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TRENDS IN ACCESS AND QUALITY OF HIGHER EDUCATION IN PAKISTAN

A research based on three case studies

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ABSTRACT

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Trends in Access and Quality of Higher Education in Pakistan: A Research based on three Case Studies

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The aim of present research is to investigate the response of the universities after implementing the higher education commission (HEC) reorganized policies for widening participation and improving the quality in the higher education system of Pakistan. The relationship between education and economic growth has been emphasized in the literature. The Human Capital approach that stresses the quality of the labor and the contribution of enrollments factor is used for widening participation for the economic growth of the country. The other relevant concepts of rate of return with respect to private and social benefits have been presented to smooth the trend of widening access and quality in higher education. Moreover, the experiences of central European and South East Asian countries about the expansion trends are analyzed for finding the valuable lessons. The higher education system of Pakistan with the perspectives of expansion trends and quality improvement amendments is analyzed for recognizing the HEC initiatives and outcomes. The major focus of the study is to investigate the reaction of three public sector universities after the implementation of HEC policies in 2004.

The evaluative case study methodology was adopted by the researcher. The data was gathered through analysis of policy documents and interviews conducted in three public sector universities about the following issues: students' enrollments and expenditures per student. The documents like official reports, online papers and newspapers were consulted along with the interviews for getting upgraded information. The undertaken analysis has resulted in several basic findings. It has been concluded that universities are gradually increasing access opportunities by introducing new disciplines particularly, and also establishing many new higher education's institutions for expanding participation in this decade. The establishment of quality enhancement cells along with hiring foreign faculty and PhDs in public universities are significant steps for both access and quality improvement of higher education in Pakistan.

Keywords: Economic growth, human capital, widening access, Quality measures, higher education

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LIST OF ABBREVIATIONS AND ACRONYMS

C1	Case 1
C2	Case 2
C3	Case 3
DAIs	Degree Awarding Institutions
EPS	Expenditure per student
HEC	Higher Education Commission
HE	Higher Education
HEIs	Higher Education Institutions
HSC	Higher Secondary Certificate
GDP	Gross Domestic Product
GER	Gross Enrollment Ratio
GOP	Government of Pakistan
HEEM	European Master in Higher Education
MoE	Ministry of Education
MTDF	Medium Term Development Framework
PhD	Doctor of philosophy
PTF	Pakistan Task Force
QEC	Quality enhancement cell
R1 – R10	Respondent 1 – Respondent 10
STR	Student teacher ratio
TBG	The Boston Group
UGC	University Grants Commission
WB	World Bank

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1 INTRODUCTION

1.1 Study Background

In the beginning of 21st century, many countries in the world including developed and developing determined to widen access in Higher Education systems for economic growth and to become knowledge economy. Mostly expansion occurred when government took initiatives through formulating new policies for the higher education system. Widening access requires determined objectives, governmental policies and strategies to achieve these goals.

In contrast to United States, only 10% of the 18 to 21-age cohort in EU countries attended different forms of tertiary education in 1965, which was associated only to the elite group (Douglass 2010, p. 3). The widened access would transfer the system into mass higher education and also provide equal opportunities to under-represented groups to participate within the system. The transition from elite to mass system never happened abruptly – rather required years for change, but have long-term benefits for the economic growth of the country like Pakistan that have many deprived groups in the society.

The matter of quality has significant place in the discussion of mass higher education, as widening access has direct impacts on quality. Hence, quality should be controlled along with the expansion otherwise over-crowded mass system would result in unemployment and low quality graduates. The issues of low access and low quality of higher education in Pakistan were recognized by the Task Force (2000), and the Boston Group (2002). The establishment of Higher Education Commission (HEC) in place of University Grants Commission (UGC) took place in 2004 introducing many reforms in the higher education system. The HEC introduced many measures such as the enlargement in higher education funding, establishment of new campuses, the increase in limited seats of university students and the revised pay scale for university personnel. The idea behind is that if the access and the quality of the higher education sector increase; the economic growth would augment and country will play a better role in the market of higher education.

1.2 Rationale for the study

Various significant reasons have motivated the researcher for conducting this specific study. Firstly, the participation rate in the case of Pakistan is relatively low 3% of the age cohort (18-23). As the population is increasing rapidly there exists much capacity to feed the access of higher education in Pakistan. The statistics show there is much more capacity for the further expansion of HE in

developing countries. The participation rate in higher education is 26% of the age cohort in developed countries and only 6% in developing countries (Altbach 2003, p. 2).

