budget.

126.   **Internal evaluation mechanisms.** Although independent program reviews by universities have been proposed, no general program has been implemented. The HEC's primary focus is to establish an accreditation mechanism which will be implemented at both the institutional and program levels. The HEC has developed self-assessment protocols and other assessment material for Councils that would be useful to universities in undertaking their own program reviews. The establishment of Quality Enhancement Cells in ten universities on a pilot basis should also facilitate academic program reviews. That program is currently being expanded to twenty universities.

127.   **Quality improvement for teaching and research.** The HEC has begun providing funding and incentives for quality improvement. Projects include:

- National Research Grants to encourage faculty to conduct research in priority areas.
- Sabbatical leave fellowship programs with financial incentives and provision of research grants.
- Schemes for the strengthening and development of S&T labs and libraries.
- Establishment of Hi-technology centralized Resource Laboratories at selected universities.
- Establishment of central research laboratories at the premier research universities.
- Annual awards for the best research publications in various disciplines.
- Enhanced IT infrastructure both at the intra-university and inter-university level.
- Change of postgraduate program from research only program to program with two semesters of course-work focusing on the students' chosen field.
- Provision of seed money for exchanges between Pakistani and foreign faculty.

- Transition of two-year undergraduate program to four-year undergraduate program.
- Enhanced qualifications for the award of the PhD.
- Development project funding.
- Grants for seminars, conferences, and workshops.
- New enhanced criteria for appointments of faculty members.

128. The performance measures in the MTDF for promoting excellence in learning and research include indicators on PhD training, computer ratio per student, research success (e.g., number of external research grants obtained, number of patents awarded, quality of international research publications of faculty members and annual rate of production of PhDs). These and other indicators seem appropriate and should provide valuable measures of the success of these programs. What information is available at this time suggests substantial improvement in quality such as: a dramatic increase in research publications of 63 percent from 2002-2005; rapid implementation of HEC programs including quality improvement for PhD training by two universities, introduction of the four year undergraduate program by 25, enhanced promotion opportunities at the level of meritorious professor at four with 18 in process; computerization projects for faculty and students at 17 institutions; and an increase of more than 18% in HEC grants for international seminars and workshops.

129. **Education Management Information System (EMIS)**. The HEC has begun to collect and verify some of the basic institutional data such as enrollment figures. This has been a slow process and labor intensive taking almost a year to provide reliable data. The HEC now has very good base line data for enrollments for the previous three years and has sent out questionnaires to universities to gather additional information to expand the data set. However, internal efficiency indicators (e.g., dropout and repetition rates) are not currently tracked. Plans are being developed to put together an effective EMIS for higher education, both centrally and in the universities. This will be accompanied by a capacity building program for end users. On the other hand, there remains a substantial need for training and capacity building in this area both in the universities and at the HEC.

130. **Accreditation and quality improvement of universities and programs**. The efforts currently underway with the QAA and the Accreditation Councils are now in their infancy. The first steps at establishing a system of accreditation and quality improvement were taken in 2003 with the creation of the Quality Assurance Committee at the HEC. The task of the committee was to develop a viable system of quality assurance for higher education with the goal of enhancing the quality of universities to a level compatible with international standards.

131. **Programs for quality assurance and accreditation.** The MTDF calls for the establishment of programs to monitor the quality and performance of universities. These include:

- Development of accreditation bodies and mechanisms through the Quality Assurance Agency (QAA) and the Accreditation Councils. That process is underway.
- Development of university ranking criteria, setting up a mechanism for ranking the universities, and developing mechanisms for rating departments. An initial effort to do that for universities was undertaken by the Quality Assurance Division of the HEC, but a decision was made not to publish the results.
- Granting of University/Degree-Awarding Institute status.
- Taking measures against the institutions that overstep the legal bounds defined by the Charter.
- Implementation of ISO 9000 Certification Program.
- Closing institutions that do not meet legal and/or quality standards.
- Establishing quality cells in universities. A pilot project is underway in 10 universities to explore the most effective way to assist the universities with quality assurance and improvement.

- Changes in the criteria for appointment of faculty members.
- The establishment of special professorships for outstanding academics with exceptional research records.
- Revision of PhD standards, advising, and supervision.
- Establishment of four year undergraduate programs.

132.   **Institutional accreditation.** The MTDF calls for the establishment of criteria for stringent institutional quality assessment. Confusion regarding audits (assessment on an institution's or program's own standards) versus institutional accreditation (assessment against sets of minimum national standards and/or international standards[14]) has now been clarified.

133.   **Program accreditation.** The MTDF proposes to establish program accreditation to carefully assess the quality of all academic programs. In that vein the HEC has begun to establish Accreditation Councils which are responsible for the accreditation of degree programs in a broad range of disciplines. The initial plans called for accreditation of all programs – more than 150 in all. However, the HEC came to realize that such a massive effort would be far too complicated and be very costly in terms of human resources (peer reviewers), and of the large number of site visits that would have been necessitated. The original plans were modified to limit the number of programs reviewed establishing no more than 15 Accreditation Councils focusing on traditional professions such as engineering, medicine, and law.

134.   The Accreditation Councils are fully under the authority of the HEC with the chair appointed by the chairman of the HEC. The Councils include both academics and professionals. In several cases, the HEC is working with existing professional bodies such as the Pakistan Engineering Council to support accreditation activities that are already in place. A specialized program accreditation council, the National Computing Education Accreditation Council, was established in November 2005. Work is underway to establish a National Agriculture Accreditation Council, a National Teacher Education Council, and a National Business Council. There is resistance to this process in some sectors such as medicine. Cooperative efforts with the professions should be encouraged, as long as conflicts of interest can be avoided, as they will be mutually beneficial to the universities and the professions and should reduce the cost of accreditation to the state.

135.   **Government control of accreditation or autonomy.** Under the *Higher Education Commission Ordinance, 2002 (section 10),* the powers and functions of the HEC include authority for "…the evaluation improvement, and promotion of higher education, research and development." The HEC may "prescribe conditions under which institutions, including those that are not part of the state education system, may be opened and operated;" and "set up national or regional evaluation councils or authorize any existing council (…) to carry out accreditation of institutions including their departments, faculties, and disciplines by giving them appropriate ratings. The Commission shall help build capacity of existing council or bodies in order to enhance the reliability of the evaluation carried out by them."

136.   It is under this authority that the HEC set up a Quality Assurance Committee to develop mechanisms for quality assurance and accreditation, has begun to establish Accreditation Councils, set up the QAA and sees is mandate as covering all higher education institutions, public and private. It is this Ordinance that gives the HEC power to evaluate and set policies for higher education institutions. That is the tradition in most of the developing world. Indeed, all but three of the fifteen national quality assurance bodies in East Asia and the Pacific were founded by governments (Lenn 2004), as were all twelve of those now in place in Africa. Nonetheless, the question of who should control accreditation in the long run is a

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[14] Institutional accreditation is the term used in most of Asia with thirteen of fifteen national accreditors carrying out accreditation including India, China, Indonesia, Japan, Korea, Malaysia, Mongolia, the Philippines, Thailand, and Vietnam. Only Australia and New Zealand use audits (Lenn, p. 17).

difficult one, since its success in the short term often hinges on assuring adequate funding (which in most countries can come only from government) while the legitimacy of the process depends in part on its autonomy from political or other interference.

137. The plans for accreditation at the HEC call for the process of institutional and program accreditation to be under the federal government's (HEC) control during its early development. However, their stated long-term goal is to provide autonomy for the QAA (which currently reports to the HEC) once it is well established. Experience suggests that it would be wise to plan for the same level of autonomy for the Accreditation Councils.

138. **Peer review and other processes of assessment.** It is the intention of the HEC to include peer review as part of accreditation at both the program level and for institutional accreditation, though policy for the latter has not been written. The use of peer reviewers from outside the country has not been settled, partly because of concerns about the high cost of such a requirement. It might be more appropriate on an "as needed" basis. It seems very likely that there will be a capacity problem when it comes to finding enough highly qualified academics to fill the large number of peer review positions that will be needed in some specialized areas. There are also advantages to having some external reviewers as part of the peer review process in that they bring a comparative perspective to a system that has set international standards as its benchmarks.

139. **Standards for accreditation.** Draft standards have been developed for computer sciences accreditation. They are well crafted and reflect world-class standards. They should serve as a model for other program accreditation. The HEC has recently begun the process of developing standards for institutional accreditation. This will be a major undertaking and should involve extensive consultation with universities and other stakeholders.

140. **Academic reviews by universities.** The HEC does not have plans at the present time to encourage academic reviews by universities and other tertiary institutions. Nonetheless, support for such activity is within the purview of the MTDF in terms of the objectives spelled out in the document which calls for improved quality, renewed and revised curricula, the introduction of quality assurance methods at institutional levels, and establishment of mechanisms for evaluating quality (p. 53). Encouraging universities to carry out their own academic reviews separate from the accreditation has proven to be a very effective mechanism to create a culture of quality at universities and to help make quality assurance and quality improvement part of the ongoing activities of university communities as has been shown – amongst others-- in South Africa and the United States.

141. **Quality improvement and accreditation for Colleges.** The Colleges do not fall within the authority of the HEC but are under regional authority. Thus no plans are in place to include them in the activities of the QAA or the Councils. However, HEC staff recognizes the need to expand quality assurance to the Colleges at some time in the future.

THE WAY FORWARD

142. While the HEC has made substantial progress in defining goals and establishing processes for quality assurance, quality improvement, and accreditation, major tasks remain in terms of: improvement of student quality, training of teachers and faculty members, improvement of the curriculum, development and elaboration of the accreditation process, establishment of standards for institutional accreditation. It will be important to provide further training for QAA and HEC staff about accreditation processes, peer reviewer training, site visits and other aspects of quality assurance in the United States, India, or other countries with active institutional programs. To its credit, the HEC recognized that its original conceptualization of accreditation was far too complex and has scaled back its plans.

143.   **Faculty development.**   The key question is the capacity of the system to train the large number of new faculty members, with the quality desired. It will also be important to conduct a need assessment in order to establish priorities for recruitment and PhD training in certain critical disciples. It may be useful to consider additional incentives if serious shortages in critical areas occur.

144.   **Teaching, learning, and assessment.** Part of the push for better quality teaching must come from the universities themselves. Over the next few years the HEC should continue to work with the universities to devise incentives for faculty members who do outstanding teaching. The HEC has several programs designed to improve teaching. Efforts should be made to foster critical analysis and creativity rather than rote-learning. A major effort is needed to reduce the excessive focus on examinations by introducing continuous assessment and making it a significant part of the final mark for the subject, and to fight the malpractices that have marked them for so many years.

145.   **Academic qualifications of students.** Several changes are needed to enhance the qualifications of students accessing higher education. While this is not within the HEC mandate, it may be the only educational institution capable of initiating such cooperative changes. Activities that might be undertaken include efforts by the HEC to: (i) encourage cooperation with primary and secondary educators to improve education at that level; (ii) work with the provincial education authorities and the universities which serve as quality assurance guarantors for affiliated colleges to raise the quality of the colleges; and (iii) develop better mechanisms to insure quality in admissions which might include improved admissions criteria and examinations as well as academic development programs for promising students from disadvantaged backgrounds and areas. With the projected substantial increase in the number of new students, it will not be possible to avoid revising and adapting the admission mechanisms anyway.

146.   **Curriculum content.** The MTDF framework encompasses a number of goals that speak to the need to improve curriculum content. This effort needs to go beyond the current curriculum committees and involve a major commitment from the universities as well. The current curriculum committees might be more effective if they were advisory with primary responsibility for curriculum left to university faculty members.   The establishment of Accreditation Councils should help foster improvement and upgrading of curriculum to meet world class expectations and standards.

147.   **Relevance.** Part of the work on relevance might include more systematic follow-up on graduates, analysis of the labor market, success of university graduates in the workplace from the perspective of employers, and surveys of graduates that tap their work history and job satisfaction over time. In addition, cooperative projects between higher education institutions and the private sector would help sensitize faculty members to the needs of employers in terms of instruction, research, and service (see Chapter IV). Some of the programs to boost relevance in research have been criticized for their relatively high costs by university staff and public, and therefore, it will be important to engage as many stakeholders as possible during the development phase to ensure full understanding of the programs among the stakeholders (staff, students, industry representatives, Ministry of Science and Technology).

148.   **Educational materials, computers, laboratories, and libraries.** While the HEC is off to a good start in this area, some of its programs need to be expanded as there remain significant equipment needs to improve the quality of teaching and learning. It would be useful to take an inventory of research equipment, laboratories, and ICT at each university so that the substantial additional funding required for upgrading and purchasing could be estimated more rigorously.

149.   **Internal evaluation mechanisms.** It is suggested that the HEC, through the QAA, encourage universities/institutions to undertake academic reviews of departments, programs, and faculty on their own, outside the accreditation process. This is an excellent way to foster a culture of high quality and to help institutions upgrade their faculties, departments, and programs without the public embarrassment of

poor accreditation results. This process allows the universities to assess the strengths and weaknesses of their programs in terms of national and international quality standards. Academic Reviews usually involve program self-assessments and internal peer reviews and result in recommendations to the appropriate dean and/or vice president.[15] The initial steps taken by the HEC in this area are promising and should be encouraged. Workshops should be prepared to demonstrate the methods and utility of such self-assessment. Additional funding might be provided to assist universities with academic reviews as part of the funding for university Quality Assurance Cells.

150. **Quality research – autonomy and decentralization of research funding.** While the HEC has sought to remain at arms length from decision making in the areas of faculty development and advanced training, the perception remains of lack of autonomy in research funding decisions. As the HEC moves forward with these programs it might be appropriate to consider decentralizing some of the funding and decision-making to the universities or setting up totally autonomous funding organizations able to set their own agendas as well as respond to government priorities, outside the HEC, with broadly based peer reviewers to strengthen the research process at the universities. In the long run, it will be critical for research efforts to be driven by outstanding academics and world-class standards. Similarly, decisions on research grants should be the result of peer review and academic decisions in a context of national priorities and development needs while also encouraging basic research at the frontiers of knowledge. Finally, HEIs would benefit from linking up with research institutions outside universities (e.g. Pakistan Agricultural Research Council or Pakistan Medical Research Council).

151. **Expansion of the Education Management Information System (EMIS).** Development of an effective EMIS at the national and university level is critical for the evaluation and monitoring of quality, relevance, and efficiency of the higher education system. While the HEC has plans underway to develop EMIS at the national level, it is equally important to do so at the university level and to provide training for university administrators so that useful data will be collected and universities can carry out their own analysis. This should include data on internal efficiency (student dropout and repetition rates, graduation time). It is encouraging that the HEC is considering collection of this information in its new data base.

152. **Data collection.** The history of data collection in higher education is rife with examples of failed efforts. Effective data collection involves many steps from definition of variables to finding a system that is effective but not so complicated and comprehensive that it is difficult to use and subject to frequent crashes and other problems. Such decisions need to be made at the outset if the EMIS efforts are to be effective. In doing so, the HEC should consult widely about data definition, collection, and analysis as well as about the effectiveness of systems available and the reliability of the software.

153. **Accreditation and quality improvement of universities and programs.** A strengthened accreditation and quality improvement strategy is essential to realize the goals of the MTDF. It requires the development of the process for institutional accreditation. A first step has been made in clarifying that institutions will be accredited rather than audited. They will be assessed against national and/or international standards rather than their own and the outcome of peer review and site visits will be a decision to accredit, not accredit, or put on probation. Given the goals of the HEC, this is the appropriate approach. Some standards have been set for program accreditation through the Councils. Those have been drawn from international standards in very useful ways. Work is now underway on institutional standards for universities.

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[15] In the United States most universities carry out program reviews on a rotating basis every five to eight years and have found them a very effective mechanism to focus on quality improvement and create an institutional culture of quality improvement.

154.   Institutional accreditation should be based on clear, carefully crafted national standards, prepared with reference to international standards.   The success of the institutional accreditation process is dependent on developing high quality, appropriate, standards and gaining consensus on them within the university and professional communities. The process of preparing such standards, will take at least one year (including national and international consultations and training about outcomes assessment). It is thus critical that the HEC continue to proceed carefully with the work on setting national standards, working with all concerned national and international stakeholders.

155.   **A multi-step institutional accreditation process**.   Since Pakistan has no experience with institutional accreditation, it would be wise to develop accreditation as a multi-step process. This might include: 1) registration/permission to apply for candidacy for accreditation; 2) review for candidacy for accreditation including self-evaluation, peer review site visits, reports and recommendations, decision; 3) candidacy for accreditation and after 2 years or graduation of the first class; 4) consideration for accreditation, probation/provisional accreditation, or not accredited status (Figure 10).

Figure 10: Stages in the Accreditation Process
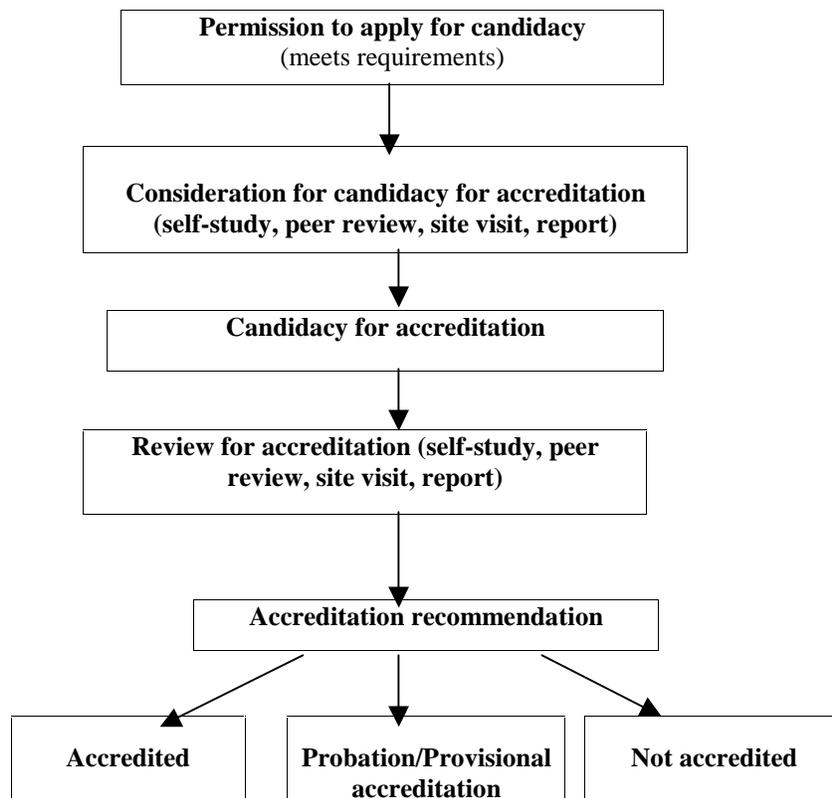
156.   **Outcomes assessment.**   The assessment of outcome is a difficult but critical area for quality assurance and improvement. Institutions and programs need to devote considerable attention to outcomes assessment including looking at the value added of their programs, employment history of their graduates, satisfaction of employers, and long-term assessment of education relevance by graduates. A good start has been made in that respect with the publication of the "Self Assessment Manual". Outcomes assessments should be strengthened through wider consultation and participation of key higher education stakeholders.

157.   **Accreditation requirements and their consequences for administrative and human resource loads**. In order to avoid setting up quality assurance and accreditation processes and procedures which

demand excessive amounts of information and inordinate amounts of people/hours to carry out, it is important that the HEC embark on a review of the human resource requirement for effective accreditation, and of the particular processes they are developing. This includes resources at the QAA, the Councils that will accredit the fifteen or so professions, and at the universities as they prepare self-studies and respond to site visits. Processes should be reviewed so as to be sure they do not constitute an undue burden on institutions, their administrators (who provide the data, or prepare program and institutional self-assessment reports) and staff (who serve as peer reviewers). A recent World Bank review of accreditation in Africa found that the success of new accreditation programs was threatened by these excessive demands on faculty staff (World Bank 2006). Once draft processes are in place for institutional accreditation in Pakistan, it would be useful to test them through "pilot accreditation reviews" to assess their appropriateness, time requirements, and effectiveness.

158.   **Training and external reviews required for implementation of effective quality assurance**. Although the HEC has made significant progress in its work on quality assurance and accreditation, the magnitude of the tasks ahead should not be underestimated. Once draft standards and procedures for accreditation are developed, it would be useful to invite external experts to review the proposed processes and to seek suggestions from the universities and other stakeholders. Given the scale of organization needed, it is important to have this input before the processes are formalized and change becomes much more difficult. A major training effort should be organized including peer review training in places with well established accreditation processes in Europe, Asia, South Africa or the United States. In addition, the HEC, through the QAA and the Councils, will need to organize a large-scale training effort for universities about institutional accreditation, for the hundreds of peer reviewers that will be needed for program and institutional accreditation, the staff of the Quality Assurance Cells, and that of the Councils already established and to be established.

159.   **Professional/specialized accreditation**. Decisions need to be taken relative to (i) the integration of professional associations traditionally involved in quality assurance (e.g., law and medicine) into the new accreditation system, (ii) the locus of the ultimate authority -- the professional association or the HEC, and (iii) the mechanisms to encourage cooperation.

160.   **Insuring the quality of accreditors.** Mechanisms to insure the autonomy of accreditation will need to be established in the medium term. This will have to await autonomy for the QAA and Councils but should be in the early planning stages over the next few years. One approach would be for the HEC to become the accreditor of the accreditors. Another would be to have those functions carried out by an autonomous organization charged with monitoring and recognizing accreditors. Periodic reviews of accreditors would provide an important check on the quality of their activities and also insure that their focus is the quality of teaching and learning, research, and service. In the case of the Councils, periodic reviews and monitoring will also help protect against attempts by individual professions to seek unfair advantage for their members or unduly intrude on academic and institutional autonomy.

161.   **Governance.** A potential conflict of interest is built into the current quality assurance system because the HEC is responsible for the management and direction of accreditation (including ranking universities) through the QAA and the Accreditation Councils, while being responsible for the allocation of funds to universities and institutes. In the long run, the position of the HEC will be strengthened if the accreditation process is autonomous, thus separating quality decisions from financial decisions. Plans should be put in place to lay out the conditions and timing of that transition.

162.   There is a potential conflict between quality assurance activities in the Provinces and at the National level. The HEC has set up and funded four monitoring units to look after quality assurance matters in each of those Provinces. For the most part, this does not appear to have been a very successful effort. In Sindh some progress was made when cooperation between the HEC and the Council was strong

and Provincial meetings were attended by a senior member of the HEC staff. However, after an initial good start, the provincial leaders feel that the HEC is moving into an area they controlled prior to the establishment of the HEC. The HEC counters that it has ultimate authority over the quality assurance of higher education at all levels (public and private, Federal and Regional) under section (d) of the *Ordinance*. In the event of a dispute, HEC's authority is decisive. Given the magnitude of the quality problem, some accommodation could be worked out that recognizes the common interests of parties, and the need for some central decision making under the authority of the HEC, so that quality assurance is not sidetracked by administrative disputes and turf battles.

163.   **Quality improvement and accreditation for colleges**. In the long run the HEC, the QAA, and the Councils will need to consider mechanisms to include colleges in the same quality assurance processes used for universities, adjusted to their different missions, goals, and programs. It is not too soon to begin to explore the possibilities. While the authority over the colleges is largely a provincial matter, accreditation and quality assurance could be dealt with within the national framework (as is the case in the United States, where states have primary responsibility for higher education).

164.   **Primary and secondary education**. Improving the quality of primary and secondary education will require close cooperation between the universities, primary, and secondary education – especially in teacher training. It is important to start on the process as soon as possible since that will have a major impact on efforts to improve the preparation of students to meet the demands of higher education.