Secondly, higher education budget has increased three times in 2004-05 and targeted Pakistan to become knowledge economy (Higher Education Policy Note 2006, p. 31). The government strategy of increased funding provides incentive to increase access in higher education system. There exist examples of other countries in the world that utilize the measure of increased funding as a tool for augmenting participation in higher education sector. This dramatic change in the history of higher education in Pakistan also develops an interest for the author to investigate the changing trend in the access of higher education due to increased funding in Pakistan.

Thirdly, the vast literature of both developed and developing countries represent that many of them are experiencing and planning to increase participation in higher education sector in the beginning of 21st century. Pakistan is besides one of the developing Asian countries that has objective to become knowledge economy in coming years for the prosperity and better future. This is one of the interesting and popular topics on media discussing how to handle the issue of low participation and quality in higher education institutions in Pakistan. This study would provide some picture and guidelines concerning the matter.

Fourthly, there exist many under-represented groups in the country like Pakistan who have less possibility to establish good business or avail other earning opportunities. If there are incentives for deprived groups to pursue higher education, then the qualified labor force would provide good Human Capital for the economic growth of the country. This is quite significant to investigate whether all groups in the society have equal access to higher education according to current restructured HEC policies.

1.3 Research Questions

My research interest is to investigate how the issue of low access and quality is being tackled in the public sector universities. What are the pros and cons of providing more access in higher education? Do the universities compromise on quality for making expansion? How public universities are providing more access in higher education? In other words, I will focus on finding out the merits and demerits of expanding access to higher education in Pakistan for the duration of 1995 to 2008. The government of Pakistan has planned to increase the access in higher education by providing more funding; therefore the Higher Education Commission has been created to implement the

restructured policies. I will try to find answer to the following questions from selected three public universities in this research:

1. **What** is the response of universities for increasing access to higher education in Pakistan?
2. **How** quality is being affected with increasing access?

1.4 Research Methodology

The researcher would employ the case study method to collect and analyze data in order to answer the research questions. According to Yin, “The need for case studies arises out of the desire to understand complex social phenomena that further allows an investigation to retain the holistic and meaningful characteristics of real-life events (Yin 1994, p 3), so the case study assists to identify the social trends in real existence proceedings.

By this qualitative technique “how” or “why” questions are being asked about a contemporary set of events over which the investigator has little or no control (Yin 1994, p 9) furthermore, this type of questions deals with operational links needing to be traced over time, rather than mere frequencies or incidence (Yin 1995, p 6). Bell further argued that the case study method provides opportunity to study the problem in depth in a limited time scale (Bell 1987, p. 6). Thus the case study helps to find out the better result in place of survey or examination of archival records by studying the case with profundity in a specific duration of time period.

A good case study investigator should make the effort to develop theoretical framework for the case study that is to be conducted, regardless the type of the study, whether it is explanatory, descriptive, or exploratory. The use of theory, in doing case studies, not only is an immense aid in defining the appropriate research design and data collection but also becomes the main vehicle for generalizing the results of case study (Yin 1995, p 32). Therefore, it helps the researcher to study the case on theoretical grounds and enables to apply those grounds in selected case for extracting out valuable results.

According to Merriam (1998, p. 31), a case study helps to explain the reason of the problem, the background of a situation, what happened and why, as well as explain why an innovative idea worked or failed to work. Beside, the study evaluates summaries and concludes its potential applicability. Also, Yin emphasized that the central tendency among all types of case studies is that it tries to illuminate a decision or set of decisions: why they are taken, how they are implemented, and with what result (Yin 1995, p 12).

Evaluative case study is the best reporting form of evaluations (Merriam 1998, p. 39) that involves description, explanation, and judgment. Discuss and evaluate the alternatives that have not been chosen, afterwards summarize and conclude, thus increasing the potential applicability (Merriam 1998, p. 31). This research would be defined as *an evaluative case study* (Holy & Harris 2002, p. 338) as it is organized to answer the practical, real world questions about the effects of some amendments or program and namely the effects of increasing access and quality measures by the higher education commission. These mentioned aspects cover the central elements of a study about increasing access in higher education in Pakistan after introducing the policy reforms in 2004. Therefore, the evaluative case study technique will be helpful for structuring this kind of study. The study is intended to discuss response of the universities for increasing access in higher education initiated by the Higher Education Commission in Pakistan. And how quality is being affected with increasing access?