165.   **Quality improvement – making the case.** The success of the quality assurance process will be enhanced if the universities understand that the primary goal is quality improvement and not denial of accreditation or ranking universities. The goal is not to close institutions but to bring them up to quality levels that meet the needs of employers and are compatible with international standards. The HEC should begin to plan such a communication strategy.

CHAPTER IV: PUBLIC-PRIVATE PARTNERSHIPS

The Private Higher Education Sector in Pakistan

166.   The private sector has long played an important role in the delivery of education in Pakistan. Throughout most of Pakistan's history, however, the private sector role in education was confined to the school level. In 2003/04, the private sector market share was highest at the primary school level (42 percent) and lowest at the secondary school level (30 percent). By contrast, at the higher education level, 23 percent of students were enrolled in private institutions– excluding distance education-- in 2003/04

167.   The private university sector in Pakistan dates back only to the mid-1980s, when the Aga Khan University and the Lahore University of Management Sciences (LUMS) were established in 1983 and 1985 respectively. The early development of private universities was made possible by the promulgation of the National Education Policy (NEP) of 1979, which recognized the need for private involvement in education and reversed the ban on private HEIs that had been introduced under the NEP of 1972. The real take-off did not begin in earnest until the mid-1990s, with the number of private institutions growing from 6 in 1994/95 to 19 in 1999/00. Since then, the number of private universities and DAIs rose from 19 in 1999/00 to 54 in 2005/06 (see Annex 3). Data on private HE enrollments are only available from 2001/02 and at an aggregate level. There were just over 61,000 enrollments at private HEIs in Pakistan in 2003/04. This represented around 23 percent of all HE enrollments in that year. Between 2001/02 and 2003/04, private HE enrollments grew by just over 17,000, an increase of nearly 40 percent (compared to an increase of 60,000 or 42 percent in public HE sector enrollments).

168.   A number of factors explain the rapid growth in the private university sector in Pakistan. A key driver is the inability of the public sector to meet the burgeoning demand for higher education in the country. Private HEIs report considerable excess demand for places, with anywhere from 2-6 applications for each student admitted in some areas. The increasing popularity of Cambridge 'O' and 'A' levels has resulted in increased numbers of quality high school graduates eligible for admission into higher education.

169.   The reversal of the anti-private sector Education Policy of 1972 and the subsequent passage of supportive legislation in provinces such as Punjab, NWFP and Sindh, has played an important role in lifting demand for private HE. Other important factors that explain the growth in the sector include: (i) a growing middle class; (ii) 'pull-factors' such as the more modern and job relevant curriculum at private HEIs; and; (iii) 'push factors' such as the declining quality of provision, poor infrastructure, the lack of equipment, 'session jams', and concerns about political influence in university affairs at public HEIs

170.   Two provinces – Sindh and Punjab – make up over 80 percent of all private HE sector enrollments in Pakistan. Sindh has the highest private sector market sector share (41.1 percent), followed by Punjab (16.3 percent) and 16 percent in NWFP.   Private HEIs are found mostly in the Federal area of Islamabad and provincial capitals, where populations and incomes are higher. In 2005/06, Karachi had the largest number of private HEIs (23).   This was followed by Lahore (15), the Federal area, Faisalabad and Peshawar (all with 3).

171.   Private HEIs tend to be much smaller, employ more visiting (part-time) teachers and employ staff with lower qualifications than their public counterparts. Visiting staff are drawn from either public HEIs or industry, and are used more in areas such as business and IT. Teachers at private HEIs earn higher

salaries than do teachers in public universities who are on the standard public service pay scale. However, the private pay differential is smaller for teachers on the 'tenure track' program initiated by the HEC. The 18% increase in the salary of staff in public university decided in June 2006 is reducing the gap.

172.   Private HEIs are primarily teaching institutions, although some such as the Center for Advanced Studies in Engineering (a private affiliated college) do conduct advanced research. Some private HEIs provide consulting services to industry. One of the more significant providers so such services is the Center for Advanced Studies in Engineering (CASE). Mohammad Ali Jinnah University is currently setting up a formal consulting arm to its university.

173.   Private HEIs offer fewer 'general' programs such as biology, math or physics. In 2003/04, about one-third of bachelor-level enrollments in the private sector were in General universities, compared to two-thirds in the public sector. Nearly 40 percent of bachelor level enrollments in the private sector were in Business universities, compared to less than 2 percent in the public sector. Private HEIs in Pakistan offer a more limited range of job-oriented courses and programs than their public counterparts. These include 'modern' programs such as Telecommunications and Networks, Telecommunications Engineering, Fashion Design, Nursing, Technology Management and Development Studies, Computer Science and Business Administration.

174.   According to most observers, including government officials, business representatives and others, graduates from the more established private HEIs – including the Aga Khan University, the LUMS and GIK – are well regarded in the marketplace. Although official statistics are not available on labor market absorption of HE graduates, most observers believe that graduates from top private universities are successful finding work upon graduation. The labor market acceptance of qualifications from many of the newer private HEIs remains untested. There is evidence that employers recognize differences in the quality of tuition at different private HEIs and also see value in HEC recognition. Employers often advertise for candidates from HEC recognized institutions and 'reputable' HEIs. The private HE sector is competitive with the public sector in Pakistan, despite the requirement to pay tuition fees in the former.

Regulation of Private HEIs in Pakistan

175.   Private HEIs can be established under either a Federal or Provincial charter and come under the regulatory purview of the HEC. Applications for a charter to operate are normally directed to the government where the institution is located – the provincial education department in the case of a provincially-based institution or the HEC in the case of an institution located in the Federal territory. The criteria and requirements for establishment differ across jurisdictions, but are broadly based on guidelines set out in the HEC document *Guidelines for the Establishment of a New University or an Institution of Higher Education*. These criteria relate to a range of factors including faculty strength, the number of academic departments, educational infrastructure and the amount of land owned by an institution.

176.   Private HEIs can be either for-profit or not-for-profit. Both types of institution can be recognized by the HEC. Not-for-profit status confers certain benefits upon private HEIs – e.g., tax. In addition, future incentive packages are likely to be limited to not-for-profit institutions.

177.   There are no geographical limits on where private HEIs can operate. However, in recent years, some provinces have begun to place geographic limitations on HEIs through their charters. For example, provinces may only charter institutions to operate in the province where they obtain their charter. They would then be required to obtain a charter in other provinces if they wished to set up a separate institution in other provinces. They can, however, open branches of the main institution in other provinces.

178. The HEC produces guidelines for institutional programs/curricula. Private institutions are autonomous and do not need to seek HEC approval to set or amend the curriculum or program content. There is no external quality assurance provided, as the accreditation system is not fully operational. Yet, private HEIs cannot have affiliated colleges for the first ten years of their existence.

179. The HEC has taken a number of initiatives in the area of quality assurance, including the establishment of a Quality Assurance (QA) Committee, the establishment of an Accreditation Council, a ranking mechanism for local universities and a requirement that all HEIs undergo ISO 9000 Certification. The HEC also uses its website to list recognized and unrecognized HEIs and approved foreign providers. The QA system applies equally to public and private HEIs. A recent review of private HEIs showed that only around 20 percent of private HEIs met the HEC's regulatory requirements, 43 percent had minor shortfalls and 20 percent were seriously deficient.

180. Private HEIs do not receive either government recurrent or capital funding, nor are they eligible to receive government research and development grants. Not-for-profit HEIs, however, are exempt from income tax and customs duties on educational equipment. They also benefit from concessional rates on utilities. Private HEIs do receive some indirect assistance, including scholarships for students and staff, reductions in income tax for staff and access to the HEC digital library.

181. Private HEIs are financed primarily by student fees and other revenues. There are no restrictions on the fees that private HEIs can charge. However, at least 10 percent of students at private HEIs must be granted fee exemptions or needs-based scholarships. Most institutions charge a one-off registration fee, annual tuition fees and miscellaneous fees to cover computer and English laboratories, transport and student activities. Students at private HEIs pay much higher tuition fees than do students at public HEIs. Tuition and other fees vary considerably across private institutions (see Annex 4).

182. Foreign institutions both public and private can operate in Pakistan. The HEC encourages collaboration between foreign institutions and local providers. Different types of collaboration come with different regulatory requirements related to infrastructure, accreditation and inspection depend on the nature of the collaboration and the quality of the foreign institution. Top ranked foreign HEIs such as the London School of Economics are allowed to run degree programs with local partners with only minimal regulation. Currently 8 foreign universities/institutions have been approved to run collaborative degree programs in Pakistan (not including programs from 'top-ranked' universities).

183. There are currently few formal partnerships or research and development linkages between the public HE sector and industry. There is little research or other interaction between HEIs, industry and public sector research institutes. Programs and curricula at public HEIs are described as outdated and inflexible. There is little industry input into curriculum development. As a result, course and program offerings at many public HEIs are out of step with the needs of the labor market. Internal governance processes at public HEIs mean that altering programs, courses and curricula is a time consuming and difficult process. Public Service Commission (PSC) employment standards – which are also difficult to change - also have a significant influence on university curriculum content.

184. There is a significant disconnect between student demand and job market requirements. Although the government's economic strategy places increased emphasis on a technology-led, innovative economy, the share of enrollments in general universities has increased in recent years, while that of engineering and medical colleges has declined.

185. Recent decades have seen the gradual running down of the Pakistani higher education sector's capacity to undertake scientific and technological research and development. A number of factors mean the public HE sector in Pakistan is poorly placed to undertake both basic or applied research and

development. These include outdated laboratory facilities and equipment, low levels of spending on research, a lack of well-trained teachers, and poor links with the international scientific community. A recent evaluation of research conducted by the Pakistan Council of Science and Technology rated all science and technology departments at Pakistani universities. This evaluation examined a range of factors, including the scientific and technical merit of the research, faculty quality and economic impact of the research. Out of the 181 departments evaluated, only 5 were rated A, while fully 133 departments were ranked D or lower. (Pakistan Council for Science and Technology 2005).

ASSESSMENT

186. The Government has indicated a strong and public commitment to quality private education and to a growing role for Public/Private Partnerships (PPPs) in education in Pakistan. This commitment is reflected in the *National Education Policy (NEP) 1998-2010*, the *Education Sector Reforms (ESR) Strategic Plan 2001-2004* and the *MTDF*, all of which foresee a strategic and growing role for the private sector in education. One of the overall objectives of the MTDF access strategy is to "facilitate the private sector in provision of quality higher education". The ESR identified a target private sector enrollment share of 40 percent in HE by 2010. All three documents propose a range of initiatives and incentives to encourage the expansion of the private education sector, including tax rebates, matching grants and concessional rates for land and utilities (Annex 6). The MTDF outlined two general proposals to enhance PPPs in HE:

- special incentive packages to facilitate expansion and development of private institutions; and

- facilitate/encourage the private sector to donate to, and open new departments/centers in, public universities.

187. The HEC has subsequently put forward a number of reform initiatives to give effect to these general proposals (already approved by the HEC, the Ministry of Finance and the Planning Commission):

- private institutions would pay no tax for 10 years, then tax would be assessed at 25 percent of existing tax. A more definite proposal is to be worked out with the appropriate authorities;

- the government would provide land for the establishment of new Universities/DAIs on the condition that the infrastructure was established within a specified period of time. Ownership of the land and assets would revert to the government at the end of the period;

- federal grants would be provided to set up departments in areas important to the socio-economic development of Pakistan;

- matching grants would be provided for digital library access to select journals and international bandwidth for internet access;

- matching grants would be provided for private HEIs hiring foreign faculty; and

- private HEI researchers would be eligible for assistance under the HEC Research Grant Program.

188. In order to be eligible for the above incentives, the regulations require that a private HEI:

- be not-for-profit. That is, none of the founders should be deriving any monetary benefit from the institution;

- have at least 70 percent of the courses at the private HEIs must be taught by full-time faculty;

- have a campus of its own that meets the basic needs of the student body and the programs offered – ensure survival of university;

- have a proper governance structure and credible board of trustees;

- follow established accounting procedure and have its accounts audited by an approved chartered accounting firm;

- have an admission policy based purely on merit and on a need-blind basis with a transparent admission process and a system for meeting the financial needs of students requiring financial aid; and

- meet the Cabinet criteria for the establishment of universities/DAIs (e.g., faculty, infrastructure, etc.)

189.   The expressed government commitment toward private education, as reflected in the NEP, the ESR and the MTDF, is complemented by a policy framework that includes some provisions that are supportive of the private HE sector. These include the relatively liberal rules relating to the establishment of foreign institutions, HEC accreditation policy and the use of scholarships. The growth in the private HE sector in recent years, --and the quality and relevance of courses and programs delivered by a number of private HEIs-- provides a useful platform for expanding the role played of PPPs in Pakistan.

190.   The introduction of the HEC's proposed package of reforms represents a useful first step in moving towards a framework that will promote the expansion of the private HE sector and increase the scope for PPPs in Pakistan. However, it is not clear that these proposals will be sufficient to realize the *ESR Strategic Plan* target of 40 percent enrollments in the private HE sector by 2010 (from the current 23 percent). This is especially true given the recent expansion of public HE sector.

THE WAY FORWARD

191.   The dramatic increase in university enrollments projected by the MTDF for the next 10 years will put a no less dramatic additional burden on both public universities and the public budget. The capacity of both is limited, and part of this additional burden will need to be borne by non-public bodies. To that end, a number of other policy initiatives could be considered to help promote PPPs in HE in Pakistan. This section outlines a number of these initiatives (they are summarized in Annex 7). Some of these proposals are far reaching and are to be considered over the long term; others are capable of being introduced in the short-term, without sweeping reforms or institutional changes.

Proposal #1: Improving the Regulatory Environment for the Private HE Sector in Pakistan

192.   **Subsidize Students at Private HEIs**. **The first and most direct method of making use of the private sector to enhance access to HE would be to provide subsidies to students attending private HEIs**. Currently, private HEIs do not receive any direct government subsidies, although they do receive some direct support in the form of limited access to the HEC digital library. PhD students at private HEIs are also eligible to receive HEC indigenous scholarships. In contrast, public universities receive both operational and development funding, are able to charge fees and can enrol 'self-financed' students. As a result of these funding differences, private HEIs are put at a competitive disadvantage and private HE is beyond the reach of most Pakistanis.

193. While there are several justifications for government intervention in HE (e.g., the presence of externalities, capital market constraints, equity concerns, etc.), none of these provides sufficient justification for favoring public HEIs over private HEIs when it comes to government funding. Limiting subsidies to public HEIs may several adverse effects on the HE sector. In particular, it may:

- adversely affect equity outcomes because poor but meritorious students do not have the option of attending a private HEI if they so wish;

- limit entry by private providers into the private HE market;

- force private higher education institutions to target students who can afford to pay fees;

- reduce the average 'quality' of students in the private higher education sector; and

- insulate government universities from private sector competition.

194.   **A better system of funding both tuition and research in universities/DAIs would be to treat public and private providers in a more neutral manner. Funding decisions would be based on the quantity and quality of tuition and research delivered by HEIs, not on whether institutions are public or private**. Poor quality tuition, whether provided by the public or private sectors, is poor quality tuition. The MTDF proposes a number of funding initiatives, including matching grants for foreign faculty and access to research grants for faculty at private HEIs. These initiatives are a step in the right direction, and go some way toward addressing the 'non-neutral' treatment of private HEIs under the current funding system. This reform direction should be continued.

195.   Over the longer term, the government could consider introducing tuition funding systems under which funding would simply follow students to the public or private HEI of their choice, and research funding flowing to either public or private HEIs based on the merits of the research proposal. However, there would be considerable transition costs attached to such a reform. Such a reform would require a wholesale review of the recently introduced funding system for public HEIs. For these reasons, such a 'big bang' reform is highly unrealistic in the short to medium term in Pakistan.

196.   A more limited reform of the funding of private HEIs could, however, build on the MTDF proposals. One option would be to expand existing scholarship programs, thereby increasing the number and widening the scope of scholarships available to students in the private HE sector (i.e., extending them to undergraduates). At the limit, all growth in recurrent funding to the HE sector could be in the form of new scholarships, so public institutions would be funded through a mix of subsidies and (increasingly) scholarships. Private institutions would be funded exclusively through scholarships.

197.   A second option would be to set aside a 'pool' of funding for the private HE sector. Many scheme designs are possible. One indicative design would be as follows:

- funding would be controlled and distributed by the HEC;

- the design of the funding program could be similar to the current funding system for public HEIs – i.e., based on student numbers and type of program;

- private HEIs would apply for funding under the program; and

- the number of students would be capped in any given year and could be adjusted over time.

198.   Under either of the above interim options, it would be important to ensure that funding went only to quality private and public HEIs (or students at such HEIs in the case of scholarships). This could be accomplished by limiting eligibility for either program to recognized, highly rated HEIs (or their students). Eligibility could be linked to an institution's accreditation status once this new system is fully operational. Other institutional criteria could also be applied, including requiring an appropriate governance structure and financial reporting framework. Funding could be targeted on programs/courses that are deemed to be strategic (e.g., science, engineering, etc.). Any link to quality as a criterion for eligibility should also apply to public HEIs.

199.   A leveling of the playing field in tuition and research funding, combined with improved quality assurance, is likely to have the greatest impact on lifting growth in quality private sector HEIs. While the

current proposed incentive package would be helpful, it would provide very little assistance compared to the level of funding accorded to public institutions. For example, the MTDF includes a proposal to provide funding of Rs60 million to private HEIs over 10 years. This would amount to an annual subsidy of only Rs100 per student (Rs1,000 over the 10 year MTDF time horizon) – assuming no growth in private sector enrollments. This compares with a current annual per student subsidy of Rs46,000 to students in the public sector. Such a small subsidy will have little or no effect in stimulating private sector activity.

200.   Tax and Fiscal Incentives. A second set of initiatives that could be considered to promote PPPs is the introduction of tax and other fiscal incentives for private HEIs. There are currently few tax and other fiscal incentives available to private HEIs, apart from a tax exemption for not-for-profit institutions and an exemption from customs duties for educational equipment. The MTDF proposes two additional ones: further tax exemptions and free land from the government. While such incentives might spur additional investment in the private HE sector, their benefits need to be weighed up against the costs of such a policy and against alternative policies aimed at achieving the same objective.

201.   Key weaknesses of such policies include erosion of the tax base and potential distortions in investment decision-making. Alternative policies such as direct subsidies to private HEIs or indirect subsidies via the expansion of the scholarships program would seem to offer a cleaner and more transparent method of subsidizing private HEIs. Irrespective of what fiscal incentives are retained or new ones introduced, it is important that the framework for fiscal incentives be clear and consolidated into one text so that private HEIs have greater certainty about the investment environment.

202.   **Requirement for land as a condition of HEC recognition**. One of the criteria for HEC recognition as a university is that institutions have at least 10 acres of land (3 1/3 in the case of DAIs). The rationale for such a requirement is that it provides some assurance that an HEI is 'serious' and not a 'fly-by-night' operation. It also provides an asset that the HEC can attach where an HEI ceases to operate for financial or other reasons. The objective of the policy is a good one. However, it is not clear that this requirement provides the best way of achieving the stated policy objective.

203.   There are several concerns with the policy. First, the lack of available land (or land that is zoned for private education) in cities such as Karachi, Lahore and Islamabad means that the minimum land requirement can represent a significant hindrance to the entry of new institutions (or the recognition of existing ones). Even where land is available, it is often expensive. As a result, the minimum land requirement can significantly raise the cost of establishing an institution, obtaining HEC recognition and the time required to achieve recognition. For example, one private HEI noted that it had taken two years to obtain the requisite 10 acres of land and that it had had to negotiate the purchase of some 70 plots of land in order to secure these 10 acres.

204.   Second, the minimum land requirement would appear to be out of step with modern conceptions of HEIs. Many modern and successful HEIs do not operate on 'traditional' university sites characterized by large grounds, opting instead for conveniently located office buildings. For example, the University of Phoenix – the largest private HEI in the United States – operates out of office buildings located close to freeway exits. The minimum land requirement would appear to add little to an institution's ability to deliver quality teaching or research. This is particularly true given the narrow and specialized program offerings of many private HEIs. Indeed, the requirement may have the opposite effect on quality by diverting money from needed investments in both staff and equipment. The minimum land requirement may also reduce the ability of institutions to set up in locations that are convenient to students and well served by transport services. One observer argued that obtaining 10 acres of land in Karachi was "unthinkable" and that such a requirement would force an HEI to settle at least 30 kilometers outside the city, with a consequent negative impact on female enrollments.

205.   Finally, the objective of the minimum land requirement is, in some way, redundant, because the requirement for private HEIs to create an endowment fund already provides the HEC with some measure of security and an asset that can be secured in the case of an institution's closure. In addition, the establishment criteria for HEIs already include a requirement that an institution's infrastructure be 'fit for purpose'.

206.   While the HEC is proposing that some private HEIs be provided with land, this will do little in cases where land is not available. For the above reasons, the HEC should reconsider the minimum land requirement for HEIs. If regulation of infrastructure is required, building/space norms or standards would be more appropriate than a blanket minimum land requirement. These norms would specify criteria such as the number of square feet of building space required per student (it could vary by faculty) and minimum equipment requirements, rather than a minimum land requirement.   Such a policy would be more flexible and less costly, and would be more likely to lead to improved quality in educational delivery.

207.   **Requirement for endowment as a condition of HEC recognition**. The HEC currently requires that the sponsors of private HEIs create an Endowment Fund in the name of the Society/Trust equal to Rs200 million (in the case of universities) or Rs50 million (in the case of DAIs). The rationale for such a requirement is that it provides a guarantee against the financial failure of the institution. While this rationale is a good one, the requirement can pose a significant barrier to entry for private HEIs – especially small ones. As with the above land requirement, this can draw money away from higher valued uses. As a means of addressing this issue, the HEC could consider introducing an endowment policy that ties the endowment amount to institutional size, as well as type of institution. This would provide a better balance between the financial security objective and stimulating private entry into HE.

Proposal # 2: Making Greater Use of Information as a Tool for Regulating the HE Sector

208.   A necessary ingredient to good oversight of the private higher education sector in Pakistan is that consumers and regulators have access to timely, high quality information upon which to base enrollment and regulatory decisions. Since its establishment, the HEC has undertaken a number of steps to provide students with information on the quality of private HEIs in Pakistan. A key informational tool for the HEC is its website, which provides: (i) a list of recognized domestic and foreign universities; (ii) a ranking of private HEIs against the establishment criteria set put by the HEC; and (iii) a list of illegal (i.e., unrecognized) universities and DAIs operating in Pakistan. The HEC also makes use of newspaper advertisements and placement of newspaper articles as means of informing the public about important matters.

209.   HEC recognition is important for students, institutions and employers: all these stakeholders appear to make considerable use of the information put forward by the HEC on HEIs. Institutions value highly their status as an HEC recognized institution and make considerable use of this status in advertisements, brochures and course prospectuses. Students reportedly make great use of the HEC rankings – as well as other factors such as reputation – in their enrolment decisions. Employers seek graduates from HEC recognized universities and institutes. Job advertisements typically seek graduates from recognized universities and, in some cases, from institutions ranked in the top category by the HEC.

210.   Other mechanisms exist for providing information to consumers on the quality of private HEIs in Pakistan. A key one is reputation. Long-established universities like the Aga Khan University, GIK and LUMS have very strong reputations among students and employers in Pakistan and abroad. Some job advertisements from large employers in Pakistan specifically limit applicants to graduates of institutions such as LUMS. Large numbers of private HEIs advertise in newspapers and other media to attract students. Many also have websites. A number of domestic private HEIs offer foreign qualifications to attract students and the option of studying abroad as means of differentiating themselves from competitors

(eg. Thames Business School offers an MBA from Southern Queensland University in Australia). The annual *Dawn Education Expo* held in Karachi, Islamabad and Lahore provides students with the opportunity to find out information on a wide range of domestic and foreign HEIs.