The three public universities comprised of categories such as general, engineering and agriculture have been selected as case studies for finding out reliable and valid data without bias. The qualitative approach for this study would allow for getting an insider perspective. One of the reasons of selecting qualitative research is to explain the objectives of this study and also become fully aware of the challenges in increasing expansion of higher education faced by the universities of Pakistan, whilst the theoretical framework would be based on *Human Capital approach* that emphasizes the quality of the labor and the *contribution of Enrollments factor* used for widening participation for the *Economic growth* of the country.

The case study has diverse sources of evidence such as documentation, archival records, interviews, observations, physical artifacts (i.e. insight into cultural features and technical operations) (Yin 1995, p. 80). The *semi-structured interviews* have been used in this study because “the interviewer usually has some latitude to ask further questions in response to what are seen as significant replies” (Brayman 2004, p. 113). Moreover, interviews of open-ended questions were conducted that suit the research objectives and rationale of the study. Case study interviews are of an open-ended nature, in which you can ask key respondents for the facts of a matter as well as for the respondent’s opinion about events (Yin 1995, p. 84).

Qualitative researchers rely quite extensively on in-depth interviewing. Kahn and Cannell (1957) describe interviewing as “a conversation with a purpose” (Marshall & Rossman 2006, p. 101). The difference as compared to others is that it speaks of its depth instead of its width. Interviewers should be superb in listening skills and be skilful in establishing personal interaction, question framing and gentle probing for elaboration (Marshall & Rossman 2006, p. 102). Notes during

interviews were used to recall what informants said and to provide contextual understanding (Steinar 1996, p. 161). The interview would allow for discovering a better picture and represent a wide process of negotiating meanings or emphasis in a limited time scale to the relevant people in public universities (Herbert & Irene 1995, p. 19).

Yin referred to Campbell (1975), that one promising approach for case studies is the idea of “pattern matching” (Yin 1995, p. 25). Furthermore, “there is no precise way of setting the criteria for interpreting these types of findings. The different patterns are sufficiently contrasting and the findings can be interpreted in terms of comparing at least two rival propositions (Yin 1995, p. 26). Therefore, the data would be presented in a graphical and descriptive way about each case study that would be helpful for understanding the real picture of investigating issues.

The concerning authorities related to these selected case studies would be interviewed for research purposes and their comments, suggestions and ideas will portray the image that will show the relation between the governmental determined objectives related to the access & quality and response of the universities. More or less, ten people would be interviewed including the Director of quality enhancement cells, the Director of departments, HEC focal person, and university students in selected three case studies as well as the Executive Director of HEC.

The other valuable technique of data collection would be documentation, based on its stability and helpfulness for qualitative research (Marshall & Rossman 2006, p. 63). The government documents and official reports would be collected for presenting a clearer and more in-depth understanding. The whole data gathered during the research process would be carefully analyzed (how it relates and supports each other) for illustrating the research question, and finally valuable conclusions and recommendations will be extracted.

1.5 Organization of the Study

The structure of the present research comprises of seven chapters. In Chapter 1, the study background, rationale for the study, research questions are presented along with an overview of research methodology. Chapter 2 is aimed to shed light on the theoretical concepts of the present research. The concepts of Human Capital Approach, the contribution of Enrolments and Expenditure per Student factors for the economic growth are the basic notions forming the conceptual framework of the thesis. Along with, the other relevant concepts of rate of return with respect to private and social benefits have been presented to smooth the trend of widening access and quality in higher education, Moreover, the above concepts are combined and a theoretical plan

is presented. In Chapter 3, the emerging trends of expansion in higher education in central European and South Asian countries have been analysed. In Chapter 4, the case of Pakistan presented with its socio-economic background, the system of higher education along with challenges and expansion trends. In Chapter 5, the trends of expansion in Pakistan along with the rationale for the study, the HEC chronological steps for improving access & quality and major achievements & obstacles faced by Pakistan are presented. Chapter 6, presents the backbone of the study because this research is based on three case studies which are discussed and analysed in detail. In Chapter 7, the overall conclusion is drawn along with suggestions for the change.