211. **The importance of, and respect accorded to, HEC rankings and information puts a premium on ensuring that information is accurate, that the quality measures used to determine HEC recognition are accurate indicators of quality and that the process is transparent and legitimate.** The development of the HEC's quality assurance system should add significantly to the information base upon which to base recognition decisions and quality rankings.

212. The HEC has the power to require private HEIs to provide whatever information is requested. The HEC has begun to build up its information base on private HEIs. It has recently prepared a 'statistics at a glance' document that contains key information on the private HE sector. The HEC should ensure that the collection of information becomes systematic and is incorporated into the HEC's management information system as the latter is developed. It is also important that such information is analyzed and contributes to HEC planning and decision-making. A key weakness in existing information systems is the absence of information on the external efficiency of HE in Pakistan. This could be addressed through the collection and dissemination of information on labor market outcomes for HE graduates in Pakistan – through for example the HEC sponsoring graduate tracer studies, graduate employer surveys.

Proposal # 3: Improving Linkages between the HEC and the Private HE Sector

213. The rapid pace and complexity of policy reform puts a premium on the HEC ensuring that it has effective mechanisms in place to consult with the private HE sector on policy and implementation issues. Existing consultation mechanisms appear weak and informal. While the HEC is placing private providers on a number of committees (e.g., in areas such as accreditation), there is currently no active forum for consulting with private HEIs on policy direction or on and implementation issues. A vice chancellor's committee has been established by the HEC, but it has reportedly never met. The views of private HEIs on policy issues were reportedly sought late in 2004, but no follow up action was taken.

214. **One mechanism for improving consultation with the private HE sector would be for the HEC to develop a sector forum to discuss policy and implementation issues**. Its role would be to provide a forum to communicate policy decisions and to discuss policy and implementation issues that are common to the private HE sector. Such a group should meet at regular intervals. HEC meetings with vice chancellors should also be institutionalized and held at regular intervals.

215. Sector associations exist in a number of countries – both developed and developing – including Australia, New Zealand, the United States and the Philippines. In these countries, they play a number of roles, ranging from a narrow representation role to a broader role as a key part of the regulatory and quality assurance framework. For example, in the Philippines, the private sector representative bodies operate the accreditation system that applies to private institutions at both the school and university levels. In Pakistan, the absence of representative associations at both the Federal and provincial levels means there is limited scope for formal liaison between the private education sectors and the government. There is also no formal medium in which the collective non-government sector can interact with the government and its advisers. The HEC should facilitate the establishment of a national association representing private HEIs and the establishment/strengthening of similar associations at the provincial level such as the Association of Private Universities in Sindh.

Proposal #4: Increasing the Role of the Private Sector in the Provision of Educational Infrastructure

216.   A critical need in the Pakistan HE sector is the upgrading of infrastructure, including buildings, equipment, laboratories and hostels. **The HEC could consider making greater use of the private sector in the financing, design, construction and operation of public HE infrastructure.** Such infrastructure PPPs are an increasingly common form of procurement for large infrastructure projects in the education sector and could be used for all types of infrastructure, including classrooms, laboratories and hostels.

217.   The private sector can participate in infrastructure in a variety of ways – financing, design, construction and operation. Different types of infrastructure PPP exhibit varying degrees of private sector risk and responsibility, such as the Build-Operate-Transfer (BOT) arrangements – also often referred to as Design-Build-Finance-Operate (DBFO) arrangements.   Under the most common type of PPP arrangement – BOT – the private sector finances, designs, constructs and operates a public school facility under a contract with the government for a given period (for example, 25-30 years). At the end of that concession period, ownership of the school facility transfers to the government. While arrangements can differ widely, infrastructural PPPs have a number of characteristics in common (see Annex 8).

Proposal # 5: Building Linkages between HEIs and Employers in the Public and Private Sectors

218.   A more innovative and knowledge-driven economy must be underpinned by closer linkages and greater collaboration between research institutes, HEIs and industry. The HEC has recognized the need to enhance university-industry linkages and has already taken steps to address the issue. Among the initiatives included in the MTDF are:

- the launch of a University-Industry Technology Support Program;

- a requirement that public HEIs and DAIs to establish career centers and develop links with industry;

- development of university/industry collaborative programs involving a minimum 20 percent matching contribution from industry; and

- development of National Centers at public universities/DAIs in areas deemed to be priorities for the socio-economic development of the country.

219.   The initiatives in the MTDF represent important steps in bridging the academia-industry divide. However, two key problems with the proposals should be addressed. First, it needs to be recognized that a number of factors constrain public institutions' ability to deliver the tuition, research and other services that are valued by industry and the private sector and that represent the basis for developing sustainable university-industry linkages.   These include: (i) bureaucratic and inflexible institutional governance arrangements, which slow down decision-making; (ii) rigid institutional employment arrangements, including the inclusion of public HEIs under PSC pay and employment rules; and (iii) an outdated curriculum, coupled with academic processes that make curriculum change a difficult and time consuming task.

220.   It is important, therefore, that these problems be addressed during the development and implementation of the HEC's university-industry linkages initiatives.   For example, in developing National Centers, **the HEC should ensure that these organizations are established as private/autonomous research centers or companies attached to public universities**. These research centers would operate outside the public service and would have greater staffing, spending and operational flexibility than public HEIs. Such an arrangement would allow for staff sharing and provide a marriage of universities' research capacity and the flexibility and industry relevance inherent in a private sector organization. Such organizations would be better placed to develop and commercialize basic research.

221.   **In addition to the establishment of National Centers, the HEC should also facilitate and encourage (perhaps through seed grants) the development of private research centers alongside public and private HEIs.** These could be modeled on existing Pakistan examples such as CASE/CARE or examples from other countries such as the United States, Australia and New Zealand. In New Zealand, many universities have set up subsidiary companies to take on roles that are more commercial in nature. This provides those organizations with the flexibility needed to operate in the commercial world.

222.   Second, a number of existing HEC policies are directed solely toward public sector HEIs. For example: (i) research grants are available only to researchers at public institutions; (ii) HEC development funding is directed entirely toward public institutions; and (iii) National Centers are expected to be developed only at public HEIs. Yet, as discussed above in the case of tuition subsidies, there is no rationale for differentiating between public and private researchers/HEIs in the allocation of development or research funding. **All HEC research funding should be contestable between public and private HEIs/industry research centers and be performance-based.**

223.   Third, the HEC should address issues of relevance by making greater use of industry in the development of curricula and facilitate the development of industry placement and practical training programs for HE students. Currently, curriculum committees are made up predominantly of academics, although they do include academics from private institutions and industry. Finally, the HEC should work with the PSC to review its competencies and hiring standards to ensure they are up to date and aligned with wider labour market competencies and needs. The size of the public sector and the system of centralized civil service exams in Pakistan means that the PSC's competencies and hiring standards can have a significant influence on the academic programs delivered by HEIs.

Proposal #6: Encouraging PPPs in Research and Development

224.   The Government of Pakistan puts considerable emphasis on science and technology as a driver of economic growth and prosperity. A dynamic HE sector can play an important role in scientific and technological development by providing the intellectual and physical infrastructure to innovate, generate new scientific knowledge and adapt existing technologies in the most effective and relevant manner.

225.   Since 2002, the HEC has undertaken a number of initiatives to strengthen research and development in universities in Pakistan. These include the introduction of a research grant program for researchers at public HEIs, faculty development programs, travel grants for academics, programs aimed at strengthening research laboratories and libraries and the provision of access to scientific journals through the digital library. Despite this, research remains a weak area.

226.   According to the Task Force, linkages between universities and business/industry are important not only for employment of graduates, but also for the relevance of curricula and research. This is consistent with the conclusion of a recent study that cooperation between public research organizations and industries is likely to stimulate private sector research and development (Jaumotte and Pain 2005). There are currently few research and development linkages between industry and universities/research institutes and between universities and research institutes in Pakistan.

227.   There are a variety of reasons why there are few business/university linkages in research and development in Pakistan. A key one is that there is little research being conducted in Pakistani universities and much of the research that is conducted is of low quality. Other factors include the fact that:

- research being undertaken in Pakistan universities is often theoretical in nature and of limited relevance to industry (e.g., little research is done in areas such as design and process improvement);

- there is a low percentage of qualified staff in universities;

- laboratory equipment is old and outdated;

- there is little interaction with industries, including in the development of courses and programs;

- academicians' time frames are governed by research guidance and teaching assignments, while industry's time frame is immediate and results oriented (Hussain 2005).

228.   The proposals outlined above – e.g. allowing private university researchers to have access to research funding and increasing linkages with business on curriculum issues – would go some way to providing an environment more conducive to industry/university PPPs. In addition, the establishment of autonomous research centers affiliated to universities would allow for a marriage of universities' human capital with the private sector's more industry relevant curriculum and more flexible operating environment would provide much greater scope for PPPs in research and development.

229.   A number of further measures could be considered to strengthen PPPs in research and development in Pakistan. These include:

- linking academia to private industry through increased use of faculty exchanges, allowing pension portability for public HEI faculty who transfer to public HEIs and allowing academics to sit on company boards;

- develop pre-incubators that provide a mechanism for networking with other entrepreneurs, allow testing of ideas, coaching and training before moving into incubator phase. This is particularly relevant given the 'rudimentary' nature of university/industry linkages; and

- provide seed money for development of autonomous research centers with 'sunset' funding clause. This would introduce a 'market test' and improve performance incentives as the continuation of the research depends on patents and commercialization of research.

230.   These proposals would build on recent HEC and other initiatives aimed at enhancing industry/university linkages, including the development of Industrial Productivity Centers, which is part of the National Productivity Organisation's Benchmarking Services of Pakistan program. The NPO is a skill-development and research organization, whose mandate is to address and promote productivity in all sectors of the Pakistan economy.

Proposal #7: Introducing Measures to Improve Efficiency in the Delivery of HE

231.   The HEC could undertake a number of steps aimed at improving the efficiency of HE delivery in Pakistan. These include: (i) benchmarking operating and staff costs and revenues for both private and public HEIs – in aggregate and for individual sub-components; and (ii) identification and dissemination of good practices in institutional management. Both measures would provide the HEC and individual HEIs with valuable information on the efficiency and quality of delivery across institutions. It would also provide the HEC with a valuable learning tool for HEIs through the dissemination of best practice examples across a range of institutional functions[16].

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[16] One potential model for the implementation of a benchmarking program would be the US-based Consortium for Higher Education Benchmarking Analysis (CHEBA). CHEBA provides a network for the exchange of performance measurements and benchmarking data for all levels of higher education around the world (see www.cheba.com).

232.   **The HEC should also examine the scope for additional outsourcing of non-core services in HEIs to the private sector.** Outsourcing involves the transfer of service provision from a public entity to an external – usually private sector – organization and has been widely used by government agencies to procure a broad range of services, including transportation, cleaning, refuse collection and fire protection. The use of the private sector to deliver non-core services in the higher education sector has been common for many years. HEIs around the world have outsourced a wide variety of services to the private sector. As Wertz (2000) argues, financial pressures are likely to see this trend continue or even escalate.

233.   Non-core services that could be outsourced by HEIs in Pakistan include food services, bookstores, accounting and auditing services, advertising, architectural services, security, construction, IT, data processing, evaluation services, examinations, legal services, public relations, hostels and accommodation services, and utilities. The HEC currently outsources some functions – such as examinations.

234.   A more far-reaching proposal would involve allowing the private sector to manage a small number of public HEIs or particular schools/faculties within public HEIs**.** For example, a private HEI or entity could operate the business school at a public university under a contract to a public provider. These HEIs/schools would continue to be government-owned, but would operate with the same autonomy and the more flexible regulatory framework that applies to private HEIs.

Proposal # 8: Improving the Regulatory Environment for the Public HE Sector

235.   Increasing PPPs is not simply a matter of adjusting policies that directly affect the private sector. Linkages between the public and private sectors mean that policies affecting the public sector also have an impact on the private sector. A number of changes to policies affecting the public HE sector would improve the scope for PPPs. These include:

- introduce greater performance accountability for academic staff at public HEIs, including the effective implementation of the 'tenure track' policy; and

- reform governance arrangements at, and provide more management flexibility to, public HEIs so they can better organize themselves to meet the needs of the modern world.

236.   An additional option that would improve efficiency and equity in public higher education would be to increase private responsibility for the costs of HE at public HEIs. This increased cost-sharing could be across the board or targeted at particular schools or programs that are deemed to be more market oriented (e.g., business, IT, engineering). Any increase in cost-sharing could be accompanied by the introduction of needs-based scholarships, to ensure that equity goals are met. Public HEIs do charge a nominal fee, although newer public HEIs do charge higher fees than more established public HEIs. In many cases, public institutions have moved toward charging fees for market oriented courses. For example, the Arid University charges higher fees in its IT and business schools.

237.   Tuition fees already play an important role in financing HEIs. Institutions that wished to increase private responsibility for the costs of HE could be required to set aside a certain proportion of their revenue to offer needs-based scholarships to ensure equity outcomes. The HEC could introduce a system of (limited) matching grants to encourage HEIs to increase private revenues. This would provide both HEIs and students with some assurance that fee revenue represented additional revenues above government funding.

238.   There is a range of possible ways of introducing cost-sharing in the higher education sector – some more limited in scope and controversy. These include the introduction of small 'earmarked' fees for examinations or registration, the introduction of fees for only certain types of institutions or programs and the full introduction of tuition fees across the higher education sector (see Box 2).

239.   Clearly, an increase in cost-sharing at the HE level in Pakistan would be politically sensitive. However, other options exist if that is deemed to be too difficult in the short-term. For example, the government could encourage public HEIs to charge for non-tuition services at public universities such as boarding and lodging. A variant on this would be to encourage PPPs whereby public HEIs would contract with private providers to deliver full-fee courses or programs under an affiliation agreement with the university or to establish separate, but affiliated schools/faculties that operate on a commercial or full fee-paying basis. Thus public sector students could choose to attend the full fee-paying institution if they wish and would get higher quality tuition in return. Tuition fees are by no means the only avenue available to raise institutional revenues. A number of others exist (see Annex 7).

240.   The expansion of cost-sharing in the public HE sector in Pakistan would contribute to fill the financial gap that the implementation of the MTDF is likely to bring about (Chapter VI). It would also be consistent with the worldwide trend toward increasing private financing for the costs of HE. Vossensteyn (2000) has noted the gradual shift of the burden of higher education costs from governments to students/parents (see also World Bank 2002). This increased cost-sharing has come in the form of tuition fees, a growing supply of private post-secondary education opportunities and an increased emphasis on student loans versus grants. The trend is not uniform, however: while China has forcefully introduced cost-sharing, Ireland abolished tuition fees for full-time undergraduates in 1996 and private responsibility for tertiary education declined in Mexico and the Czech Republic between 1995 and 1998.

241.   Increasing the private contribution to the financing of higher education in Pakistan would promote growth in the private higher education sector by providing for a more level playing field between public and private institutions. Tuition fee revenues would also allow public universities to increase the quality of their program delivery (i.e., smaller class sizes, more equipment, etc.) and diversify their revenue bases.

It would also lead to greater equity in government spending since students in higher education tend to be drawn from higher socio-economic groups.

OPERATIONALIZING REFORM

242.   Significant reforms are already undertaken or proposed by the HEC in respect of private HEIs. This chapter has identified a number of possible strategies that could be considered to complement these reforms. These possible strategies represent a range of administrative and policy reforms. Some of these strategies are both technically and politically feasible in the short-term, while others represent longer-term policy reforms.

243.   The difference in the scale and scope of the reforms means that they can be introduced over different time frames, with appropriate sequencing. For example:

- reforms aimed at increasing information, benchmarking and identification good practice could be introduced first to inform student choice and HEC decision-making;

- increase in private responsibility for costs of HE could be larger, or could be introduced first, in 'market oriented' courses at public HEIs;

- achievement of a neutral funding system for public and private HEIs might be a longer-run goal, but expansion of 'contestable' scholarships offers a means of making short-term improvements in the funding system[17].

244.   In many cases, capacity building within the public and private sectors would be required. Pilot projects could be organized to ensure well managed testing and introduction of proposals.

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[17] A paper (Salmi and Hauptman, 2006) presented at the Dijon Conference on Economics of Education proposes a comprehensive typology of the mechanisms used to finance higher education. Worldwide examples are provided – and the conditions for their successful implementation evaluated-- in this paper.

CHAPTER V: GOVERNANCE & MANAGEMENT

245.   Governance and management weaknesses pose among the most serious challenges to the overall agenda for change proposed in the MTDF in that they threaten effective implementation of the Framework. In this Note, governance refers to the structures, regulations and processes that determine how the higher education system operates. Management refers to the systems, procedures and human resources capacity supporting the implementation of higher education policies and administration of higher education institutions.

246.   The governance and management weaknesses at the university level have been widely recognized as major impediments to urgently needed policy transformation of public higher education in Pakistan. Major problems of governance and management at private tertiary institutions and at the nation's colleges have been less well recognized but are no less serious. Several potentially critical issues of governance and management at the HEC are also noted in what follows. Major governance reforms at the federal level were attempted in 2002 through promulgation of the Federal Universities Ordinance. They were intended to create conditions in which "public sector universities are allowed to function as largely autonomous entities with systems of governance and accountability that are primarily internal to the structure of the university itself."[18]   It was hoped that this ordinance would have a spillover effect for other universities, both public and private. Problems noted beyond the federal university sector remain to be tackled. Progress in resolving these issues are critical to the success of the efforts to revitalize and improve higher education in Pakistan.

CURRENT SITUATION AND SECTORAL ISSUES

247.   The higher education sub-sector in Pakistan consists of different types of tertiary institutions, most operating autonomously. These are federal universities which include the Open University and the Virtual University, provincial universities, the affiliated colleges, and private universities, with little cooperation or coordination among them. Governance and management within these institutions is diverse, with different levels of autonomy.

248.   **The Roles of Federal and Provincial Governments.** By law, authority over higher education is divided. The federal government controls the federal universities. It also provides funding for the provincial universities, which nonetheless are under the control of the provincial governments. The colleges are accountable to their respective provincial governments but are also affiliated with universities which are responsible for maintaining the quality of college programs, oversight of the curriculum, and examinations. The universities receive a small affiliation fee for these services and charge substantial fees for carrying out the examinations. The overlap, and in some cases ambiguity, of authority between the federal and provincial authorities, has created some areas of confusion and has the potential –particularly in the area of quality assurance-- to create serious tensions between the federal and provincial authorities.

249.   **The Higher Education Commission.** Part of the rationale for creating the HEC was the weakness and ineffectiveness of the University Grants Commission (UGC) in overcoming the general decline in higher education over many years and its inability to foster change. In spite of a number of thoughtful and critical reviews of the crisis in higher education in Pakistan, including *Higher Education and Scientific Research: Strategy for Development and Reform* (1992) and the report of the Higher Education Task Force (2002), no major efforts were made to follow up on problems identified or the recommendations made. The breadth and extent of the problems – including issues of governance, the flight of many of the best faculty members to institutions abroad, inadequate funding, etc. -- were beyond

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[18] Raja, Selman Aram, Chapter 4 "Reform of University Legislations." *Steering Committee Report*, (2004), p. 1.

the capacity of the universities to resolve either individually or collectively. The UGC had neither the authority nor the inclination to tackle these problems. Pakistan faced a situation in which the UGC, educators, and policy makers were aware of critical problems and possible solutions, but no one was willing or able to do anything to resolve them. In the mean time the quality and relevance of higher education continued to deteriorate and access remained one of the lowest in the world in terms of the percent of the population attending university in that age cohort.

250.   In that context, the HEC was established with a mandate to promote policies, guiding principles, and priorities for higher education; evaluate higher education institutions; prepare, in consultation with the institutions, plans for the development of the universities; and promote social and economic growth.[19] The creation of the HEC was premised on the desire to establish a strong centralized structure with extensive authority over higher education and with the power to foster badly needed changes in higher education,. Its functions included control over university budgets. It had authority to review and assess financial needs and advise government accordingly, to establish accreditation and quality improvement, carry out curriculum review and enhancement, control and recognize degrees, define conditions under which public or private institutions can be opened, enhance and fund research, support libraries, and enhance linkages.[20] The HEC took over the functions of the UGC.

251.   In one sense, the Ordinance was not a radical document calling for change but its delegation of extensive powers to the HEC gave it the ability to exercise authority in ways that could reshape higher education. Among them were allocation mechanisms linking funding to performance. The vision was a strong autonomous agency which would change higher education institutions to meet contemporary demands, improve quality (including building some to world-class status), expand access, and reinvigorate research, teaching, and learning. The HEC mandate over quality included improvement of university education in both the public and private sectors. The HEC was given oversight over federal university budgets. It also provides some funding for provincial universities.

252.   The HEC Chairperson –the controlling authority-- has the status of Minister in the government and substantial powers in his own right including appointment of major committees and councils and their chairpersons, such as the various Accreditation Councils. The policy responsibility of the HEC rests with its Commission[21] with its members including the secretaries of Education, Information Technology, and Science and Technology Research Division, representatives of the Regional Governors, university representatives and at least seven distinguished professionals and educators of "international eminence". The day to day operation of the HEC is carried out by the HEC Secretariat under the direction of the Executive Director. In reality, the Chair of the Commission and the Executive Director exercise most of the authority, with the Council itself playing primarily a supporting role. It is required to meet only two times a year. The Commission Secretariat itself is run in a top down manner. That too has typified its operations with the universities.

253.   Although the HEC has gained substantial authority since its inception, in part because of its own strong leadership and independent board the rest of the sector retained management structures that are ineffective in meeting the challenges faced by higher education. Part of the lack of change can be attributed to the multiple levels of authority over tertiary education embedded in law, de facto administrative arrangements, and tradition, and part to the fact that parts of the Ordinance of 2002 were largely ignored.   Only two federal universities, Urdu University and Air University, incorporated

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[19] *Higher Education Commission Ordinance, 2002*, chapter 2, section 10 a-c.
[20] Ibid. *Ordinance*, section 10.
[21] HEC Ordinance, Ibid. chapter 2.

proposals that were central to the governance changes included in the Ordinance[22] and only very recently have two universities used its procedures for the selection of vice chancellors.

254. **Public universities.** Management and governance problems in public universities, both federal and provincial, were centered primarily on the power of the vice chancellor and the weakness of the senate. The vice chancellors were appointed by the chancellors (the head of state or the governors of the provinces) at their sole discretions without effective requirements for consultation with the faculty, staff, or other stakeholders. As a result, the vice chancellors were accountable only to the chancellor and were free to ignore the wishes of the syndicate, the senate, and other university institutions and often govern using emergency powers over which they had almost total discretion. Indeed, at Karachi University, the Chancellor did not call a meeting of the Senate for three years in spite of statutes requiring a minimum of one meeting a year (World Bank 1992). The Steering Committee Report (2004) noted that failures in the governance and management areas "created a culture inimical to academic excellence."[23]

255. In 2002 the Higher Education Task Force commented that: "Ineffective governance and management structures and practices" were at the top of the list of "longstanding maladies afflicting higher education in Pakistan" and identified them as "among the most important reasons for the declining standards of higher education in Pakistan." [24] Overall, the Task Force' assessment of the processes of management and governance of universities was extremely critical. It concluded that these processes "do not protect universities from political, government, and bureaucratic or other extraneous influences that may adversely affect the institutions from within or outside". The Steering Committee Report even suggested that "…the Vice-Chancellor is justifiably viewed as the government's representative who is not, by law, answerable to the university community in any real sense." Added to that was a syndicate emasculated by the powerful vice-chancellor and a senate that was too large and too ungainly to provide either effective oversight of academic policy or effective input into the governance of the universities.