2 ANALYTICAL FRAMEWORK AND LITERATURE REVIEW

The existing chapter is aimed to assemble and to build up the theoretical framework of the present study through reviewing and discussing such notions and concepts as *economic growth and higher education as well as contributing factors for economic growth*. The mentioned basic theoretical concepts would be applied to underpin the empirical data of the research, derived from theories. The rate of return is another relevant term to be overviewed in the present chapter since the conceptual ideas would strengthen to certain referred analytical studies. Moreover, the current research would try to measure the benefits of increasing investment on enrollment patterns and quality improvements.

2.1 Economic growth and higher education

The relationship between education and economic growth goes back to Adam Smith and the classical economists who stressed the significance of investment in human skills. Until the late twentieth century, the scientific and formal analysis of this relationship has not been undertaken. Several studies such as Psacharopoulos et al. (1985), De Meulmester (1995), Jorgenson and Fraumeni (1998) investigated the relationship between education and the economic growth in which the initial point was the basis of economic growth (Aziz 2010, p. 3). The subsequent theories (see Schultz 1960; 1963, Becker 1964) extend the attempt that economic growth depends on the increase of investment and the labor factor in the productive development as well as other factors of *Enrollments, Expenditure per Student and Human Capital* included for research purposes. The current chapter is not meant to explore in full detail the existing literature on economic growth but aims to present the importance of other contributing factors about the concept.

Contributing Factors

2.1.1 Enrollments factor

The researchers stated that the relationship exists across countries between economic growth rates and schooling enrollment rates including *enrollment in higher education*, while other researchers such as De Meulmester (1995) claimed that this relationship is not always a direct one by using econometric techniques in a distinguished way (Aziz 2010, p. 4). The author determined the relationship among the *enrollments in higher education, the higher education expenditure* and

Gross Domestic Product (GDP) with the help of Cobb-Douglass production factor. According to the research these factors are interrelated to each other, the increase in enrollments of higher education and enlargement in higher education expenditure (in terms of both quality and quantity) has a positive impact on GDP; inversely the GDP has a positive impact on the enrollments as well as the expenditures in higher education. The study extends the theory particularly for the higher education sector that provides high skills, knowledge and quality in the labor. Hence the participation rate in higher education will produce labor force and the skilled labor force would improve the economic growth (Aziz 2010, p. 21). Additionally, the enrollment in higher education would provide more opportunities of employment for its participants. The parametric results show that the employment rate, higher education expenditure, and enrollment in higher education contribute positively towards the GDP. For the rapid economic development of the country, special attention must be given towards the higher education as it has a positive effect on the economic growth.

2.1.2 Expenditure per student (EPS)

Many studies were conducted about the impacts of expenditure per students (see Hedges, Laine & Greenwald, 1994; Greenwald, Hedges, & Laine 1996; Hedges & Greenwald 1996; Tow 2006; Kang 2007), but most of other researchers insisted that the relationship is weak or non-existent (Dahar & Iqbal 2009, p. 10).

Larry V. Hedges and Rob Greenwald (1996) conducted research about grade 12th and analyzed that increasing expenditures per student has a significant positive impact on student achievements. There exists a lack of consistency in findings but the researchers agreed that any effect of expenditures per-pupil on academic outcomes depends on how the money is spent, not on how much money is spent. According to the research when the EPS is increased by the local governments in different states of America then in some cases the achievements increased but in some cases the effects on achievements were insignificant. The way of spending allocations on academic institutions is relatively considerable. The idea of increased EPS has association to the planning and strategies of academic institutions that differ from one another (Dan Lips and Fleming 2008, p. 5).

Dahar, & Iqbal conducted a study for finding out the impacts of Expenditure per Students on students achievements including parameters of pupil teacher ratio and students achievements at secondary schools. The study identified that there exists a positive relationship in rural science students but negative for rural arts and urban science students. Anyhow, if the funds are properly

allocated and effectively utilized, the student achievements and the quality of education may be improved. The study illustrated that the EPS can be categorized into development and non-development expenditures, in which development expenditures are consumed on expansion, new buildings, purchase of equipment etc., while non development expenditures include wages and allowances, operating expenses, scholarships to students, repair and maintenance cost. But the EPS only calculate the school expenditures and the other departmental expenditures are not included in it (Dahar & Iqbal 2009, p. 8).

2.1.3 Human Capital

Economists such as Becker (1960, 1964) Denison (1985) and Schultz (1960, 1961, 1963) argue that by gaining the useful knowledge and skills, the attitudes become more productive economically and contribute to the economic growth and development which is known as *human capital approach*. They found that qualitative changes had taken place in the labor market, that workers were more productive because of the increased acquisition of knowledge and skills towards more productive innovations (McMullen & Munach 2000, p. 3).

The “human capital” theory examined the benefits of education for individual and the society, and those benefits that accumulated to the students themselves including improved technology, reinforced authority, technically oriented higher education to a large number of students (Douglass 2010, p. 2). The private benefits for individuals encompassed better employment opportunities, higher salaries and ability to save and invest, better health, improved quality of life and increased life time earnings. The public benefits are less widely recognized but individual gains can furthermore benefit society as a whole (Aziz 2010, p. 4).

The investment on human capital is indispensable to get sustainable economic growth as well as to reduce the poverty. An investment in the higher education sector prepares the productive labor force to enhance the incomes and economic growth. In a long term perspective, the high social spending on education will improve not only the living conditions of the poor but will also bring many social benefits and developments. Moreover, it has been investigated that the returns on education are higher in less developed and low income countries (Haizheng 2003, p. 318). In comparison to many other countries, the population growth rate is higher in Pakistan that radically creates hindrance in the way of prosperity and poverty remains pervasive. Poverty, political instability, economic crises and many social problems are the major issues confronted by the people of Pakistan. A range of diverse social and political problems can be addressed if the people know the value of their vote for

electing the deserving people for national and provincial assemblies to bring a change for making their lives better. The growing investment on human capital would assist in producing skilled labor force to resolve the current social, political and economical issues as well as to produce good-decision and policy makers (Mohsin 2005, p. 4).

2.1.4 Factors strengthening sustainable economic growth:

According to the Hausman, Pritchett & Roderick (2005) research, the economic reform is a significant predictor of the acceleration that remains sustained. A country has one in four chances to experience acceleration during a decade that is defined as per capita growth of 2% or more lasting for at least eight years, however, growth accelerations tend to be correlated with increases in investment, with real exchange rates and with political regime changes but all accelerations last equally long. Additionally, external hazards sometime produce growth accelerations but in the long run bubble out; on the other hand the economic reforms provide considerable accelerations with sustainability and that prediction favors more the new higher education investors (Mohsin 2005, p. 4).

Rodrik (2003) argues that initiating an economic growth and sustaining it are two different things. Sometimes only small reform steps are taken to jump-start the growth process but sustaining growth requires continued institutional reforms for managing shocks and continuing productive dynamism. The author emphasizes some economic principles are adhered for maintaining strong growth such as protection of property right, market-based competition, appropriate incentives, and low inflation, therefore these principles can translate into different policy packages for individual countries according to the local opportunities and constraints (Ibid).

Sala-i-Martin (2004) mentioned after analyzing the cross-country growth and noted that there is no determinant of growth rather the quality of government as well as its policies and institutions are important variables for growth instead of various *production factors* such as; the initial level of income, human capital approach and protracted life expectancy. Moreover, it was found by many studies that merely the increase in *production factors* cannot explain economic growth rather the *total factor productivity* have major contribution such as;

$$Y_t = A_t f(K_t, L_t)$$

Here the Y_t is the total output, A_t is the total factor productivity which considerably affects the output, K_t is the capital stock means investment and L_t is the quantity of labor force that does not

affect the output. This function is linked to the Cobb-Douglas production function or the total factor productivity (Mohsin 2005, p. 5). Policies and institutions affect the efficiency of an economy as good institutions take less input for producing the same amount of output, whereas weak institutions or instability in the governmental policies decrease incentives to spend in human and physical capital. Therefore, good policies and institutions are important determinant of growth and human capital plays a vital role for setting such policies and institutions in place. The skilled and trained human capital has capability of producing better output than unskilled labor force in the total factor productivity (Mohsin 2005, p. 6). A World Bank study (1993) found that the higher level of human capital is a significant factor behind the rapid development of a number of East and Southeast Asian Countries.