256. The Steering Committee noted that the Ordinance of 2002 was designed to change all that by providing for an open, competitive process of selecting the vice chancellor outside the control of the chancellor, and a restructured senate that would have governance functions transferred to it and autonomy from government control while being held accountable to government. However, this Ordinance has not yet been effectively implemented.

257. In addition to excessive powers of the vice chancellor and a weak senate, the provincial universities are faced with complex and confusing authority structures – the dual management of both the national and provincial administrations and in some cases the HEC, as indicated above. While many universities have managed to navigate the quite different requirements of these bodies very creatively and successfully, others have not.

258. **Private universities.** Governance and management at private universities is diverse, in some cases approximating the situation of public universities, in many cases rivaling the worst aspect of authoritarian regimes with all power vested in the president (or CEO) who is sometimes also the owner of the institution. Thus, the crisis of governance and management in private education often mirrors, and in some cases exceeds, that of public tertiary institutions. And while in theory private universities are "non-profit" many make substantial incomes for the owner(s) and are run like fiefdoms. Academic decisions are not under the control of the teaching faculty, there are few if any protections or appeals against the abuse of authority, and there is neither financial nor administrative accountability. Quality improvement

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[22] Raja, Ibid. p. 2.
[23] Steering Committee, p. 8.
[24] Including the *Higher Education Task Force* (2002).

and high academic standards require major reforms at private universities like those proposed for public universities.

259.   **Leadership**. The other side of the picture is the difficulty of developing effective faculty and staff leadership in such a context. Governance and management structures including the Senate and Syndicate have not demonstrated an ability to foster needed change, meet the challenges of the contemporary world, or deal with the critical issues that face higher education. The Task Force concluded that the universities and colleges suffered from a "number of fatal flaws" in their governance. They included: (a) absence of accountability and transparency, (b) incongruity of responsibility and authority; (c) inadequate financial management and control systems; and (d) inadequate systems for supporting the quality of academic programs and research. These assessments are shared by many observers.

260.   **Strategic planning and financial management**. While the federal universities have a great deal of autonomy in some areas, their budget control and planning mechanisms are underdeveloped. The budget process does not involve the usual progression of requests, discussion, and planning that lead to effective decision-making. Indeed, the decision process seems more driven by previous budgets and history than by any effort at planned change. Effective governance requires much better financial planning and control as part of a strategic planning process at university level. At the same time, it requires that some budget functions be decentralized to the institutions that are now controlled centrally. Major efforts should be made to encourage strategic and financial planning at the institutional level along with capacity building in financial planning and accountability.

261.   **The colleges**. Colleges suffer under a number of burdens including a dual management structure which includes the provincial government and the universities with which they are affiliated. Until recently, some were also subject to local authorities. These problems have been compounded by years of serious under funding. As has been emphasized elsewhere, the colleges are the weakest links in the tertiary education process and a major impediment to improvement in quality nationally. At the same time they take about one third of all students in higher education and provide training for many of the students who go on to the nation's universities. Improving quality in the colleges is particularly hampered by management and governance problems.

262.   The affiliating public sector universities are required to inspect and ensure the adequate maintenance of facilities, staff, buildings, libraries and laboratories as well as the quality of their education through examination. The intention is that through affiliation the public sector universities control the quality of college education.   Theoretically, the colleges benefit from university oversight of the quality of their programs through review, comments, and approval of new programs as well as through examination of students. In reality there is little evidence of quality assessment visits by the affiliating universities. Review of new programs by the universities is described as slow and often impossible. While examinations are one indication of quality, that process does not rise to the level of effective quality assessment. A recent initiative by the HEC to revise requirements for affiliation should help improve the process and the chances for quality improvement. Nonetheless, in the long run the colleges need to be involved in institutional accreditation and assessed by a process similar to that envisaged for universities through the QAA.

263.   **Cooperation at the national level among all Tertiary Education Sub-Sectors.** There is virtually no coordination or information sharing in tertiary education across all sub-sectors. That has a profound negative effect on efforts to improve access, quality, and relevance. It is also manifest in some duplication and incompatibility of programs, for example in teacher education.

264.   The MTDF identified poor governance of the universities as one of the five major issues the higher education sector in Pakistan currently faces and set out "developing leadership, governance and management" as one of its core strategic aims. Yet, governance issues are less central in the MTDF than one would have expected. The specific goal is to provide support, through a broad-based partnership, to enhance the sector's leadership, governance and management. The proposed programs to meet the goal include:

- To assist institutions in identifying areas requiring reform, identify best practices, and suggest mechanisms for improvement.
- To establish a system of university overhead (15% of research funds) to implement modern financial management practices and general institutional strengthening.
- To provide training of young faculty in educational administration and management.
- To develop performance-based award and promotion system in all cadre of university workforce.
- To establish Research Management Cells at universities to improve research management.

265.   Many of these are intended to enhance research management and administration at the universities and seem doable and appropriate. However, the MTDF largely leaves out some of the fundamental issues of governance that affect the ability of tertiary institutions to foster and maintain change, especially the issues relating to the power of vice chancellors and those of the senate, in spite of earlier criticism. In addition, these programs do not touch on challenges at the national or provincial levels discussed above. They do not respond to the many critics, which, inside and outside the academic community, question the credibility of governance in the higher education sub-sector. While many of these issues are outside the purview of the HEC, as part of the non-university tertiary sector, the HEC might play a role in bringing about broader chances nationally in governance and management in tertiary education generally.

266.   The HEC has been somehow unselfconscious about its own governance structure. The MTDF is silent on that issue. Yet, in the long run, the legitimacy and effectiveness of the HEC will depend on the efficacy of its own governance, the way in which the Commission relates to, and involves university inputs and concerns into its decisions-making process, and its openness and transparency in the minds of higher education stakeholders. Its top down approach to date has been effective but runs the risk of overlooking critical concerns of universities, faculty members, students, business, other government agencies and ministries, and of the public. An indication of potential problems is the growing unease among faculty members about several HEC programs including tenure track and faculty recruitment. In the long run, the transformation of higher education initiated by the HEC will succeed only to the extent that the universities, the administrators and faculty, and stakeholders own the process, accept its premises and goals, and contribute to its implementation.

267.   **Performance indicators.** The indicators selected for the leadership, governance and management section of the MTDF are useful to measure progress (e.g., number of universities having ISO 9000 certification), but they do not focus on governance patterns in the sub-sector or improvements in management across the sub-sectors.

268.   To provide an adequate institutional framework for the pedagogical reforms under way in the public universities, the HEC has initiated a number of measures aiming at strengthening governance and management in public universities:

- Establishment of a new tenure track system.
- Setting up of university governing bodies including representatives from the productive sectors and society at large.

- Training programs to build up the universities' strategic planning and management capacity.
- Guidelines for research management.
- Introduction of management information systems.

269.   In addition, the HEC's ability to establish programs based on incentive funding gives it significant authority to affect change at the universities – especially since the federal higher education budget has increased substantially over the last few years. In the case of provincial universities, authority is divided between the HEC and regional authorities, with the HEC funding providing significant incentives for change for those institutions willing to undertake it, but has little management or governance authority beyond its specific projects or programs.

THE WAY FORWARD

270.   Weaknesses in governance and management have created frustration about the prospects and possibilities for change at all levels including in tertiary institutions, among the public, and in the private sector. To solve this serious problem requires effective leadership. But it also needs concerted collective action at the federal, regional, and institutional levels – both public and private, broad participation and public support.

271.   The process of change will require getting all the major actors (the HEC, the provincial authorities, the universities, and the colleges) together and reaching agreement on needed changes. The changes will be most effective if they are the result of consensus. These changes can probably not continue to be legislated or handed down from the top. In the future, the HEC might serve as the "honest broker" in the process as a way of showing good faith and as the one entity in tertiary education with an overview of the issues. The HEC could start the dialogue, spelling out issues of major concern and thus hopefully promoting the types of management and governance reform that will be essential to the success of the MTDF.

272.   **The Higher Education Commission.** The leadership of the Higher Education Commission has been successful in mobilizing strong support for the proposed reform in many, but not all sectors of the higher education community and among stakeholders. They are in the process of developing new policies and procedures that will strengthen the quality of the faculty including new policies on the promotion of meritorious professors and new conditions of eligibility for appointments.[25] These will also strengthen the faculty and enhance their ability to improve both governance and management. Nonetheless, a key missing ingredient is the lack of agreement on a framework for reform at the HEC that would guide and inform its transformation efforts.   The wide dissemination of the MTDF and a broad consultation on how to implement it would help mitigating the risk associated with this current lack of ownership.

273.   In the longer term, the sustainability of HEC programs could be more firmly assured if the authorizing environment of the Commission was not solely dependent on support from the highest political authorities, but also relying on a more active working relationship of the governing board with a wider representation from the academic world, the productive sectors, and the community served by universities. The present Board is quite diverse, but perhaps it could be enhanced with –for instance--one additional representative from the private university sector and two or three representatives from leading

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[25] See *Proposed Statutes Regarding Promotion to Meritorious Professor* (BPS-21), nd, circa 2005 and *The Eligibility Conditions for appointment in all disciplines (excluding Engineering, Information Technology, Computing Science, Medical Sciences Disciplines) in all Universities and Degree Awarding Institutions,* nd. (Circa 2006).

economic sectors.[26] In the long run, the Commission should play a more active role in governing the HEC to help insure both its legitimacy and its longevity beyond the tenure of any one government. Similarly, the HEC needs to work more closely with university administrators, faculty members, and staff, in addition to improving its information flow to the institutions and developing an effective communications strategy.

274.   **Quality Assurance.** The HEC authority over quality assurance and accreditation nationally is one means by which there may also be increased federal control over provincial and private universities in ways that could affect management and governance. The HEC's recent efforts to identify private institutions that do not meet minimum standards, and to make that list public, appears to have had a major impact on decision by students about choice of private institutions and focused attention on quality at the private institutions themselves.

275.   The central organization of quality assurance in the HEC, from the outset, has been very important to its success. It has helped bring people together to develop guidelines for program accreditation and has set up a framework, through its pilot quality assurance cells in ten universities, for institutional and program accreditation. Nonetheless, once institutional and program accreditation are well established, it will be important to give the agencies autonomy. It is encouraging that the HEC plans to provide autonomy for the QAA and Accreditation Councils once they are firmly established as that will be important to the legitimacy of the accreditation process in the long run. An area of potential conflict is that between Provincial quality monitoring units, some predating the creation of the HEC but most receiving funding from the HEC, and the HEC in terms of authority over quality assurance and accreditation. It is essential that there be national standards for both institutional and program accreditation. Similarly, provincial governments can play an important role in helping to assure quality improvement and high standards. It should be possible to avoid such serious conflicts in this area.   The HEC would do well to focus attention on these potential problems and, while asserting its authority under the *Higher Education Commission Ordinance, 2002, section 10*, work to build cooperative relationships among all those interested and willing to work to improve the quality of education in Pakistan.

276.   **Public universities**. University governance needs to be reviewed to make sure it works to enhance the quality of the faculty, teaching and learning, the curriculum, and operation of the institutions. A key to success will be the ability to mobilize university faculty members to take an active role in the change process, to bring to bear on these problems the best minds in Pakistan, and to have them become active participants in the transformation of governance and management as well as in quality improvement.

277.   In addition, policies need to be put in place to end or modify the dual authority system of regional universities and to create management processes that will facilitate, rather than hinder, change and quality improvement. Efforts need to be made to streamline these processes so that they work in tandem rather than pulling in different directions. If that is not done, in the long run the procedural hurdles may well derail many of the creative new initiatives just underway.

278.   **University autonomy and accountability**. There is a need for a thorough examination of the limitations encountered by universities in exercising the autonomy that they are assumed to enjoy. Meetings and interviews with a wide range of university leaders have revealed that there is a lot of confusion and diversity of interpretations with regard to the degree of autonomy actually enjoyed by their institutions. Opinions range from those who consider that universities in Pakistan have few if any

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[26] At present, the Board consists of 18 members distributed as follows: HEC chairman and executive secretary, Federal government (3), provincial governments (1), public universities and research institutes (5), private universities (1), Parliament (1), Industry (1), retired VCs (2), community at large (2).

constraints to those who feel that they are bound by tight regulations and practices that hinder their efforts to transform their universities.

279.   Furthermore, there appears to be a large gap between the flexibility theoretically inscribed in the higher education laws and regulations and actual practices encouraged or sanctioned by the authorities. Table 15 below suggests that Pakistani universities enjoy a larger degree of autonomy than those in a sample of OECD countries as well as in Malaysia (Canada excepted). Whether they have the freedom to decide on the entire range of responsibilities indicated in the matrix remains to be verified. At any rate, salary and career conditions seem to be the main constraining factor recognized by almost all leaders of public universities who complain that they lose their best faculty to the private sector. If Pakistan wants to successfully build up quality in the university sector as a whole, and also compete with emerging countries such as China or Singapore who are hiring top researchers on the international market, the issue of civil service conditions of employment for faculty will need to be revised as a matter of priority.

Table 15: The Areas of University Autonomy in Selected Countries

Areas of Governance	HOL	UK	DK	CAN	MY	PAK
Appointment / dismissal of VC/President/Rector	X		X	X		X
Appointment / dismissal of professors	X	X	X	X		X
Academic tenure	X	X	X	X	X	X
Academic pay and conditions				X		
Students entry standards				X		X
Selection of students				X		X
Size of enrollments	X	X	X	X		X
Quotas for special groups	X	X	X	X		
Language of instruction				X		X
Introduction of new courses / elimination of old courses	X			X		X
Selection of textbooks	X	X	X	X	X	X
Examination / graduation standards	X			X	X	X
Decision to teach courses at graduate level	X			X	X	X
Research priorities	X	X	X	X		X
Approval of publications				X	X	X
Membership and control of governing council / board			X	X		
Management of university budget	X			X		X
Level of tuition fees						
Approval of income generation ventures	X			X		X
Own buildings and equipment	X	X		X		X
Ability to borrow funds	X		X	X		X

Note: X means that the university has the power to perform this function autonomously.
Source: World Bank survey conducted in 2005 and 2006.

280. The policies set out in the Federal Universities Ordinance seem likely to be effectively implemented during 2006 through Presidential action. The revised, transparent, merit-oriented selection process for vice chancellors and the strengthened powers[27] of the senates should go a long way to overcoming the governance crises of the past.

281. At the university level, there has also been some concern about the style of the HEC in its efforts to implement key reforms in the higher education sector. While it seems highly unlikely that needed reforms could have taken place without substantial top down authority in the beginning, the challenge will be to gradually increase institutional autonomy in the universities as the needed changes take place so that the delegated authority envisioned by the Steering Committee – academic autonomy and freedom so essential to quality academic life – can flourish in universities in the near future.

282. **Private universities**. Critical to increasing access for students nationally, the private sector too needs reform. Badly needed quality improvement in much of the sector will also require governance and management reform to eliminate dictatorial leadership practices in some private institutions and insure that academic matters are controlled by the faculty. They would benefit from adopting and implementing the kinds of governance reforms suggest in the Federal Ordinance. Such changes may follow from requirements that will be instituted to allow private tertiary institutions to have access to Federal funds and as part of the institutional accreditation process.

283. **Leadership**. To ensure effectiveness of university governance and management, it is important that the governance principles embodied in the Federal Universities Ordinance, be put in place for all universities, federal, provincial, public and private so that the position of vice-chancellor is redefined as proposed and the respective responsibilities are well defined for the councils/boards, the vice-chancellors, the syndicates, the senate, the university management, and other bodies. The appointment process for vice-chancellors and other senior administrators needs to be reformed and made transparent as proposed with major emphasis on merit, the academic qualifications of leaders, and their fit with institutional needs. These reforms need to be implemented by the institutions themselves once the legislation is in place. It is encouraging that recently both Punjab University and NWFP University utilized the new procedures in the selection of their vice chancellors.

284. **Strategic planning and financial management**. It is important that the universities have more effective decentralized financial planning and financial control as part of the change process including development of user-friendly multi-year financial planning software as well as an effective computerized system for budget management. That will require capacity building at the institutions and the installation of improved software for budget planning and expense tracking.

285. Public and private universities should also be subject to annual external financial audits with the results published to provide public transparency of income and expenses and to insure proper accountability. While an outside audit might be introduced as part of accreditation standards (as is the expectation in many countries), it would be more appropriate to have it introduced as part of a series of changes designed to improve university administrative efficiency – especially financial and public accountability. In any case, annual audits should be part of the normal expectation of university governance and public accountability.

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[27] Procedures for the appointment of the Vice Chancellors of Federal Public Sector Universities, Presidential action, January 26, 2005.

286.   **Capacity building**. The HEC has initiated a number of programs designed to provide capacity building in management focused in particular on quality assurance, teaching, and research. The needs in the governance and management areas go far beyond this good beginning and will require far reaching programs covering all institutions and involving a major commitment of resources. The capacity building programs might include:

- Training in management for the universities (leadership techniques, strategic and financial planning)
- Training about university governance, including governance for boards or councils. This training should help make the range and limits of authority clear for each of the governance areas.
- Improved budget management including better financial reporting of expenses and annual outside audits. These are essential to effective governance.

287.   **The colleges**. Improving the quality of the colleges is an essential part of increasing the quality of students admitted to the universities, enhancing their success rates, and allowing students to maximize their opportunities for tertiary education. The governance and management structures of the colleges need to be reviewed carefully, both in terms of how they work on campus and in terms of the management and governance authority over colleges by the provincial governments and the affiliating universities. Mechanisms should be put in place to provide greater autonomy for the colleges once they reach a certain level of proficiency and experience, ending or modifying the affiliations with universities.

288.   **Coordination and cooperation.** It is essential that the reforms proposed by HEC be carefully coordinated with ongoing efforts by the Ministry of Education to improve the quality of secondary education, including with respect to issues of rote learning, science education, and language of instruction. Likewise, a major effort at the national level needs to be undertaken to develop inter-sector cooperation and information sharing at the national level. This should be a high priority focus in the coming years and should help improve planning, policy, and, ultimately, the quality of the education services available to young Pakistanis.

CHAPTER VI: PROJECTING MTDF COSTS AND FINANCING

BACKGROUND AND METHODOLOGY

289.   If achieved, the ambitious goals of the MTDF would enhance enormously the situation of higher education in Pakistan, and help to favorably position the country for global competition. Recent and significant increases in budget allocations for higher education show the high priority now being given to that subsector. Yet the MTDF does not provide an estimate of the financial impact of this rich gamut of measures and programs being set forth. In order to complete the assessment of the MTDF and of its realism, this Note tried to bridge this gap, and to translate the MTDF programs in financial terms.

290.   This section presents a set of projections aiming to: (i) assess the cost implication of the MTDF; (ii) examine the fiscal feasibility of these programs by comparing their costs and the projected resource envelope for higher education and assessing the financing gap associated with the implementation of the MTDF; and (iii) illustrate the sensitivity of alternative policy options for the financing gap. Projections uses an Education Simulation Model (ESM)[28] constructed around three modules: (i) enrollments; (ii) costs; and (iii) resources. Each of these modules is built around a set of assumptions.[29]

291.   The projections stretch over the 2005-2015 period, and therefore provide a longer time horizon than the MTDF itself (2005-2010). The main reason for using this extended period stems from the fact that many measures need more time to be absorbed and/or to have an impact. The ESM uses 2004/05 as its base year -- i.e., the last year for which current figures are known with a sufficient level of confidence.

292.   The MTDF covers only the university segment of the higher education subsector and does not include the affiliated colleges. Nevertheless, the non-university part of the HESS has been factored into the model in several ways. First, enrollment projections take into account the student population attending the postsecondary levels of the colleges. Second, the costs of the colleges and the resources allocated to them are also added to those projected for the universities. This allows comparing the financial balance of the university segment (the MTDF territory) with that of the entire higher education subsector.

293.   Similarly, as higher education cannot be insulated from the rest of the education sector, the financial situation of HESS is framed in the overall education sector, which includes primary and secondary education. This allows policy makers at the macro-level to have a comprehensive view of the sector, and to consider possible tradeoffs between the various levels of education.

294.   The projections proceed in two stages. First they are applied to a conservative Base Case Scenario, which represents the MTDF in an environment with stable parameters. The Base Case assumes: (i) the implementation of all measures as proposed in the MTDF; and (ii) continuation of the past evolution of resources allocated to the subsector, not taking into account the recent announcements regarding the commitment to allocate additional resources to education. A second scenario is proposed, dubbed the High Case, which reflects alternative assumptions with respect to all three modules: enrollments, costs, and resources. It allows testing the sensitivity of departing from the Base Case assumptions and provides a perspective on the margins of maneuver to achieve MTDF goals.

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28 The Education Simulation Model is a module of the Manpower Allocation Model, developed in the   Middle East and North Africa Region of the World Bank. (the architecture of the model is presented in Annex 8).

[29] All assumptions, basic data, and detailed results of the projections were reviewed and discussed with HEC staff between December and March 2005. Details of the projections are presented in Annexes11.

295.   Feeding the ESM requires a comprehensive set of data in the areas of enrollments, costs, and resources at the federal, provincial, and institutional levels. The HEC began the process of collecting basic data on higher education with the collaboration of tertiary institutions in 2001/02. Currently there are detailed and comprehensive databases that include information on the basic characteristics of the system -- enrollment, faculty, and finance. The information covers public and private universities, degree-awarding institutes, and centers of excellence.   An elaborate and detailed financing database was established and is used for the financing formula applied for distributing resources among the universities.

296.   Yet a number of areas still require special attention, including the collection of basic data on repetition rates, drop-out rates, pass rates, teaching loads, and student/faculty ratios for the different areas of study. Lacunas in these areas become particularly acute when it comes to project enrollments. The lack of data, their frequent inconsistency, and the low level of reliability – e.g., different figures for the same variable depending on the source—are serious problems which impede the necessary rigorous planning and monitoring of the system, and deprive decision makers of a basic instrument to strategize higher education. They point to the urgent need to overhaul the HEMIS.

PROJECTING ENROLLMENTS: INCREASING ACCESS TO HIGHER EDUCATION

Current Enrollment Patterns

297.   Higher education participation in Pakistan is low. In 2004/05, the number of enrollments in higher education totaled 534,000, or 2.5 percent of the corresponding age group. If enrollments in affiliated colleges are included, the number of students in the higher education subsectors (HESS) increases to 807,000, which still represents only 3.8 percent of the corresponding age group. The government's commitment to increasing higher education participation is expressed in the MTDF target of increasing the university enrollment ratio to six percent of the relevant age group by 2010.

298.   With such low levels of participation, higher education in Pakistan remains an elitist system, catering to a marginal proportion of the eligible population. As the system expands, it will be critical that equity of entry to higher education be guaranteed, and that no barrier at admission to the system be placed for socio-economic, gender, or other reasons, and that merit remain the sole criteria for accessing university education. In addition to providing the country with skilled and professional manpower, higher education plays an important role in enhancing social cohesion. Therefore, equity of access should be an explicit goal of higher education and incentives should be provided to encourage the admission of socio-economic disadvantaged students, with special attention to the underrepresented regions and provinces.

299.   As a result of government efforts, enrollments in public and private higher education institutions have increased substantially in recent years. According to the HEC, the number of students at the bachelor level increased by an average of 19 percent between 2001/02 and 2003/04 (21% including Masters and PhD students). The total number of HEI enrollments in 2003/04 stood at around 260,100.

300.   The largest growth occurred among the universities that offer general and pure science studies where enrollment increased by 25 percent, followed by engineering universities (15%), and medical universities (7%). With an average growth rate of 35 percent per year, enrollments in distance education[30] increased even faster Total enrollments including distance education --but excluding affiliated colleges-- expanded from 265,000 in 2001/02 to 419,000 in 2003/04 – an average rate of growth of 26 percent). Enrollments in general universities made up 76 percent of total higher education enrollments in that same year (Table 16). Such a trend does not reflect the future needs of the labor market.