Many studies like Easterly and Levine (2001), Bosworth & Collins (2003) failed to find a relationship between years of schooling and changes in economic growth, as well as were unable to find a link between educational quality and growth. Similarly some researchers suggest that Human Capital development will not give benefits if the institutions or infrastructure is weak (Mohsin 2005, p. 7). This implies that investing alone in higher education will ignite definitely the economic growth but the sustainability will be achieved by the solidity of institutions, better policies, competent policy makers and required reforms.

Conclusively, raising investment and improving institutions are important for achieving high rates of economic growth and those countries that invest more in human capital do better in terms of economic growth (Haizheng 2003, p. 318). Due to high investment and better institutions, the quality of human capital in several Southeast Asian countries including Malaysia, Singapore, South Korea and Thailand is better than in Pakistan. Therefore, Pakistan has improved currently its investment in human capital for achieving higher growth rates assuming that higher social spending would attract foreign private investment for improving the overall quality of country's institutional framework. These changes would enable Pakistan to enter into a virtuous cycle of sustained economic growth and stable improvements in living conditions of the population (Mohsin 2005, p. 16).

The number of enrolments (i.e. Access) and per-student expenditure (i.e. Quality) have been demonstrated by the researcher in the upper part of the Figure 2.1 that is directly proportional to the economic growth/GDP of a country. This implies that by increasing the access and quality of higher education, the GDP of the country will be improved. In the reverse scenario with the help of improved GDP any country can invest more to improve the access and quality of higher education.

The lower part of the Figure 2.1 shows that more access and better quality of higher education will eventually help in building up the human capital. Thus the human capital again assists to increase economic growth of a country. The relationships of these contributing factors illustrated in the figure 2.1 by the researcher that construct the overall empirical framework for the intended research.

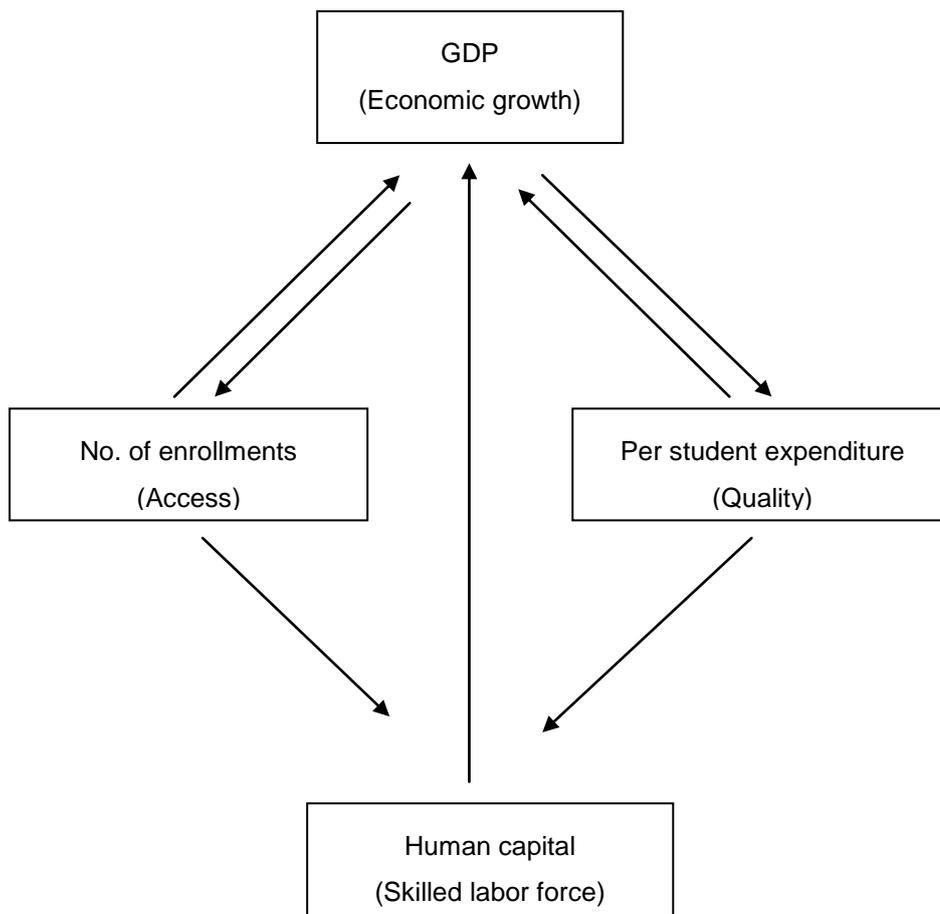


Figure 2.1: Contributing Factors for Economic Growth

2.2 Rate of Return

The literature about rate of return has focused on the significance of increased investment in higher education due to the related social and private benefits with higher education (Psacharopoulos &