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[30] Distance education in Pakistan is delivered primarily by the Allama Iqbal Open University (AIOU) and to a lesser degree by the Virtual University.

Table 16: Enrollment Growth by Type of HEI, 2001/02 - 2003/04

| Year	General/ Science	Agriculture	Engineering	Medical	Total	Distance Education	Total (including DE)
Enrollments							
2001/02	125,900	14,256	29,228	7,133	176,517	88,493	265,010
2002/03	156,140	13,766	33,662	7,386	210,954	107,860	318,814
2003/04	197,754	15,743	38,422	8,222	260,141	159,257	419,398
Growth Rate							
2002/03	24.0	-3.4	15.2	3.5	19.5	21.9	20.3
2003/04	26.7	14.4	14.1	11.3	23.3	47.7	31.5
Average	25.3	5.5	14.7	7.4	21.4	34.8	25.9

Source: Higher Education Commission

301.   The share of female higher education enrollments has increased from 28 percent in 2001/02 to 34 percent in 2003/04. At the bachelor level, women are fairly well represented in general and medical universities (37 and 54 percent of total enrollments, respectively, in 2003/04), but less so in agricultural and engineering universities (15 percent). The same pattern is found at the master levels, where women represented 42 percent of enrollments in general universities and 27 percent in agriculture universities. At the PhD level, the proportion of women is shrinking and dips to 28 percent. They still made up a greater share than men in medical studies (54%), but only 15% in engineering.

302.   *In the short and medium term, there will be no lack of candidates to feed the ambitious goals of increasing access at the university level. Instead, the real risk is to have huge cohorts of youths left aside after dropping out – or even graduating – from higher secondary education, without access to postsecondary education, with limited possibilities of complementary training opportunities, even less perspectives to be absorbed by the labor market.   This risk has already become a reality.*

303.   Based on the continuation of past trends, enrollments in primary education are expected to increase from 17.9 million in 2005 to 25.0 million in 2015. Together, middle and high secondary enrollments will increase from 6.2 million to 12.1 million and collegiate enrollments will increase from 0.2 million to 0.4 million in 2015. When all levels are combined, the total number of students enrolled at the pre-tertiary education level is projected to increase from 22.7 million in 2005 to 32.3 million in 2010, and to 37.5 million in 2015 (Figure 11).

Figure 11: Enrollment Projections, 2005-2015 (000s)
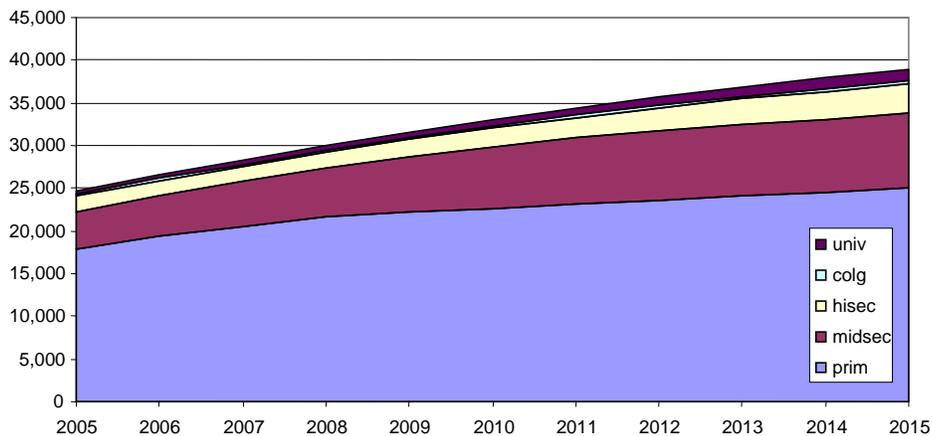
304.   Access to universities is mainly regulated by the Higher Education Certificate (HSC), even though other doors exist (Box 3). The number of students taking the HSC exam has been increasing steadily by more than 10 percent per year during 2000-2004. Meanwhile, the pass rate has increased from 38 percent to 50 percent. In 2004 some 778,000 students took the exam, with half of them passing. In the same year universities admitted about one-fifth (74,000 students) of the 389,000 students who passed the HSC exam. Students who pass the exam but are not admitted to university usually enroll in professional colleges affiliated with the universities or – in theory – enter the labor market.

Box 3: Access to Postsecondary Education

The IBCC manages and conducts two major exams nationally for students who pursue higher education. The Secondary School Certificate exam (SSC) for grade 10 graduates, and the HSC for grade 12 graduates. Universities usually admit students who pass the HSC exam according to their scores. The pool of students who take the HSC exam consists of grade 12 graduates from the public and private secondary education systems in addition to the graduates of the 12 grades of the affiliated colleges. In addition, the private sector provides training for the O and A level equivalent that is offered to students who want to continue their education abroad. Those students who take the A-level exam and want to join the national universities are also added to the pool of applicants.

Secondary School Certificate and High Secondary Certificate Exams Statistics, 2000 – 2004 (*)					
	2000	2001	2002	2004	Growth Rate
SSC (exam after grade10)					
Appeared	1,041,033	1,092,061	1,026,805	1,167,000	2.9
Passed	476,218	553,218	606,772	641,850	7.7
Pass Rate (%)	45.7	50.7	59.1	55.0	
HSC (exam after grade 12)					
Appeared	525,739	558,031	502,209	777,680	10.3
Passed	201,395	248,023	239,967	388,840	17.9
Pass Rate (%)	38.3	44.4	47.8	50.0	
Total SSC&HSC					
Appeared	1,566,772	1,650,092	1,529,014	1,944,680	5.6
Passed	677,613	801,241	846,739	1,030,690	11.1
Pass Rate (%)	43.2	48.6	55.4	53.0	

* Data for 2003 are not available.
Source: Based on IBCC, data

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305.   If the current growth rate of students who take the HSC exam continues at the same level, and if their pass rate remains at the same level, the pool of students will be sufficient to satisfy the desired expansion of university education (Figure 12). The increase in HE enrollments is likely to have a significant boomerang impact on secondary education: it may push enrollments at this level as a result of perceived rising opportunities. Expectations regarding access to HEIs may incite more students to complete senior secondary school and to sit on the HSC exams. Thus, access policy and regulation procedures currently in place will need to be revisited.

306.   Notwithstanding the above problem, the real –and far more worrisome—issue is that a substantial number of youth will graduate from high school without the prospect of vocational training, nor any real possibility of being absorbed by the labor market. Unless bold actions are taken in the field of technical training and unless job creation is boosted, huge portions of future cohorts of youths will be left aside. Even though this issue is not within HEC purview, it should be a source of concern for policy makers, calling for serious and urgent attention.

Figure 12: HSC Graduates and University Intake, 2005 - 2015 (000)
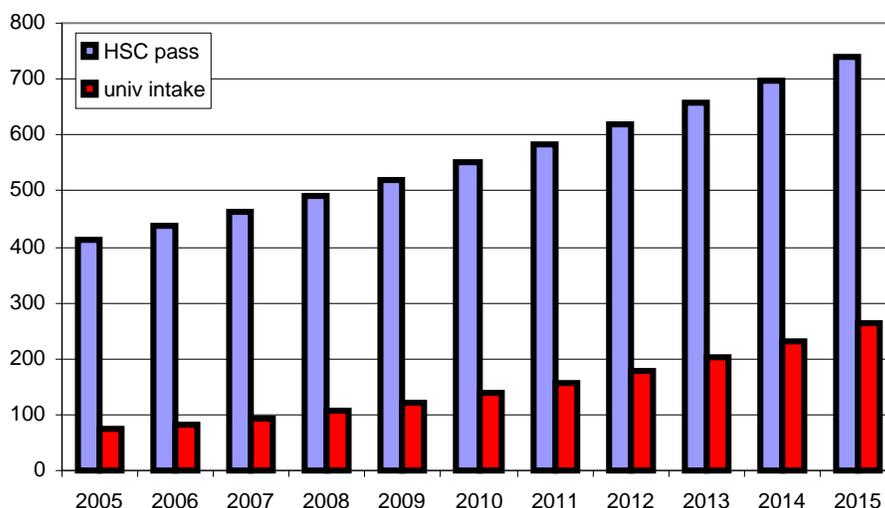
Future Expansion of University Enrollments

307.   *If left to its "natural" course, the distribution of students by fields of study will not be consistent with the priorities of the country. Too few students are enrolled in fields of study most needed in the future. Measures need to be taken to induce more students into engineering, scientific, and technologic fields, and lure them away from general subjects. They must start at the pre-tertiary levels.*

308.   The projections simulate the flow of students throughout the complete education system. They cover the primary, middle, and upper secondary levels, as well as the collegiate level (grades 11 and 12). Primary and secondary enrollments are projected by year of study, gender, and level of education. The current proportion of females in primary and secondary -- approximately 40 percent -- is assumed to remain constant. University enrollments are projected by year of study and gender for five areas of study: general, sciences, agricultural, engineering, and medical. University projections cover bachelor, master's and PhD programs. The distribution of student intake by field of study is assumed to remain constant.

309.   The projections are based on intakes into the system and internal efficiency rates (promotion, repetition, dropout, and transition rates). These rates are assumed constant over the projection period. The increase in primary school enrollment reflects demographic growth and the built-in momentum of the education cohorts already in the system. The increase in the middle and high secondary education levels is driven by the transition rates to these levels of education in addition to the increase built into the existing cohorts of students[31]. Intake into the different disciplines of the university is based on the past five year's rapid growth of admission.

310.   Enrollment projections cover students in universities and students registered in the DAIs and in COEs (i.e. all institutions incorporated in the HEC budget). Programs that are comparable to the bachelor, master's, and PhD levels in distance education also are added to the projections to obtain the aggregated number of university students. Finally, projections include students enrolled in grades 13 and above of colleges, since these are postsecondary grades. Projections cover students in both public and private institutions, and are based on the assumption that the intake into universities would follow the past five year's trend.

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[31] Current transition rates are as follows: 67 percent from primary to middle secondary, 79 percent from middle secondary to high secondary, but only 11 percent from grade 10 to grade 11.

311.   The projections show that total enrollments in universities, DAIs, COEs, and the parallel distance learning system will double between 2005 and 2010 and will more than triple by 2015 to reach 1,879,000 students by 2015. The ratio of university enrollment to the population of the corresponding age group (age 17-23) would increase from 2.5 percent in 2005 to 6.2 percent in 2015. When enrollment in the affiliated colleges is added to those of the universities, the total enrollment of the HESS would increase from 807,000 in 2005 to 2,324,00 in 2015, and its ratio to the age group would increase from 3.8 percent in 2005 to 7.7 percent in 2015 (Table 17).

Table 17: Projection of HESS Enrollment and Population Age Group

	2005	2010	2015
Age 17-23 pop	21.4	25.4	30.2
Univ. enrollment (000)	534	1026	1879
College enrollment (000)	273	348	445
Univ.+college enrollment (000)	807	1374	2324
% univ. enrol/pop	2.5	4.0	6.2
% college enrol/pop	1.3	1.4	1.5
% univ.+college enrol/pop	3.8	5.4	7.7

312.   The projections suggest that the goal set by the MTDF to raise the enrollment *rate* to five percent in five years and 10 percent in 10 years (page 28) is probably too ambitious, but that the doubling the *number* of students over a five-year period may is more likely. Considering the current limited availability of human and physical resources, such a fast growth remains a phenomenal increase to be absorbed.[32]

313.   General universities have by far the largest share of total university enrollments as well as the fastest growth rate in comparison to the other universities. Projections show that if past trends continue, there will be substantial increase in the enrollment of the general universities in both major disciplines of general studies and pure sciences studies (Table 18).

Table 18:   Projection of University Enrollment by Area of Study, 2004 - 2015

	2004	2005	2010	2015	Growth Rate
General	118,652	154,609	347,647	699,254	16.3
Science	79,102	103,073	231,765	466,169	16.3
General and science universities	197,754	257,681	579,412	1165,423	16.3
Agriculture universities	15,743	16,897	22,033	26,806	4.7
Engineering universities	38,422	43,094	64,688	90,735	7.7
Medical universities	8,222	8,907	11,987	15,303	5.6
Total	260,141	326,579	678,120	1,298,267	14.8
DAI & COE	25,407	31,903	66,244	126,825	14.8
Dist Education	159,257	175,183	282,133	454,379	5.0
Total, with Dist. Ed.	444,805	533,665	1,026,498	1,879,471	12.4

314.   Based on the continuation of past growth trends by field of study, the number of students will grow at 16 percent per annum in general universities, eight percent in engineering universities, and five percent in agriculture and medicine. Under these assumptions, general universities enrollments will

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[32] Indeed, China has demonstrated that such challenges can be met: total enrollments in higher education grew from 5 million in 1993 to 23 million in 2005, pushing the GER from 5 to 21 percent. Viewed from the intake angle, annual admissions of new students in Chinese universities jumped from 2.2 million in 2000 to 5.1 million in 2005.

increase their share of total university enrollments from 79 percent in 2005 to 90 percent in 2015. As a result, the gap between general universities and other universities such as agriculture and engineering is expected to increase further (Figure 13). It must be noted, however, that "general universities" are far from homogenous: they include different areas of studies such as arts, social science, business, IT, and languages, and they also have a considerable number of basic sciences programs such as physics, chemistry, biology, etc. Students in these programs make up about 40 percent of the total enrollment in general universities.

Figure 13: Distribution of University Enrollment by Discipline, 2005, 2010, 2015
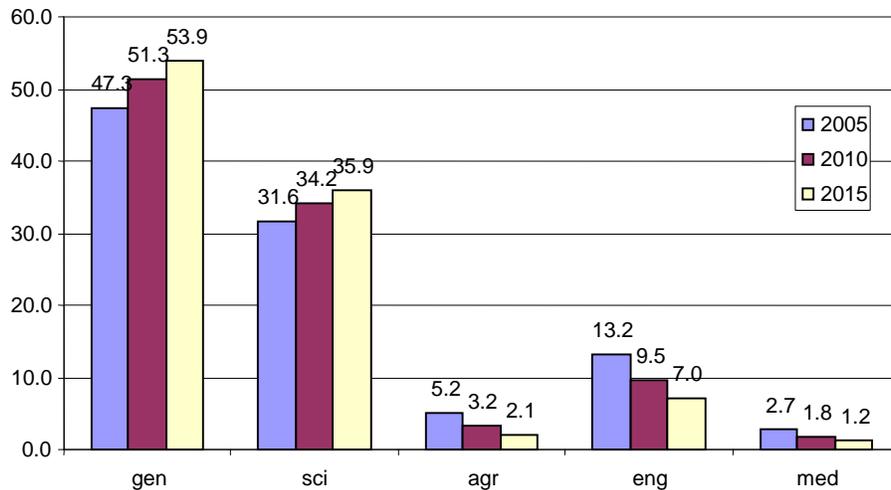
315.   These patterns have a serious incidence in terms of relevance to the evolving labor market needs. According to the HEC vision, the country will move towards a knowledge-based economy with modern agriculture, light manufacturing, and IT industries. Student enrollments by discipline will need to be reoriented to that effect. For the last two years, the HEC has applied a financing formula which starts to address that issue by including built-in incentives for the universities to enroll more students in professional disciplines (Chapter III, Box 1). These incentives should help to bridge the gap between the general areas of study and other applied studies. However, initiatives are also needed at the pre-university level in order to foster the attractiveness of applied studies.

THE COSTS AND FINANCING OF THE MTDF

316.   Cost projections must combine realism and flexibility, and must be easily manipulated so that sensitivity to assumptions can be clearly assessed. Projections also must provide a reference against which alternatives can be estimated. Following these principles, two scenarios were built: the Base Case, which serves as a reference, and the High Case, which depicts a situation combining more realistic assumptions and more pro-active measures (projection results in Annex 11).

The Base Case

317.   *If all the measures carefully crafted by the HEC to rebuild Pakistani universities were to be implemented as scheduled, but if, at the same time, the resources they receive from the budget were not growing faster than the economy, the financial gap associated with the MTDF would creep to unsustainable levels. With a budget increasing at the GDP rate of six percent, universities could hardly accommodate the additional students projected to enroll in the next 10 years; they would not be able even to maintain the already low level of quality which called in the first place for the energetic actions*

envisaged in the MTDF. Hence, there is a clear incompatibility between the level of funding universities have been accustomed to until recently, and the increase in access, let alone the ambitions of the MTDF to overhaul quality in these learning institutions.

318.   The Base Case factors in the comprehensive set of measures contemplated in the MTDF. The Base Case projections assess the cost implications of the different programs in increasing access and enhancing quality during the period 2005-2015. The costs of increasing access and those of enhancing quality are estimated separately, with distinct methodology[33]. On the resource side, the Base Case is conservative to the extent that it extrapolates revenues only on the basis of GDP growth, and does not take into account recent statements regarding the government's commitment to increase dramatically budgetary allocations to the sector and the subsector (Box 4). The Base Case is used to answer the following question: Would the MTDF be affordable with the level of resources currently available to universities?

Box 4: Base Case Scenario - Main Assumptions

- Enrollments: (a) Growth at same rate as last five years
                        (b) Internal distribution by fields of study remains constant
                        (c) Respective shares of public and private remain constant

- Costs: (a) Based on needs linked to implementation of MTDF (as is)
                        (b) Student/Teacher ratios remain constant

- Resources:

    (a) Government
        - Universities allocation increases proportionally to the GDP.
        - GDP grows at 6% per annum
    (b) Universities own resources
        - Increase as a function of enrollments

Costs

319.   **Increasing Access**. Cost projections of increasing access cover <u>recurrent</u> expenditures, which consist of salary expenditures associated with the additional staff required to teach the additional students, and non-salary expenditures. Recurrent cost projections linked to access are based on student/teacher ratios (STR) in the different areas of studies[34]. In the Base Case, these ratios are assumed constant. Salary expenditures are projected on the basis of the average salary in the base year (also assumed to be constant)[35]. Since most of the non-salary expenditure is associated with staff expenditures such as transport, travel, and fixed assets, the non-salary component is projected by using its elasticity to salary expenditures (i.e., increases in non-salary expenditures are proportional to increases in the salary bill).

320.   Assuming stable STRs, the total number of full-time staff needed would increase from 10,500 in 2004 to about 47,000 in 2015 -- i.e., at an average annual increase of about 3,300 staff. This increase is high in comparison to the current expansion of about 2,000 additional staff per year. When part-time staff is added, then total staff needs are projected to increase from 13,500 in 2004 to 63,200 in 2015, and the

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[33] The costs of increasing relevance are a function of the distribution of enrollments by fields of study, via the different unit costs of these fields.

[34] In 2004 the average STR was 19.2. The highest level was found in general universities (23), followed by agriculture universities (16.4), and engineering (12.6), and medical schools (8).

[35] The 18 percent rise decided in June 2006 is factored in the projections

total salary expenditure, based on the average salary level in 2004, is expected to increase from Rs6 billion to Rs30 billion in 2015. When adding the non- salary expenditure, the total recurrent expenditure would rise from Rs11 billion in 2004 to Rs56 billion in 2015.

321.   The next step is to add the cost of the ambitious tenure track plan which provides substantial salary increases for those faculty members who are prepared to undergo periodic reviews of their performance[36]. According to the HEC plan, the proportion of faculty in the tenure track would be increased gradually to 30 percent within the coming 10 years. The average salary of faculty in the tenure track is three times the average salary of regular faculty, and therefore, the cost of the measure is quite high. Total recurrent expenditure (salary and non-salary) including the tenure staff would rise to about Rs68 billion by 2015, of which about Rs12 billion would be allocated to the tenure track system[37].

322.   The costs associated with the expansion of access also include <u>capital</u> costs -- i.e., costs of additional physical infrastructure needed to accommodate the additional 833,000 university students expected to be enrolled in the coming 10 years. Using the infrastructure costs per student as estimated by HEC (Rs360,000), the incremental capital cost would reach approximately Rs300 billion for the 2005-2015 period. Capital costs also include the component of development grants granted by HEC for the expansion of the physical infrastructure (about 2/3 of these grants).

323.   When capital costs are added to the recurrent expenditure, the total cost of increasing access would reach about Rs724 billion for the entire period, and the yearly cost would rise from Rs17 billion in 2005 to about Rs119 billion in 2015.

324.   **Enhancing Quality**. Quality improvement is a major focus for the HEC, and is reflected in a number of initiatives inventoried in the MTDF and reviewed in Chapter III of this Note. The total cost of the quality enhancement over the 2005-2015 period is estimated at over Rs390 billion (Table 19).

Table 19: Projection of Quality Enhancement Programs (2005-2015)

Program	Rs bil	
Quality assurance	3.0	
Faculty development	100.0	Train minimum of 10,000 PhDs in upcoming 10 years;
Faculty and staff training	20.0	continue training univ. faculty/staff in coming 10 years
Equipment	140.0	10years
Access to info/database	0.5	10years
Linkage programs	15.0	All universities
Establishment. of Centers of Excl.	25.0	
Research support prog.	10.0	
Grants for private sector universities	60.0	
Focus areas of support	18.0	
Total	391.5	

325.   These programs are expected to be executed gradually, especially with regards to faculty and staff development and training and according to an implementation plan that ensures the continuation of the teaching process without disruption. Based on this gradual implementation scheme, the ESM assumes that

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[36] Even though the tenure track initiative is clearly a measure to increase quality, for the purpose of projections its costs deal with those associated with access.

37 The growth pattern of recurrent expenditures among the universities reflects the distribution of current enrollment by type of universities.

the programs will be evenly implemented throughout the period, and therefore, their costs are distributed in a linear fashion between 2006 and 2015.

326.   **Total Cost of MTDF Measures**. Under the Base Case scenario, the total budget (recurrent and development) required to implement the measures aimed to improve quality and increase access to university education would reach about Rs1,120 billion over the 2006-2015 period. Gradual implementation of the MTDF programs would result in a steady growth of the universities' annual expenditures which would soar from about Rs30 billion in 2005 to about Rs177 billion in 2015 (Figure 14). It is worth noting that quality improvement measures account for only 35 percent of the total envelope, the rest being attributable to access -- i.e., the mechanical continuation of the current flow of new intakes into the system. In per student terms, the increase would be only about 51 percent, meaning that a good deal of the growing budget would be absorbed by swelling enrollments.

Figure 14: Projection of Costs Related to Increased Access and Enhanced Quality
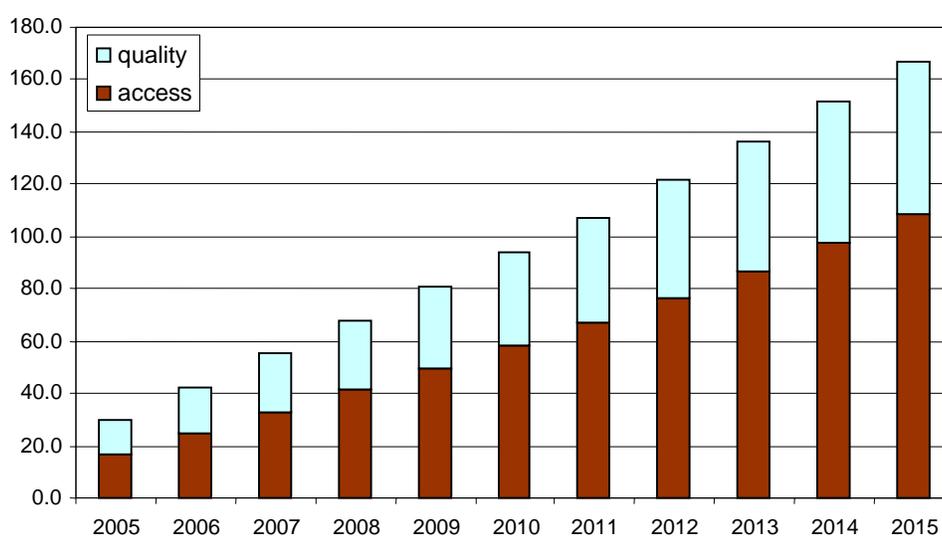
327.   From a macro perspective, the ratio of total universities expenditures to the GDP would increase from 0.5 percent in 2005 to 1.4 percent in 2015. These levels exceed the MTDF target of increasing universities resources to one percent of GDP in the coming 10 years – an already ambitious target. They even exceed current OECD levels,38 and may not be realistically achievable, especially if one considers that the budget is only for the university segment of the HESS.