Woodhall 1985, p. 7). The intended research about rate of return analysis is particularly based on Human Capital Theory. The rate of return from investment in higher education in developing countries is higher than the rate of return from investment in physical capital like machines (Holttä 1995, p. 122). Engineers and technical people are engines of technology and have priority above technology. If countries invest more in higher education to produce engineers and scientists then machines and other developments will come automatically along with/afterwards. In other words if industries are built without the proper planning of labour force then there will be shortage of skilled people to fulfil the requirement of the industrial sector. According to the World Bank, in developing countries higher education is expensive and correlated with economic development. The World Bank has found that “social rate of return of 10% or more in many developing countries indicates that investment in higher education contributes to the labour productivity and to higher long-term economic growth” (Psacharopoulos 2003, p. 2).

Psacharopoulos concluded that positive correlation between education and earnings is indisputable and universal. Many studies in the literature are available to show a positive link between education and earnings. Some researchers have investigated the level of education to change the earnings. The level of earnings also goes higher with the increase in number of years for education. The rate of return is highest for primary education in such developing countries where there is a shortage of educated workers. Educated workers earn more and can get training on the job; thus the growth rate in their earnings is higher comparatively (Psacharopoulos & Patrinos 2002, p. 3).

Higher Education Institution is not like a firm rather it is a noble business whereas like other businesses, cost and revenues are involved in higher education. In economic terms, higher education has different purposes than a business. The experience and theory emerging from the economy of firm and the market can be utilised for the case of higher education to some extent but the key features of higher education make it different from for-profit business. In business only such products are dealt that can bring high rate of profit. Higher education is multi-product industry in which some educational products like computer science, medicine and engineering etc. can bring higher economic benefits, whereas many other products like literature and philosophy bring less economic returns. The disciplines of arts like literature and philosophy show directly low rate of economic return but can contribute to producing capable individuals to make better policies and to administer various managerial sectors of the country. Highly qualified individuals in all disciplines contribute directly or indirectly to a large number of instant or long-term social benefits. A good student by entering the university provides it funding and also affects positively the learning of other classmates. On the other hand, the university provides financial grant and educational services

to build human capital. So the gross tuition fee and financing needy individuals is determined by the interaction of all, well-informed participants (Winston 1999, p. 5).

2.2.1 Social rates of Return

The social return consists of financial and non-financial benefits. The financial benefits are high national production, high tax income, higher consumption and flexibility in labor force. Due to the social return, people would be less dependent on government financially. The non financial benefits are associated with social mobility, unity in community, democratic participation, cultural development, less criminality, more charity and larger technology adaptation. Higher education is a profitable investment in which direct costs are tuition fees and study material while indirect cost consists of foregone earnings (CHEPS & CPB 2001, p. 36). Moreover, the foregone national production increases the economic growth of a country. For instance, if more graduates would participate in master/PhD programs then the expected national production would increase in long-term perspectives. The report finds that in Japan, Sweden, Denmark and other OECD countries, mostly students involved in higher education belong to wealthy social backgrounds as compared to the disadvantaged groups. Therefore these over-represented groups consume more subsidies and other benefits as compared to the deprived groups. Investment on 'average students' after the compulsory education is beneficial not only for the individuals but also for the whole society. The main beneficiaries of HE are its recipients (students/parents) but other society members (tax payers) also get indirect social benefits (Blondal, Field and Girouard 2002, p. 8). The author argues that the cost of higher education should be shared mainly between recipients and taxpayers. Government must provide funding from the taxpayer grant because the whole society benefits from higher education.