328.   The picture is even more dramatic from a sectoral point of view, since the ratio of the budget needed to implement the MTDF to the sector budget – assuming the latter would grow proportionally to the GDP – would rise from 26 percent in 2005 to 69 percent in 2015. Such a level has not been recorded in any country[39], and is indeed unrealistic –regardless the resource level.

Revenues and Gap

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[38] The average OECD ratio in 2002 was 1.1

[39] The highest levels reported (for recurrent expenditures) in 1998 were for Malaysia (32.0%), Canada (30.4%), New Zealand (29.1%), and Ireland (26.1%).   In the latter three countries, however, universal primary (and secondary) education is a reality, and in Malaysia, primary gross enrollment rates and completion rates already reach 95 percent.

329.   Resources are made up of two components: the envelope allocated by the state to universities through HEC, and the funds generated by the institutions themselves. The first component is derived from macro considerations, while the second is based on micro observation at the university level.

330.   **Government allocation**. In the Base Case, the budgetary envelope allocated to universities is projected to follow the same path as the GDP. The latter is based on the recent IMF macroeconomic framework projections (IMF, November 2005) which include the future growth of the GDP, public expenditures, and the education sector budget. The ratio of the higher education budget to the GDP is assumed to remain at the same level as in the base year during the projection period (0.37%). As an increase of this ratio was recently decided, the main purpose of the resource level projected in this conservative Base Case is for comparison only.

331.   The recent government data (Economic Survey 2004-05) show that the GDP grew at a very high 8.4 percent in FY2005 (surpassing expectations for the third straight year). The IMF expects that the economy will "cool down" and that the GDP growth rate will decrease to seven percent in 2006 and will stabilize at six percent thereafter.   These are the rates used in the projections. Projections of the universities resource envelope are based on the share of the total universities budget (recurrent and development) in the GDP (0.37%). Under the Base Case, the resources expected to be allocated by the government (through the HEC) to the universities would increase from Rs32 billion in 2006 to Rs54 billion in 2015. Total resources for the whole period (2005-2015) would reach about Rs444 billion.

332.   **Universities own revenues**. Revenues generated by the universities on their own are made up of four main components: tuition fees (41% of all revenues), examination fees levied on affiliated colleges (36%), fees collected from self-financing students, and miscellaneous revenues (23% combined). Under the Base Case, tuition fees are assumed to remain nominally constant and to follow strictly university enrollments.   Examination fees are projected to follow college enrollments, and other revenues are projected to follow their recent trend. Under those assumptions, universities would raise close to Rs130 billion over the whole period. Together, the government allocation and the self-generated revenues would amount to about Rs570 billion.

333.   **An unbridgeable gap**. Comparing the estimated cost of implementing the MTDF programs in their entirety with the total resources expected to be available to universities (whether self-generated or channeled by the government) yields a financing gap of about Rs546 billion over the period. In yearly terms the gap would start at about Rs17 billion in 2007, and be multiplied sevenfold by 2015, reaching Rs105 billion by then. The bulk of the deficit would be borne after 2010. In addition, almost two-thirds of the entire education sector budget – assuming the latter would grow proportionally to the GDP -- would need to be allocated to universities to execute the MTDF. This is indeed a clear impossibility. The lesson of the Base Case is that the level of resources allocated thus far to the education sector, the higher education subsector, and universities in particular, is not consistent with the standards expected of them. The magnitude of the gap shows that in order to make the MTDF financially feasible, measures must be sought on both sides of the equation, namely costs and revenues. This is what the High Case is all about.

The High Case Scenario

334.   To inform policy makers on ways to finance the implementation of the MTDF program, several alternative scenarios were carried out. The purpose is to test the sensitivity of these scenarios, and to suggest options for implementing the ambitious HEC plans in the context of scarce resources and competing needs. The High Case takes into account the governmental commitment to increase spending on education dramatically. It also simulates pro-active measures to increase efficiency in spending and illustrates how several measures taken simultaneously could help to make the MTDF affordable.

335. The High Case scenario focuses first on means to reduce the costs of the MTDF, without cutting the quality measures that it recommends. The first option is to improve internal efficiency of the university system. A second avenue consists of bolstering private provision of university services. Finally, measures aimed at shifting enrollment patterns by areas of studies help to achieve greater relevance, while having a side effect on the costs. All these measures have virtues by and in themselves, and are not solely – in some cases, not even primarily – aimed at curbing costs (Box 5).

336. The scenario also simulates alternative options on the resource side. These options factor in increases of the whole education sector budget and a reasonable HESS budget growth that does not crowd out other education subsectors. The resource simulation also includes an increase in the revenue generated by the universities (fees). The High Case corresponds to the situation in which all the cost-reduction policies are carried out in an environment of resource increase achieved through doubling the share of the sector budget to GDP by 2015 and through nominal increases in student fees.

Box 5: **High Case Scenario - Main Assumptions**

- Enrollments: (a) Share of private enrollments increases from 25% to 30%.
  (b) Increases of intake in agriculture (from 4% to 8%), engineering (from 7% to 15%) and medical (from 5% to 10%), universities and reduction of intake in general fields within general universities (from 15% to 10%) [Relevance measures]

- Costs: Student/faculty ratio increases from 19/1 to 25/1 [Internal efficiency measures]

- Resources:
  (a) Government
  (i) Total education sector budget as a share of GDP increases from 1.8% to 4% between 2006 and 2015 and GDP grows at 6% p.a.
  (ii) Universities allocation as a share of total education sector budget is maintained constant after it reaches 21%,
  (b) Universities own resources
  Per student tuition fees increase by 5% p.a.

Cost Reduction Measures

337. *The costs associated with the MTDF can be trimmed while implementing the HEC strategy and not compromising on quality. Yet none of the alternative cost-reduction policies taken separately would be sufficient to solve the problem without putting at risk the other parts of the education sector. Therefore, it is imperative that these policies be combined. Still, even when implemented together, these policies will not be sufficient to finance the implementation of MTDF, an will not even allow to cater to the projected expansion of enrollments.*

338. **Improving internal efficiency**. The expected rapid enrollment expansion will increase the pressure on universities, as the net growth in faculty is not expected to keep up with this enrollment explosion. In these circumstances, universities may have to increase class sizes (as well as making more use of available technology and hiring more part-time faculty). The margin of maneuver to do so, however, is somewhat limited since the STR is, on average, already relatively high.[40] Therefore, the High Case Scenario simulates a moderate increase of the STR from its current level of 19/1 to 25/1 by 2010 and a leveling off thereafter. This inflated STR would reduce the number of full-time faculty needed for the

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[40] The OECD average STR in 2003 was 14.9/1, with minimum at 9.0/1 (Iceland and Switzerland) and maximum at 29/6 (Greece). In Asia, Malaysia registers 1/18, the Philippines, 22.1/1, and Thailand 35.0/1.

2005-2015 period from 47,000 to 26,000. As a result, the salary bill would be reduced by about 23 percent (compared to the Base Case).

339.   The increase in the STR will have a significant impact on the cost of MTDF programs. Over the 2005-2015 period, the total cost would be reduced by Rs67 billion compared to the Base Case. Increasing STRs is the single most powerful tool to reduce costs. But beyond that -- it is also a way to recognize the reality, namely the difficulty to train and recruit enough faculty staff to keep up with projected growing enrollments. Indeed, this policy must be implemented with discernment, and tailored to the specific fields and levels of study, so that it leads to efficiency gains without compromising quality which must remain a key objective of the Framework. Another area of likely cost reduction is in the very high ratio of non-teaching staff to total staff. A specific study of this issue would allow identifying precisely where real surpluses exist and where savings are possible.

340.   **Adjusting the public/private mix**. A second way to reduce the pressure on public monies is to diversify the providers of higher education services. Students in private tertiary institutions pay up to Rs12,000 a year, suggesting that they are willing to contribute to the cost of their higher education provided they can enroll in institutions that offer good quality education and are more relevant to the labor market needs. Therefore, there is a potential for the private sector to contribute even more to the expansion of university enrollment. This could ease the burden on public universities – and on fiscal resources -- while introducing healthy competition.

341.   The High Case scenario builds on these premises, and simulates an increase of the private sector's share of university enrollments from one-fifth to about one-third between 2005 and 2015. Since 80 percent of the current private universities growth takes place in the general universities, it is assumed that the increase will continue to occur in these universities. Under these assumptions, private sector enrollments would reach 417,000 in 2015. Simultaneously, the growth of public universities enrollments would be slower. For the sake of consistency, this simulation incorporates the new enrollment patterns by field of study. It leads to overall enrollments 1.7% lower (in 2015) than those obtained under the Base Case. The increasing share of private universities enrollment and the associated declining share of public universities enrollment would reduce the total cost of the universities MTDF programs significantly.

342.   **Fine-tuning the stream mix**. At present, general universities have by far the largest share of enrollment (80%), and within them, general areas of studies (including arts, social studies, business, IT, and languages) have the largest share of enrollment in the total university enrollment (60%), as well as the fastest growth rate. The Base Case projections show that if these growth patterns are to continue, enrollment in general studies would quadruple by 2015 and their share to the total university enrollment would reach 54 percent (up from 47%). It is therefore clear that these patterns are not aligned with the new vision of higher education and that they must be changed if universities are to play a more active role in the modernization of the economy, and if they are to adjust to the evolving labor market needs. As documented earlier, the HEC is using a financing formula as an instrument to implement these changes.

343.   To reflect a reinforcement of this policy aimed at improving relevance, the High Case scenario simulates increasing intakes in the scientific and technological fields, both of which are in high demand and more related to the type of skills directly contributing to a knowledge economy, as well as reduced intakes in general fields. The intake rate is projected to rise from its current level of four percent to eight percent in agriculture universities, from seven to 15 percent, in engineering universities, and from five to 10 percent in medical universities. At the same time, the intake rate into general areas of studies (within general universities) is reduced from its current level of 15 percent to 10 percent, and the intake into science studies within the same universities remains unchanged at 15 percent.

344.   Under these assumptions, and compared to the Base Case, enrollments would decline by more than four percent in general studies between 2005 and 2015, but would increase by more than six percent in agriculture, engineering, and medical studies combined. As a result, though, the total university enrollment would be only slightly affected, and would decrease by less than two percent (22,000 students). In addition to boosting relevance, this measure would also contribute to curbing the cost of the MTDF through lesser overall enrollments and the internal redistribution of enrollments by streams. The reduction in the total MTDF cost would remain marginal (less than 1%).

345.   **Combined impact of cost-reduction measures**. Altogether, combining internal efficiency interventions, an increased share of private sector enrollments, and more balanced enrollments among fields of study, would allow a 14 percent reduction of the cost, and would reduce the total cost of the MTDF over the entire period from approximately Rs1,120 to about Rs960 billion (Table 20).

346.   Despite such a significant drop in expenditures, if resources were maintained at their Base Case level, universities will still be short by about Rs390 billion in cumulative terms over the projection period. Hence, as necessary and healthy as they are, cost-reduction measures will not be sufficient to make the MTDF viable. Neither will they suffice to finance the development costs of the expected increase in enrollments. Finally, even with these measures fully implemented, expenditures on universities would still crowd out the other education subsectors which are also in dire need of resources.

**Table 20: Simulation of Cost Reduction Measures under the High Case Scenario
(2005-2015, Rs billion)**

	Base Case	Int. Eff.	Int. Eff + Priv. Prov.	Int. Eff. + Priv. Prov + Balance Enr. Mix
Total MTDF Cost	1116	1049	972	964
Cumulative Reduction due to the intervention		67	144	152
Cumulated % decrease		6	13	14

Revenue Enhancement Measures and Financial Gap

347.   *The resource envelope allocated to implement the MTDF must be affordable within the budgetary parameters as defined by law for the education sector as a whole. It also must be compatible with the dire needs of pre-university education so that it does not crowd out resources required at that level. In reality, even with cost-reduction measures enforced, an overall increase in the budget for the entire education sector is unavoidable if the MTDF is to be executed properly and not at the expense of the lower levels of education.. Even then, universities themselves will need to mobilize additional resources from other sources and, in particular, from users.*

348.   Resource mobilization has two channels: the government (HEC) allocation to universities *and* the revenues generated by the institutions themselves. In addition, the preceding estimates demonstrate that an increase in the budgetary envelope for the education sector as a whole is unavoidable. Therefore, the High Case Scenario addresses these three channels and simulates their combined impact on the financing of the MTDF.

349.   **Government allocation**. In the High Case Scenario, the budget allocated to universities reflects the priority recently given to the education sector as a whole and, within the latter, to universities. It also echoes the government's strategy to achieve growth and alleviate poverty. Hence, the High Case Scenario reflects the Fiscal Responsibility Law that targets doubling the budget of the social sectors during the 10-

year period 2002/03-2012/2013, and it follows the projections used to update the PRSC. To that effect, it assumes that the ratio of the budget for the whole education sector to the GDP will increase from its current 1.8 percent level to 4.0 percent by 2015. This simulation illustrates the financial implications of the government's announcements of a rapid increase in the education sector budget, and the fact that these announcements have been so far translated into significantly larger budgetary allocations. It remains ambitious, given both the narrow fiscal space of the country and the limited capacity of the education sector to absorb such a rapid increase. Were this goal to be achieved, it would put Pakistan almost in par with the current OECD average of 4.5 percent in less than four year from now.

350.   The High Case Scenario also simulates measures to boost the budget allocated to universities. In doing that, and to be fully realistic, projections take into account the relative weight of universities in the total education sector budget so that the rest of education is not starved of the resources it needs to address the deeply rooted problems it faces. This concern is reflected in the projections by putting a cap on the share of the education sector budget allocated to universities. Once this share hits the 21 percent mark, it is maintained at that level, and the envelope for universities increases at the same rate as that of the entire education sector. Under this assumption, the ratio of universities budget to the GDP would reach 1.30 percent by 2015, thus surpassing the one percent target set in the MTDF itself.

351.   Under this twofold assumption regarding the education sector budget increase and the universities' governmental allocation increase, the cumulated government contribution to the universities during the 2006-2015 period would reach about Rs680 billion. This represents a gain of more than 50 percent if compared to the resources under the static Base Case. Still, the government allocation would not be sufficient to cover fully the cost of the MTDF (even after reduction measures).

352.   **Universities' own revenues**. Turning to the revenues generated by the universities to help to fill the financing gap, one must consider separately each component of these revenues and ponder where the opportunities for increasing this contribution are. On the one hand, it is unlikely that universities will manage to raise a higher proportion of their own incomes from selling services or other market transactions. On the other hand, however, there is evidence of untapped households' ability to pay for quality higher education. On this basis, the most probable measure would be to increase the share of the cost borne by students. Therefore, the High Case assumes that tuition fees and affiliation fees would increase by five percent per annum in nominal terms. That assumption would put Pakistan closer to the ever-growing group of countries (from China to USA) witnessing soaring tuition fees. The other fees are forecast to continue growing along the same path as the last five years (10% p.a.), as in the Base Case.

353.   If the fee increase scenario is to be followed, student fees, which currently account already for 41 percent of the universities own resources, would then contribute up to 60 percent of the latter by 2015, and 10 percent of their unit cost. These estimates suggest that users' fees are potentially a critical element in the global balance sheet of universities. Equally important to note, however, is the fact that although still modest in nominal terms (less than the equivalent of $250 p.a. by 2015) such fees, especially when added to other indirect costs, may constitute a barrier for students from lower socio-economic backgrounds. Therefore, any plan to increase fees should be accompanied by a parallel inclusive scheme to support students through a mechanism combining needs-based scholarships and loans.

354.   **Combined impact of revenue enhancement measures**. The increased cost-sharing would bring an additional cumulated Rs29 billion to the universities' self generated revenues over the projection period, and these revenues would cumulatively represent about Rs155 billion. All sources combined, the revenues available to universities under the High Case Scenario would reach about Rs835 billion.

355.   *When cost-reduction and resource-enhancement measures are taken simultaneously, the simulations suggest that, while remaining at high levels, the gap for implementing the MTDF would be*

bridgeable, and, provided the fiscal space does not shrink and/or there is no radical change in the sectoral priorities, it would remain within manageable limits.

356.   The simultaneous impact of the cost-reduction measures and the revenue-enhancement measures on the universities deficit is very substantial. In cumulative terms, the deficit would shrink to about Rs125 billion over the projection period --four times less than in the conservative Base Case scenario (Figure 15 and Table 21). Under the High Case scenario, the shortfall would peak around 2013 at about Rs18 billion, and decrease thereafter. To arrive at this more manageable deficit level --and to stay there for many years, however, a well-coordinated strategy combining cost and resource interventions is needed.

357.   More radical options to bridge the gap could be considered, both on the cost and revenue side. Measures can be devised to better mobilize users' contributions while ensuring equity through needs-based mechanisms. A more intense involvement of the private sector could contribute to lessening the burden on taxpayers. Similarly, schemes to match universities own resources with fiscal resources could be explored. Finally, given the solidity of the programs included in the MTDF and the capacity of the HEC to implement them, it is likely that foreign support could be secured. In any case, government support for the subsector will need to remain strong, sustained, and predictable.

Figure 15: Projection of University Costs and Resources
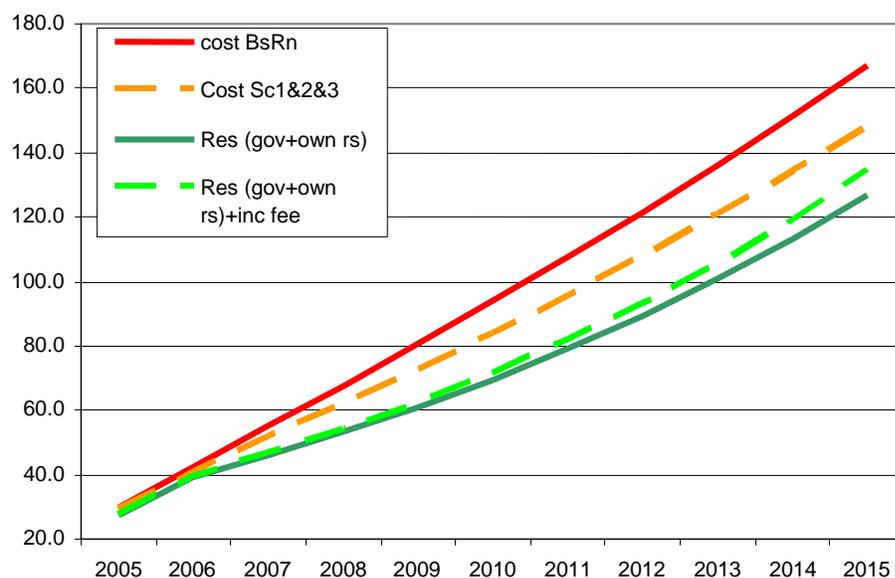
Table 21: Projection of Universities Costs and Resources: Summary

(2005 – 2015, Rs billion)

		Base Case		High Case	
Cost		1116		964	
Revenues	*Of which:*	570		835	
	Government Sources		443		680
	Universities internally generated revenues		127		155
Financial Gap		546		129	

SITUATION OF THE HIGHER EDUCATION SUBSECTOR

358.   Even though the Commission – and hence the MTDF – is almost exclusively focusing on universities, the fact that universities are part of a larger subsector – including the 'orphan' affiliated colleges – cannot be ignored. Thus, the fate of the entire HESS must be examined with the same lens as those used for universities alone, and the costs and revenues associated with the colleges must be added to those projected for universities alone.

359.   Information on the affiliated colleges is not available at the national level and what is accessible on a provincial level is often partial, inconsistent, and scattered. The colleges' budget comes from the provincial education departments and it consists almost entirely of salaries. The colleges pay affiliated fees to the universities and the revenues they generate from student fees, including examination fees, are transferred to the provincial departments.

360.   Using aggregated information, the cost of the affiliated colleges' needs and their budgets are estimated and added to those of the universities to assess the financing gap between the costs and budgets of the HESS. The colleges' needs for investment in access and quality are assumed to grow at half the universities growth rate. Under the Base Case, their resource envelope is projected on the assumption that the proportion of their budget to GDP remains constant. Under the High Case, the cap on the share of the education sector budget allocated to the HESS is put at 24 percent, so that HESS would not crowd out resources for pre-university education.

361.   Under the Base Case, when colleges are factored into the projections, the total cost associated with the implementation of the MTDF programs to increase access and enhance quality of the HESS for the period 2005-2015 would reach about Rs1,280 billion. The gradual implementation of these programs would result in a steady growth of the higher education needs, from Rs56 billion in 2006 to Rs198 billion in 2015. The ratio of that budget to the GDP would then increase from 0.6 percent in 2005 to 1.5 percent in 2015. If, on the other hand, all the cost-cutting measures of the High Case scenario (improved internal efficiency, increased share of private sector enrollment, and improved relevance) are factored in, total HESS expenditures would hover at about Rs1,120 billion in cumulative terms (Table 22). In any case, colleges would not absorb more than 14 percent of the subsector expenditures.

362.   On the revenue side, the budget for the subsector under the conservative Base Case scenario would barely reach Rs700 billion; however, it would draw nearly Rs970 billion if all the revenue enhancement measures considered under the High Case (including the increased cross- sharing in universities) were implemented.

363.   Given their relatively low share in the HESS, adding colleges do not substantially alter the financial picture depicted for universities. In particular, the final balance does not budge by more than about Rs30 billion in cumulative terms. Under the conservative assumptions of the Base Case scenario, the HESS would accrue a huge deficit of about Rs580 billion. If, however, all cost-reduction measures and all revenue-enhancing measures were implemented simultaneously as assumed under the High Case, then the subsector would be left with a notional cumulative gap of about Rs150 billion. This is the same order of magnitude as the one found in the case of universities alone, and the conclusion drawn on the latter also apply to the HESS: spread over a 10-year period, the gap is substantial but not out of reach.

364.   In summary, these results support the idea that all the cost-reduction measures and all the revenue-enhancement measures devised under the High Case scenario are needed to reach a situation where the MTDF could become sustainable from a fiscal point of view. Even then, its financial viability is not guaranteed, and more needs to be done to lessen the pressure further. To achieve the same results without compromising quality, more efforts will be needed to strengthen the efficiency of services. In turn, this may involve a more rational use of facilities and equipments, an increased teaching load, and more intense recourse to IT to deliver standardized courses. On the resource side, shoveling more public monies for the subsector and the sector than the government is targeting (1% and 4% of the GDP, respectively) does not offer itself as a credible solution, as these targets already are very ambitious and demands from other sectors are also high. Therefore, additional resources need to be found by diversifying the sources of revenues, including selective and equitable cost sharing, deeper involvement of the private sector, more creative marketing of universities services, and external support.

Table 22: Projection of The Higher Education Sector Costs and Resources: Summary

(2005 – 2015, Rs billion)

		Base Case		High Case	
Cost		1,279		1,118	
Revenues	of which:	701		967	
	Government Sources		575		812
	Universities internally generated revenues		127		155
Financial Gap		578		151	

365.   The financial dimension is not the only dimension to consider, however. The absorptive capacity of universities (and other tertiary education institutions) is also a critical element which can easily impinge on all reformist endeavors. This is where the time factor comes into play. It may be appropriate to envision carefully the possibility of spreading the needed and justified reforms beyond the medium term initially considered. By somehow slowing down the pace of reforms, and prioritizing them more radically, the HEC also might find itself in a better position to rally more interest and resources into universities and into the higher education subsector at large.

CHAPTER VII: COMMUNICATION STRATEGY

366.   ***The reforms launched by the HEC, and those which are in the MTDF pipeline are meant to radically change the academic world in Pakistan. They are met with enthusiasm by some and by resistance by others. They are not irreversible yet. To succeed, the HEC must establish its legitimacy, and improve its public image. Above all, the Commission must invest in open consultation and communication with the entire community it aims to serve.***

367.   The MTDF offers a well articulated, home-grown vision of higher education in Pakistan, and gives the first real opportunity to pull the sub-sector out of the state of deprivation into which it had fallen. The Framework is firmly in sync with the reality on the ground. Implementing the MTDF's set of reforms is an opportunity that the country cannot afford to miss if it wants to join the group of emerging knowledge economies.   The track record of HEC speaks for itself, and, provided the measures recommended above are enforced, the odds for a successful implementation are reasonably good.

368.   Yet, although the reforms already engaged, as well as those envisaged are moving in the right direction, and even though they are expected to yield long-term benefits for Pakistani society as a whole, more is needed for them to succeed. If they are not explained, let alone accepted, their short-term costs may derail the whole process. Introducing more responsibility and accountability is often met with skepticism and resistance, and therefore requires careful marketing. The strong political support that HEC can count on is definitely an asset, and one which had been lacking for too long. Nevertheless, it does not waive the need to reach out to those who are actors, users, or simply observers of the university scene.

369.   Reforming by stealth and force rarely pays off. The academic community is particularly sensitive to its status and its freedom, and cannot be manipulated, even if it is for its own good. The initiatives taken by HEC during the last three years, especially those affecting faculty staff are not unanimously welcome. Provincial authorities are voicing concerns for being left out of the loop. Private institution representatives express the view that the playing field is not entirely even.   Observers wonder if the government should not put all its attention to the issue of secondary school dropouts, and some even claim that reforming universities without first fixing secondary education is doomed to failure. Many believe that basic education should be taken care of as an absolute priority. Others question the priority given to universities and lament about the fate of colleges.

370.   Outside of the education circles, noise is also perceptible. Critiques are numerous and coming form various quarters. They point to the reforms themselves, but often focus even more on the methods used to announce them, implement them or even finance them. The successive budgetary increases enjoyed by the HEC –and universities— over the last few years have sparked nervousness from other sectors which are also competing for scarce resources. The negotiation processes by which these increases have been determined have also triggered uneasiness.

371.   The HEC needs to engage the academic community more fully, more particularly the teaching staff. As illustrated by the tenure track reform or by the ranking exercise, resistance coming from their ranks is often due to fear/and   lack of (correct) information. Clear explanation of what the reform is about, what its benefits are for the country, for universities, for the staff itself –let alone for students-- is needed. Incentives must be put clearly forward, and built in the reforms. Changing mind sets, especially when it comes to performance requires patience. Demonstrating positive impact is also important.

372.   The HEC must also reach out to the provincial-level stakeholders, including those who staff and attend the HEIs. This is a condition for the reforms to be viewed as a common good rather than be seen as an imposed burden creating suspicion. The perception that the HEC's approach is of a "top-down" nature

could hamper the chances of moving forward, and could create obstacles in implementing the MTDF. Disseminating and discussing widely the Framework will help to reduce negative perceptions and increase the chances that the positive reforms will be accepted.

373.   Substantial financial resources are a necessary condition for the Commission to carry out the MTDF programs. But they are not sufficient. The HEC also needs to constitute a credibility capital. The best way to accomplish that is to invest in open consultation and communication and to reach out to those who will be affected by the systemic reforms to be launched and implemented. This is a small price to pay when the stakes are so high.

374.   As evidenced by the number of articles published in the local newspapers on the Commission's activities, the HEC has become a highly visible organization. Even though it is a sign of strength and it reflects the large echo of its activities, it also means that the Commission will be increasingly exposed to public scrutiny—and critiques. Such visibility also means that accountability and transparency will become even more critical in the future. To garner a consensus around its vision, the HEC will need to convene stakeholders – from students to staff, including HEI's administrators -- and launch a series of discussions around both the vision and the program. HEC must listen to all these voices and must explain the benefits expected from the MTDF in the long run. This goes beyond a public relation campaign; it is absolutely essential that a meaningful dialogue be established.

375.   Provincial authorities have an important stake in the resuscitation of universities, even if their financial contribution to that process is limited. They will become increasingly involved in the longer run, and therefore consultation with them on a regular basis is essential. Another reason for strengthening collaboration with provincial authorities is the absolute necessity to widen the perimeter of reforms to the colleges, and to other post-secondary education institutions which are under the tutelary umbrella of the provincial authorities. Finally, the private sector also should be consulted, and should be encouraged to create representative bodies in order to institutionalize the relationships with the HEC and improve constructive dialogue. Regular meetings with all these stakeholders should be organized. The transaction costs of this consultation process may be significant, but the costs of not doing it may be substantially greater.

376.   Transparency of the internal operation of the HEC is also a prerequisite for the Commission to be able to carry out its ambitious mandate. The website operated by the agency is the right step in that direction. In addition, it is important that the HEC be seen as a durable institution, with a clear *modus operandi* and decision making processes, and fair and transparent staffing rules.

377.   Because the MTDF will not be a journey free of charge, and because the universities have a role to play in building the "Pakistan Incorporated" that is envisioned for the future of the country, the HEC -- which is in charge of these institutions-- -- has a huge responsibility in implementing the Framework. Even though the Commission is obviously the engine behind the current quantum changes that are reshaping the academic world of Pakistan, and will remain the main force to put into practice the MTDF program, its role will have to gradually shift to that of a facilitator. It this transition is successful, it will be a success for the Commission as well.

378.   In tandem with this dialogue, a clear roadmap spelling out in detail the steps to be taken by HEC in the implementation of the MTDF should be developed –and widely disseminated: that would allow all the players in the universities, DAIs and COEs to organize themselves in preparation of the changes they will face. Such a roadmap would need to be enshrined in a realistic timeframe, with precise and verifiable milestones. Finally, the rules presiding over decisions regarding budgetary allocations will need to be clearly defined, and institutionalized. From the HEC to HEIs, accountability will be the leitmotif.

Annexes

Annex 1: Education System in Pakistan

Grade (Class)	Age	Level	Credential	Institution
I	5/6	PRIMARY		School
II	6/7			
III	7/8			
IV	8/9			
V	9/10			
VI	10/11	MIDDLE		
VII	11/12			
VIII	12/13			
IX	13/14	SECONDARY	Secondary School Certificate Matriculation Also called Matric	College
X	14/15			
XI	15/16	HIGHER SECONDARY /TECHNICAL	Intermediate Certificate / Higher Secondary School Certificate Also called FSc/FA	
XII	16/17			
XIII	17/18	HIGHER EDUCATION	First Stage Bachelor's Degree (BA/BSc/Bed.)	University
XIV	18/19		Second Stage Master's Degree (MA/MSc/LLB)	
onwards	onwards		Third Stage (MPhil/PhD) (DLitt/ DSc/LLD)	

③   Central Bureau of Education and Provincial Bureau of Statistics (2004), *Pakistan Statistical Year Book 2004 (*A Global Guide to Management Education 2006, By Jamshed Hasan Khan, PhD)

③   Ministry of Education, Islamabad, updated by the International Association of Universities (IAU) from IBE website - World Higher Education Database (WHED)

Annex 2: MTDF - Summary of Aims, Objectives and Programmes

Core Aims	Aims	Objectives	Major Programmes	Indicators
1 Faculty Development	Improve the quality of teaching and research support through targeted programmes to improve the pedagogical skills and qualifications of faculty members	1. Increase the % of faculty members holding terminal degree 2. Provide opportunities for the enhancement of qualifications of existing faculty members to PhD or equivalent	1a. Scholarship programmes for existing faculty members 1b. Enhanced facilities to existing Ph.D faculty 2. Faculty training programmes 3. Hiring of faculty from abroad 4. Re-hiring retired faculty 5. Rewards for excellent teaching 6.Training faculty in basic competencies (9 month training courses at National Academy for Higher Education) 7. Institutionalization of the tenure track system 8. Twinning programs	(a) % of faculty members holding a Ph.D (b) % of faculty members who have undergone teacher training courses (c) # of postgraduate courses per dept (d) # of Ph.D students per faculty members (e) Funds obtained from competitive research grants (f) # of international journal publications (g) # of faculty presenting at international conferences
2. Improving Access	Maximize opportunities for acquisition of quality higher education for the 17 – 23 year old age group	1. Significantly increase enrollment (…) at universities 2. Provide opportunities to talented students regardless of need or socio-economic background 3. Support delivery of quality distance education 4. Introduce new areas of teaching and research 5. Ensure institutions are equipped with necessary infrastructure 6. Provide on-campus residential opportunities 7. Facilitate provision by the private sector	1.Incentivize and encourage private sector both inside and outside the country to open quality institutions 2. Increase access to 5% over the next 5 years and 10% over the next 10 years 3.Develop open and virtual universities to widen the scope and delivery of higher education 4. Initiate programmes to address issue of financial barriers to students from low-income families 5. Attract reputed foreign universities to open campuses and to develop external degree programmes 6. Initiate University Mega Projects 7. Devise special incentive packages for the private sector in Colleges and Universities	(a) # of students at different levels and disciplines (b) % of students on scholarships (c) # of students enrolled in distance education programmes (d) # of new seats available (e)% of students living on-campus (f) quantum of funds invested by private sector
3. Promoting Excellence in Learning and Research	Ensure that all HE students benefit from a high quality learning experience	1. Develop a dynamic and responsive research sector 2. Develop a system for assessing research 3. Implement new QA framework 4. Enhance the quality of learning and teaching 5. Reward excellence and promote professional development of staff 6.Support continuing development of physical infrastructure 7. Support supply of HE student places matching changing needs 8. Put in place funding methods in support of objectives 9. Implement funding policy that: (a) encourages world –class research (b) reflects economic and social benefits of research	1. Implement research grant program 2. Strengthen laboratory facilities 3. Implement system of university overhead for research funds 4. Complement faculty development programmes by improved modes of delivery 5. Make available digital library facilities 6. Support library information management support programme (digitalization) 7. Support sabbatical leave fellowship programmes 8. Support schemes to strengthen S&T labs and libraries 9. Establish centralized resource laboratories 10. Establish central research laboratories at premier research universities 11. Institute annual awards for the best research publications 12. Strengthen IT infrastructure both at intra and inter-university levels	(a) # of people involved in R&D in Science and Engineering (b) annual rate of production of Ph.Ds (c) % of universities/DAEs conducting Ph. D programmes (d) quantity of international research publications of faculty members (e) # of external research grants won by institutions from non-government sources (f) % of faculty undergoing teacher training courses (g) # of patents awarded (h) annual income from commercialization of research (i) International Internet Bandwith available per university (j) Computer/ Student ratio (k) Computer/ Faculty ratio (l) # of international journals subscribed to per institution (m) # of international/local conferences organized per institution (n) # of local journals published to international standards

		(c) is responsive to changes (d) enhances skill levels and working conditions for researchers 10. Generate external research funding 11. Enhance post-graduate student enrollment 12. Commercialize and exploit intellectual property 13.Focus area development through: (a) technology programmes, (b) academic and research programmes with direct relevance to the economy, (c) support to basic science, (d) support to cutting edge technologies 14. Assist social sciences (…) and business studies	13. Make mandatory 2 semesters in non core course for post-graduate students 14. Provide seed money for short visits to foreign institutions and facilitate visits from such institutions 15. Provide opportunities for faculty members to pursue Ph.D education 16. Implement transition towards 4-year undergraduate programs	
4. Ensuring Relevance	Promote interaction between the industrial and higher education sectors, to ensure alignment of the generation of human capital with economic activity and national development objectives	1. Encourage university-industry collaboration 2. Establish Industrial internship programmes 3. Set up technology parks 4. Involve industry experts in university bodies	1. Establish a technology triangle of universities, industries and R&D organizations 2. Launch a university-industry technology support program 3. Vocationalise higher education through internships in industry, engagement of business managers in HE decision-making 4. Promote dissemination and application of research findings 5. Make mandatory the creation of "Career Centers" in universities 6. Support university – industry collaborative programs involving matching contribution from industry 7. Encourage set-up of an "Office of Research" in each university 8. Establish "R&D Centers" in frontier technology areas in collaboration with industry 9. Identify centers of excellence where to establish and support "National Centers" 10. Implement the National Technology Incubator Project	(a) # of joint university-industry projects (b) # of Technology Incubators established (c) # of patents issued (d) total yearly income of university from commercialization of research (e) # of industry-sponsored research projects (f) % of university students undergoing internship with industry
5. Developing Leadership, Governance and Management	Provide support through a broad-based partnership to enhance further the sector's leadership, governance and management	1. Develop a core of university administrators 2. Train young faculty in educational administration and management skills 3. Promote continued education for university faculty and administrators 4. Arrange refresher courses on governance & management 5. Inculcate work and professional ethics of HEI of developed countries in universities	1. Train young staff on teaching, research and administrative skills 2. Design management courses by professional organizations 3. Development of management and support staff	(a) # of university administration undergoing training courses (b) # of universities adopting the Tenure track system of appointments (c) # of institutions using the Financial Management System (d) # of universities having ISO certification (e) % of projects rated as "Good" by HEC

		6. Upgrade capabilities of universities to formulate and implement projects aligned with their vision 7. Develop performance-based award and promotion system 8. Develop a new accountability relationship with the sector 9. Promote a more sustainable approach to rewarding and developing staff in HE 10. Establish Research Management Cells at universities 11. Help HEIs develop a more demonstrably fair and supportive environment for their staff		
6. Enhancing Quality: Quality Assessment and Accreditation	Establish and implement stringent quality criteria developed against international standards to access the performance on both the programme and institutional level	1. Enhance the capacity of the HEC to carry out activities outlined in its charter 2. Ensure that education imparted at domestic institutions meet certain basic quality criteria, developed against international standards 3. Renew and revise curricula against advances in subjects 4. Introduce innovative approaches, such as international collaboration and twinning arrangements 5. Establish mechanisms for evaluating the quality of higher education institutions 6. Introduce quality assurance methods at both institutional and systemic levels 7. Inform the public on the quality and validity of institutions and academic programmes based on uniform evaluation criteria 8. Build capacity at each university for continuing quality assurance	1. Collect extensive statistics on all aspects of institutions, use it the information in formulating activities under process with HEC, as well as for the development of institutional ranking criteria, and in implementation of all these programmes 2. Establishment criteria to ensure quality at the departmental level in universities as well as the university level itself 3. Continuously revise curricula in collaboration with universities and representatives from industry, to standardize curricula, bring it in line with National requirements, adjust needs of Industry, and ensure quality and incorporate global trends emerging as a result of research carried out in the field. 4. Take measures against institutions that overstep the legal bounds defined by the Charter under which they are initially established. Ensure that all universities and degree granting institutions satisfy the criteria for the Establishment of a University/ DAI laid by the Federal Cabinet in Feb. 2002 (with a deadline of 5 years to satisfy the minimum criteria) 6. Universities to undergo ISO 9000 Certification Program, for review and assessment of quality standards. 7. Move towards Four Year B.A. Degree Program will allow the delivery of a broad-based education 8. Develop curriculum to align delivery of education with the requirements of employers and rapid progress in academic disciplines. 9. Maintain comprehensive website to inform the public on approved and unrecognized institutions of higher education operating in Pakistan, including through. nationwide press announcements. 10. Establishing an Accreditation Council responsible for the accreditation of degree programs in a broad range of disciplines. Continue to work with existing	(a) # of Universities with quality assessment cells (b) # of universities having ISO 9000 or similar certification (c) Mechanism for rating of departments (d) Mechanism for rating of universities (e) # of disciplines for which Accreditation Councils have been established (f) # of departments accredited in Universities (g) # of cCourses whose curricula is revised during the past 3 years

			professional bodies to support existing accreditation activities 11. Implement a mechanism for the ranking of local universities. This ranking will measure all universities public and private, against certain basic criteria, and will allow the public to make informed decisions for enrollment into the best institutions	
7. Physical and Technological Infrastructure Development	Upgrade and equip universities with the required physical and technological infrastructure to support the conduct of high-quality education and research	Estate Strategy 1. Upgrade the physical infrastructure of existing campuses 2. Develop Campus infrastructure 3. Set up new campuses in relevant locations 4. Set up new universities in the private and public sectors Information Strategy 1. Develop IT infrastructure inside HEIs, linkages of HEIs to each other and to the international community 2. Develop research related services 3. Acquire teaching related services 4. Develop library infrastructure	1. Establish central research laboratories at the premier research universities in Pakistan. These facilities would be centralized and have essential equipment required by researchers in a variety of disciplines 2. Ensure that the recurring and development needs of the various public sector universities are provided for (allocation of development expenditure) 3. Universities to submit development projects that are relevant to their institutional needs (to be reviewed by the appropriate authority - DDWP, CDWP or ECNEC) 4. Universities submit 'University Mega-Projects', which contain all of the development activities the envisaged to complete over a period of five to seven years (review at the ECNEC level) 5. Fully deploy the Pakistan Education and Research Network (PERN) to connect all public and private sector universities to each other and build an "internet compatible" truly high-speed network 6. Complement the PERN by several digital television channels dedicated for education in the new Pakistan satellite, thus providing a world-class distance-learning platform 7. Provides public-sector universities with funds to establish a computerized infrastructure (Local and Wide Area Networking systems (LAN/WAN) to provide a modern and effective working environment 8. Maintain the Digital Library Programme to provide access to high-quality peer-reviewed international scientific information via online delivery	(a) # of new students enrolled in Universities and DAIs (b) Faculty / Computer ratio (c) Student / Computer Ratio (d) Total Internet Bandwidth available per Institution (e) Number of Library Journals available online per Institution (f) Degree of computer networking inside Institutions (g) Degree of deployment of Student (h) Information Systems in Institutions

Source: Adapted from HEC : Medium-Term Development Framework 2005 - 10

Annex 3: Number of Private HEIs, Enrollments and Market Share, Pakistan

	Private Universities and DAIs		Private Enrollments	
	Number	*Percent of Total*	*Number*	*Percent of Total**
1990/91	2	8.0	N/A	N/A
19919/2	2	8.0	N/A	N/A
1992/93	3	11.1	N/A	N/A
1993/94	3	10.7	N/A	N/A
1994/95	6	17.6	N/A	N/A
1995/96	10	26.3	N/A	N/A
1996/97	11	26.8	N/A	N/A
1997/98	15	33.3	N/A	N/A
1998/99	15	32.6	N/A	N/A
1999/00	19	35.2	N/A	N/A
2000/01	22	37.3	N/A	N/A
2001/02	33	44.6	43,873	23.5
2002/03	44	45.8	55,261	24.8
2003/04	51	48.1	61,108	23.1
2004/05	53	49.1	N/A	N/A
2005/06	54	48.6	N/A	N/A

Note: Public figures do not include enrollments in distance education.
Source: Statistics on Higher Education in Pakistan, 2005.

Annex 4: Tuition Fees at Selected Private HEIs, Pakistan, 2005/06

Institution	Academic Program	Fees in 2005/06 (Rs)	Fee Structure
Iqra University, Islamabad Campus			Annual
National University of Computer and Emerging Sciences, Islamabad	BMS PhD	112,000 96,000	Annual
Lahore University of Management Sciences, Lahore	MBA BA/LLB/MS PhD (Math) BSc (Hons) MSc (Econ)	585,000 253,000 230,000 253,000 428,000	Full course fee (2006/07)
University of Lahore, Lahore	BBA MBA BSCS D. Pharm BS (Hons) PhD	272,100 231,300 321,400 369,600 186,000 102,500	Full course fee
CECOS University, Peshawar	BCS (Hons) MCS/MIT MBA MS MSCS BSc (Eng)	193,000 90,000 90,000 60,000 110,000 368,000	Full course fee
Beaconhouse Business School	BBA (Curtin University)	Rs212,000 + $AUS4,440	Full course fee
City University, Peshawar	BEd/MEd	25,000	Annual
Preston University - Kohat	BBA MBA MSc MSIT PhD MPhil	195,500 164,000 88,000 164,000 170,000 108,000	Full course fee
Thames Business School, Islamabad	MBA (University of Southern Queensland)	$US6,500	2 year program
Gandhara University, Peshawar	MBBS BDS	307,600 261,700	Annual
Institute of Business & Technology, Karachi	BA MA	78,000 82,000	Annual

Source: Compiled by author, October-December 2005.

93

Annex 5: Summary of a Regulatory Framework for Private HEIs, Pakistan

Aspect of Regulation	Characteristic of Regulation
Jurisdiction	Private HEIs are established under either a Federal or Provincial charter.
	All HEIs come under the regulatory purview of the HEC.
Organizational Form	Private HEIs can be either for-profit or not-for-profit. Both can be recognized by the HEC. Not-for-profit HEIs enjoy certain benefits (eg. tax).
Entry/Exit	Applications for a charter to operate are normally directed to the government where the HEI is located – the provincial education department in the case of a provincially-based HEI or the HEC in the case of an HEI located in the Federal territory.
	The criteria and requirements for establishment differ across jurisdictions, but are broadly based on guidelines set out in the HEC.
	Private HEIs cannot affiliate colleges for the first ten years of their existence.
	The HEC cannot close down HEIs, but can withhold/remove an HEI's recognition.
Registration Process	The registration process for private HEIs involves a number of steps, including:
	• registration under the Companies Ordinance/Societies Registration Act/Trust Act as a Foundation/Society or Trust;
	• submitting a comprehensive feasibility report to the HEC;
	• preliminary site visit/inspection of the infrastructure and available facilities by an HEC appointed Inspection Committee; and
	• recommendation for grant of a charter by the HEC to the MoE/PED if the inspection is satisfactory.
Foreign Institutions	Foreign HEIs can operate in Pakistan. HEC distinguishes between two types of collaborative arrangements between foreign HEIs and local providers:
	• arrangements under which a local provider operates predominantly as a franchise. These institutions must meet a number of HEC mandated criteria related to infrastructure, accreditation and inspection.
	• arrangements under which a foreign provider's curriculum is taught, assessed and evaluated locally, but the degree is issued by the foreign provider. Top ranked foreign universities can run degree programs with local partners with minimal regulation. Foreign HEIs with good academic standing must meet certain financial requirements. Other accredited HEIs must meet normal criteria that apply to all other HEIs.
Fees	Private HEIs are free to set fees at whatever level the market will bear.
	Fees at private HEIs significantly exceed those for subsidized students at public HEIs. Public HEIs can and do accept full fee paying 'self-financed' students.
Governance	Private HEI governing boards include staff, an HEC nominee, a provincial government nominee, a Trust nominee and others.
Zoning	There are no geographic limits on where private universities can set up. However, some provinces limit geographical scope through the chartering process.
Resourcing to Providers	Private HEIs do not receive either government recurrent or capital funding, nor are they eligible to receive government research and development grants.
	Not-for-profit HEIs do not pay income tax or customs duties on imports of educational equipment. Private HEIs pay concessional rates on utilities.
Teachers	Academic staff at private HEIs are employed on individual contracts and are paid higher salaries than their public sector counterparts.
	HEC has developed 'tenure track' system to pay academic staff more in exchange for meeting performance criteria.
Accreditation/Review	Both public and private HEIs are governed by the same QA system. The HEC is establishing an Accreditation Council with responsibility for the accreditation of degree programs across a range of disciplines.
	HEC QA Committee has developed ranking mechanism for local universities.
	HEC operates a website that lists approved and unrecognized HEIs.
	Private HEIs do not need HEC approval to set/amend curriculum/program content.
Student Finance	At least 10 percent of students at private HEIs must be granted fee exemptions or scholarships on a needs basis.
Academic Year/Day	Most private HEIs operate on a two semester year, which begins in September.

Annex 6: Policy Proposals Relating to Private Education in Various Government Strategic Documents

Policy Area	National Education Policy 1998-2010	Education Sector Reforms (ESR) Strategic Plan 2001-2004	Higher Education MTDF
Tax/Customs Incentives for private institutions	• Tax rebates for set-up costs/Income tax rebates • Not-for-profit schools tax exempt.	• Education equipment imports exempt from customs duties • 50 percent tax exemption.	• No tax for 10 years. After 10 years, tax assessed at 25 percent of existing tax. More definite proposal to be worked out with appropriate government authorities.
Other Fiscal Incentives for Private Institutions	• Residential land at reserve prices	• Rural land provided free or at concessional rates • Utilities assessed at non-commercial rates.	• Land for establishment of new Universities/Institutes on the condition that the infrastructure will be established within a specified period of time. Ownership of land and any assets on it will revert to the government.
Funding for Private Institutions	• Matching grants in rural/poor urban areas via Education Foundations	N/A	• Federal grants to set up departments in areas important to the socio-economic development of Pakistan. • Matching grants for digital library access to select journals and international bandwidth for internet access. • Matching grants for foreign faculty hiring (50 percent of salary borne by HEI and 50 percent by HEC). • Include proposals from private HEI researchers in the HEC Research Grant Program.
Regulation of Private Institutions	• Develop fee structure in consultation with government.	• Encourage private sector organisations to facilitate registration, regulation and attainment of standards • Liberal grant of charters.	N/A
Donations	• Allow HEIs to seek financial assistance from donors, in collaboration with the MoE.		• Facilitate/encourage private sector to donate to, and open new departments/centers in, public universities.
Other Initiatives	N/A	• Joint management/use of public institutions by private sector • Industry/university linkages • Lease vacant public buildings to private institutions • Private co-management of dysfunctional public schools • Private sector partnerships to strengthen management of public institutions.	N/A

Annex 7 Summary of Possible Initiatives to Promote PPPs in HE in Pakistan

Policy Area	Possible Initiatives
Improve the regulatory environment for the private HE sector	
Subsidize Students at Private HEIs	Over the longer-term, the HEC should move toward a HE funding system under which students at public and private HEIs are funded within an integrated, neutral and demand-driven funding system, where private and public institutions are treated in a similar manner. Under such a system, funding would simply follow students to the higher education institution of their choice, whether that was in the public or private sector. In the short-term, the government could introduce a more limited reform of the funding of private HEIs. One option would be to expand existing scholarship programs, thereby increasing the number and widening the scope of scholarships available to students in the private HE sector (ie. extending them to undergraduates). At the limit, all growth in recurrent funding to the HE sector could be in the form of new scholarships, so public institutions would be funded through a mix of subsidies and (increasingly) scholarships. Private institutions would be funded exclusively through scholarships. An alternative short-term option would be for the HEC to set aside a 'pool' of funding that would be targeted at students in the private higher education sector. Many scheme designs are possible. One indicative design would be as follows: • funding would be controlled and distributed by the HEC; • the design of the funding program could be similar to the current funding system for public HEIs – ie. based on student numbers and type of program; • private HEIs would apply for funding under the program; and • the number of students would be capped in any given year and could be adjusted over time. Only students attending recognized, highly rated private HEIs could be eligible for assistance. Eligibility could be linked to an institution's accreditation status once this new system is fully operational. Any link to quality as a criterion for eligibility should also apply to public HEIs.
Tax and fiscal incentives	Currently few tax and other fiscal incentives available to private HEIs, apart from a tax exemption for not-for-profit institutions and an exemption from customs duties for educational equipment. The *Higher Education MTDF* proposes further tax exemptions and free land from the government. Tax incentives can have both costs and benefits and should be introduced carefully. Any framework for fiscal incentives should be clear and consolidated into one text so that private HEIs have greater certainty about the investment environment
Policy Area	Possible Initiatives
Requirement for land as a condition of HEC recognition	HEC should reconsider the minimum land requirement for HEIs given its potential to deter entry of new HEIs and its importance in determining institutional recognition. The HEC should consider replacing the current minimum land requirement with building/space norms or standards would be more appropriate than a blanket minimum land requirement. These norms would specify criteria such as the number of square feet of building space required per student (which could vary by faculty) and minimum equipment requirements, rather than a minimum land requirement.

Requirement for endowment as a condition of HEC recognition	The HEC could consider introducing an endowment policy that ties the endowment amount to institutional size, as well as type of institution. This would provide a better balance between the financial security objective and stimulating private entry into HE.
Make greater use of information as a tool for regulating the HE sector	
	Place relatively more emphasis on academic factors rather than factors such as ownership of land and infrastructure in determining whether an HEI should be recognized, to ensure that HEC recognition provides meaningful information to prospective students. HEC should ensure that the collection of information on private HEIs is systematic, incorporated into the HEC's management information system and used as a basis for HEC analysis and decision-making. Address absence of information on external efficiency of HE through the collection and dissemination of information on labour market outcomes for HE graduates in Pakistan.
Improve linkages between the HEC and the private HE sector	
	The HEC should develop a sector forum to discuss policy and implementation issues. Its role would be to provide a forum to communicate policy decisions and to discuss policy and implementation issues that are common to the private HE sector. Such a group should meet at regular intervals. HEC meetings with vice chancellors should be institutionalized and held at regular intervals. HEC should facilitate the establishment of a national association representing private HEIs and the establishment/strengthening of similar associations at the provincial level
Increase the role of the private sector in the provision of educational infrastructure	
	The HEC could consider making greater use of the private sector in the financing, design, construction and operation of public HE infrastructure such as IT laboratories, classrooms and hostels.
Policy Area	*Possible Initiatives*
Building greater linkages between HEIs and employers in the public and private sectors	
	The HEC should address problems relating to weak institutional governance, rigid institutional employment arrangements and an outdated curriculum during the development and implementation of the HEC's university-industry linkages initiatives. The HEC should facilitate and encourage (perhaps through seed grants) the development of private research centers affiliated to public and private HEIs universities. All HEC research funding should be contestable between public and private HEIs/industry research centers and be performance based. The HEC should address issues of curriculum relevance by making greater use of industry in the development of curricula and facilitate the development of industry placement and practical training programs for HE students. The HEC should work with the PSC to review its competencies and hiring standards to ensure they are up to date and aligned with wider labour market competencies and needs.

Encourage PPPs in research and development	
	Allow private university researchers to have access to research funding and increase linkages with business on curriculum issues Establish autonomous research centers affiliated to universities. Link academia to private industry through increased use of faculty exchanges, allowing pension portability for public HEI faculty who transfer to public HEIs and allow academics to sit on company boards. Develop pre-incubators that provide a mechanism for networking with other entrepreneurs, allow testing of ideas, coaching and training before moving into incubator phase. This is particularly relevant given the 'rudimentary' nature of university/industry linkages. Provide seed money for development of autonomous research centers with 'sunset' funding clause – introduce 'market test', continuation depends on patents and commercialization of research.
Introduce measures to improve efficiency in the delivery of public HE	
	The HEC could undertake a number of steps aimed at improving the efficiency of HE delivery in Pakistan, including: • benchmarking operating and staff costs and revenues for both private and public HEIs – in aggregate and for individual sub-components; and • the HEC could identify good practice in institutional management and disseminate such examples to other HEIs. The HEC should also examine the scope for additional outsourcing of non-core services in HEIs to the private sector. Allow the private sector to manage a small number of public HEIs or particular schools/faculties within public HEIs.
Policy Area	*Possible Initiatives*
Introduce measures to improve efficiency in the delivery of public HE	
	A number of changes to policies affecting the public HE sector would improve the scope for PPPs. These include: • introduce greater performance accountability for academic staff at public HEIs, including the effective implementation of the 'tenure track' policy; and • reform governance arrangements at, and provide more management flexibility to, public HEIs so they can better organize themselves to meet the needs of the modern world. An additional option that would improve efficiency and equity in public higher education would be to increase private responsibility for the costs of HE at public HEIs. This increased cost-sharing could be across the board or targeted at particular schools or programs that are deemed to be more market oriented (eg. business, engineering). Any increase in cost-sharing could be accompanied by the introduction of needs-based scholarships. The HEC could introduce a system of (limited) matching grants to encourage HEIs to increase private revenues.

Annex 8: Public Private Partnerships for Educational Infrastructure

Infrastructural PPPs - Common characteristics:

- private sector partners invest in school infrastructure and provide related non-core services (for example, building maintenance);

- the government retains responsibility for the delivery of core services such as teaching;

- arrangements between the government and its private sector partner are governed by long-term contracts – usually 25-30 years. Contracts specify the services the private sector has to deliver and the standards that must be met;

- service contracts are often bundled, with the private sector taking on several functions such as design, building, maintenance and employment of non-core staff; and

- payments under contract are contingent upon the private operator delivering services to an agreed performance standard.[41]

1.   Below are the six examples drawn from the UK, the Australian state of New South Wales, Washington DC, Germany, the Netherlands and the Province of Nova Scotia (Canada):

Private Finance Initiative, UK

2.   PFIs in the education sector have been used extensively in the UK, where virtually all new schools and tertiary education institutions are being built under PFI arrangements, rather than traditional procurement methods. The PFI, the most well-known form of PPP, refers to a strictly defined legal contract for involving private companies in the provision of public services, particularly public buildings.

3.   The PFI program was introduced under the Conservative government in 1992 but did not take off until the Labour Party took office in 1997. Under a PFI program, a capital project such as a school, hospital or housing estate, is designed, built, financed and managed by a private sector consortium, under a contract that typically lasts for 30 years. Contracts can be structured differently. The most commonly used structure is DBFO. Under DBFO, a private sector partner (usually a consortium of companies) takes on the provision and long-term operation of a facility in line with the LEA and school or schools' specification. The private consortium is paid regularly from public money, based on its performance throughout the contract period. If the consortium misses performance targets, its payment is reduced.

4.   Transport makes up the lion's share of PFIs in the UK. Education represents around 3 percent of the value of PFIs undertaken to date in the UK. By the end of 2003, 102 education PFI deals had been signed, with a value of approximately $3.621 billion. The largest education PFI was the Glasgow Schools Project, with a value of $400 million.

'New Schools' Private Finance Project, Australia

5.   The New Schools Project in the Australian state of New South Wales consists of two main components. First, the private sector will finance, design and construct nine new public schools in the state between 2002 and 2005. These new schools will be built to standards that must meet or exceed Department of Education and Training (DET) school design standards. Second, the private sector will provide cleaning, maintenance, repair, security, safety, utility and related services for these schools' buildings, furniture, fittings, equipment and grounds until 31 December 2032. In return, the private sector

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[41] Department of the Parliamentary Library (2002) *Public Private Partnerships: An Introduction*, Commonwealth of Australia, Canberra, p. i.

will receive performance-related monthly payments from the DET during the operational phase of the project. At the end of the contract period, the buildings will be transferred to the public sector.

6.   The project will be undertaken by Axiom Education Pty., which includes investment banker ABN Amro, commercial construction company Hansen Yuncken, property group St Hilliers and facilities management firm Spotless. The Axiom Education consortium was chosen following a competitive tendering process.

7.   The New Schools Project in New South Wales is part of a broader move toward PPPs in Australia. PPPs have been used by various governments to procure infrastructure across a range of sectors, including transport, health and prisons. They have also been used in higher education, with the University of Southern Queensland and Swinburne University of Technology both using PFIs to construct educational infrastructure. A recent report by Standard and Poor's showed increasing investor interest in PPPs, with projects valued at $3.7 billion in the pipeline.

Public Private Partnerships (P3) for Educational Infrastructure, Nova Scotia, Canada

8.   The Province of Nova Scotia, Canada used a PPP model to build 39 schools in the late 1990s. The government pursued the P3 model because its financial situation was such that it could not afford to build the large number of schools required, especially given its desire to outfit new schools with state of the art technology. The first lease agreement between the government and private sector partner was signed in 1998.

9.   Under the P3 model, schools were designed, built, financed and maintained by the private sector. Contracts were allocated on the basis of a competitive bidding process. The P3 schools were leased by the government for a period of 20 years. Most of these contracts expire between 2017 and 2020. Incentives were built into contracts to ensure quality construction and maintenance. Approximately 14 percent of the square footage in the province's schools is found in P3 schools.

10.   The government had planned to build 55 schools, but the number was cut back when the project was beset by a variety of political and other problems, including cost overruns driven by project 'gold plating' (that is, increasing school standards, expensive site selection) and weak bureaucratic management (Meek: 2001).

J. F. Oyster Bilingual Elementary School, Washington DC

11.   The J. F. Oyster Bilingual Elementary School, which opened in September 2001, was the first public school to be built in Washington DC in 20 years. In 2002, the school had 350 students. The school was built at no cost to taxpayers through an innovative public private partnership. Under that partnership, a local developer demolished the existing school and rebuilt a new one in exchange for the right to build an apartment building on what had been a playing field. The school's construction was financed by an $11 million tax-exempt city bond issue, which, in lieu of property taxes, will be repaid by the developer over 35 years from revenue generated by the apartments.

Offenbach Schools Project, County of Offenbach, Germany

12. The Offenbach schools PPP project provides for the renovation, upkeep and facility management of over 90 schools within the County of Offenbach, which is located near Frankfurt Germany and has a population of some 350,000. The project, which involves the government contracting for the financing, refurbishment and operation of government schools, is split into two parts, with a combined capital value of over $1 billion.

13. The first part of the PPP project involves 43 schools. The total value of the contract is estimated at $492 million. The contract was recently awarded to SKE, a subsidiary of the French Vinci group. According to one estimate, the use of a PPP will generate savings of about 19 percent relative to government delivery of similar services. The second part involves 49 schools. The contract was recently awarded to HOCHTIEF. The total value of the contract is estimated at $545 million. Under the Offenbach Schools Project, the private sector partners will operate schools for a period of 15 years.

Montaigne Lyceum, The Hague, Netherlands

14. The first Dutch education PPP project, which commenced in 2005, involves the construction and operation of a new secondary school in the Ypenburg suburb of The Hague. The contractor is the TalentGroep consortium. The secondary school is expected to grow from 150 at the beginning of the contract to 1,200 by 2009. The Design Build Finance Maintenance (DBFM) contract is for 30 years (1.5 years for construction and 28.5 years of maintenance). Maintenance will include cleaning, furniture, ICT infrastructure and possibly catering. Construction is expected to be completed in July 2006 and the facility will be handed back to the government in 2034.

#### Summary of Public Private Partnerships for Educational Infrastructure

Program	Jurisdiction	Program Size	Key Elements
Private Finance Initiative	UK	By the end of 2003, 102 education PFI deals had been signed, with a value of £2.028 billion	Introduced in 1992, but grew significantly post-1997 Educational infrastructure designed, built, financed and managed by a private sector consortium, under a contract that typically lasts for 30 years. Design, build, finance and operate (DBFO) is most common structure Payments to private sector are performance-related Most new educational facilities are now built using PFIs
'New Schools' Private Finance Project	New South Wales, Australia	9 new public schools built between 2002 and 2005	Private sector financing, design and construction of nine new public schools by January 2005 Private sector cleaning, maintenance, repair, security, safety, utility and related services for school buildings, furniture, fittings, equipment and grounds until 31 December 2032 Buildings handed over to public sector on 31 December 2032
Public Private Partnerships (P3) for Educational Infrastructure	Nova Scotia	39 schools built under P3 program in late 1990s	Competitive bidding process Schools are financed, built and operated by the private sector Government leases schools for 20 years Incentives built in to contract to ensure quality construction and maintenance
J. F. Oyster Bilingual Elementary School	Washington DC, USA	Individual school	Opened 2001, now has 350 students School built at no cost to taxpayers using PPP with local developer School financed with $11 million tax-exempt bond issue which is to be repaid by the developer
Offenbach Schools Project	County of Offenbach, Germany	90 schools with capital value of over $1 billion	Involves government contracting for the renovation, upkeep and facility management of public schools Private sector partners will operate schools for 15 years

**Annex 9: Resource Diversification Matrix for Public Tertiary Institutions
by Category and Source of Income**

Category of income	Source of income				
	Government (national, state, municipal)	Students and families	Industry and services	Alumni and other philanthropists	International cooperation
Budgetary contribution					
General budget	X				
Dedicated taxes (lottery, tax on liquor sales, tax on contracts)	X				
Payroll tax			X		
Fees for instructional activities					
Tuition fees		X	X		
Degree/non-degree programs		X	X		
On-campus /distance education programs		X			
Advance payments	X				
Chargeback		X			
Other fees (registration, labs, remote labs)			X		
Affiliation fees (colleges)					
Productive activities					
Sale of services					
Consulting	X		X		X
Research	X		X	X	X
Laboratory tests	X		X		
Patent royalties, share of spin-off profits, monetized patent royalties deal			X	X	
Operation of service enterprises (television, hotel, retirement homes, malls, parking, driving school, Internet provider, gym)			X X X		
Financial products (endowment funds, shares)		X	X	X	
Production of goods (agricultural and industrial)	X	X	X	X	X
Themed merchandises					
Rental of facilities (land, classrooms, dormitories, laboratories, ballrooms, drive-through, concert halls, mortuary space)			X	X	
Sale of assets (land, residential housing)					
Fund raising					
Direct donations			X	X	X
Monetary grants			X	X	
Equipment	X			X	
Land and buildings	X		X	X	X
Scholarships and student loans			X	X	
Endowed chairs		X	X		
Indirect donations (credit card, percentage of gas sales, percentage of stock exchange trade, challenging grant)					
Tied donations (access to patents, share of spin-off profits)			X		
Concessions, franchising, licensing, sponsorships, partnerships (products sold on campus, names, concerts, museum showings, athletic events)			X		
Lotteries and auctions (scholarships)		X	X		

Source: World Bank mission

Annex 10: Enrollment and Cost Projections, 2005-2015, Framework and Methodology
(The Education Simulation Model)
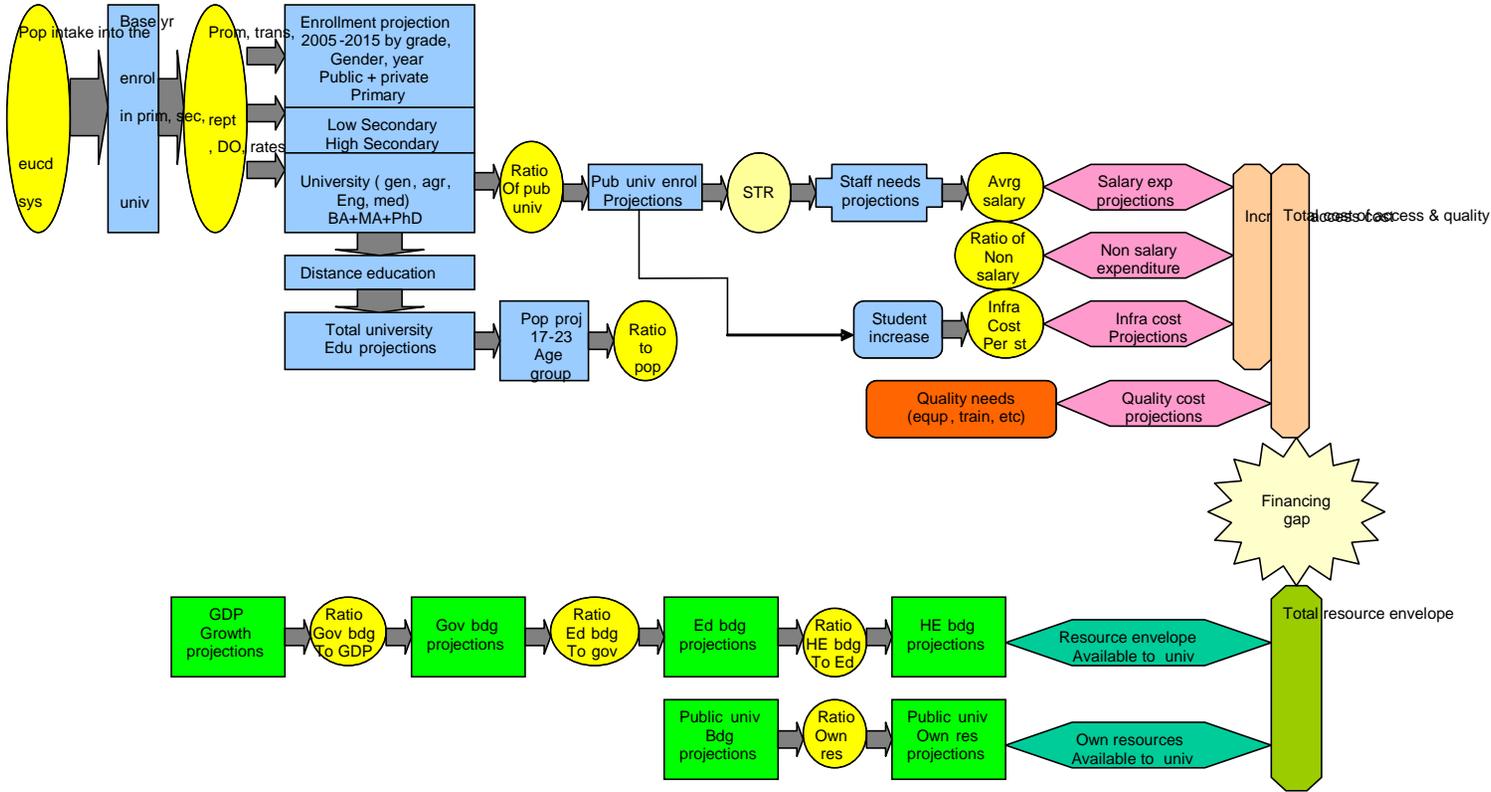
Annex 11: Detailed Projection of Costs and Resources:
Universities and Higher Education Sector (2005 to 2015, Rs Billion)

Table A: Universities

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005/2015
Costs												
Base Case	30.0	45.5	58.8	72.1	85.5	99.4	113.7	128.6	144.2	160.5	177.3	1115.7
High Case	29.2	41.9	52.8	63.4	74.2	85.1	97.3	109.9	123.0	136.6	150.5	963.9
Resources												
Base Case	27.7	39.4	42.2	45.0	48.1	51.4	54.9	58.8	62.9	67.4	72.2	570.0
High Case	27.7	39.4	46.4	54.0	62.3	71.5	81.7	92.9	105.4	119.3	134.7	835.2
Gap												
Base Case	2.3	6.1	16.7	27.1	37.5	48.0	58.8	69.9	81.3	93.1	105.0	545.7
High Case	1.5	2.5	6.3	9.4	11.9	13.7	15.7	17.0	17.5	17.3	15.9	128.6

Table B: Higher Education Sub-Sector (HESS)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005/-2015
Costs												
Base Case	38.0	55.6	70.4	84.9	99.6	114.6	130.0	146.0	162.6	179.9	197.7	1279.2
High Case	37.2	51.8	63.9	75.7	87.4	99.4	112.6	126.2	140.2	154.7	169.6	1118.8
Resources												
Base Case	35.7	48.8	52.1	55.5	59.2	63.2	67.5	72.0	77.0	82.3	88.0	701.3
High Case	35.7	48.8	56.4	64.5	73.4	83.3	94.2	106.2	119.5	134.2	150.5	966.6
Gap												
Base Case	2.3	6.8	18.3	29.4	40.4	51.4	62.6	74.0	85.6	97.6	109.7	577.9
High Case	1.5	3.1	7.5	11.2	14.0	16.1	18.4	20.0	20.7	20.5	19.2	152.2

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