The other social benefit is related to the equity of access. The inequality in access can be minimized by providing equal right of admission for all qualified students. For instance, a student from deprived group may have worked harder than the student of overrepresented group but due to parents' lower education and financial barriers fails to compete with the upper class on merit basis. In reality it is difficult to judge the performance of a student from underrepresented group and to compare with upper class. If more places are provided to underrepresented groups then the equity of access can be improved. However, it is also difficult to provide equitable distribution of higher education among all members of the society. The authors discussed that in theory it looked possible to provide more places for underrepresented groups on equality basis but practically it was difficult

to provide required new positions or to replace them with underrepresented groups. It is difficult to provide expansion according to the requirement or maybe it is a better option to open new institutions for the underrepresented groups (Blondal, Field and Girouard 2002, p. 39).

Bourdieu and Passeron (1977) have presented the example of France that its policies for providing access to higher education have failed because the privileged position of families remained dominating with larger resources and the possession of class reproduction. Class reproduction did not stop but continues to happen with the help of cultural capital instead of material capital. The upper class can now approach the institutional administrators with the help of cultural tendency to get their required academic goals. Such members of the society also get more benefits from their educational outcomes than the expected ones (Deer Cecile 2005, p. 235).

2.2.2 Private rates of Return

The private rate of return can be categorized into financial and non-financial benefits. The financial benefits are consisting of higher wages, less chance of unemployment, higher savings and mobility while non-financial benefits are interlinked with high personal status, better work satisfaction, better health, more leisure and personal development (CHEPS & CPB 2001, p. 36).

Wolf and Haveman (2000) illustrated the non-financial returns refer to non-wage labor market remuneration, inter-family productivity, child quality, spouse health, consumer choice efficiency, labor market search efficiency and marital choice efficiency. These benefits are far harder to measure and non-market returns to schooling are substantial (CHEPS & CPB 2001, p. 37). According to the research, these returns are considerably high in Australia, UK, US, Canada, Denmark, France, Germany, Netherlands, Sweden, and Japan (Blondal, Field & Girouard 2002, p. 26).

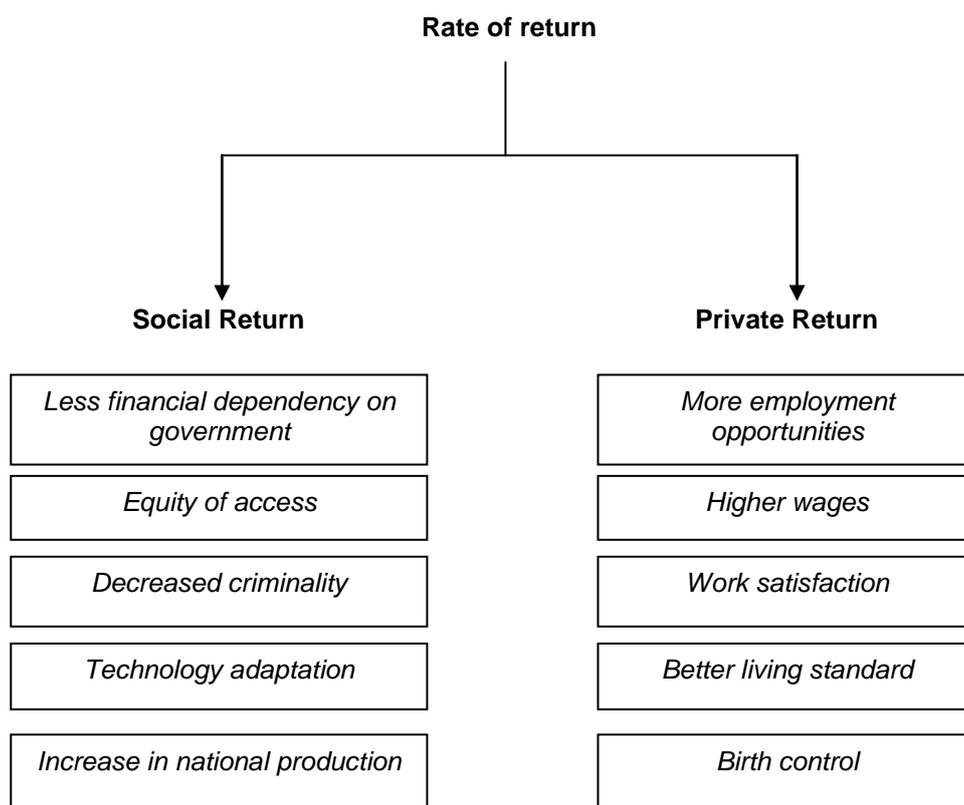


Figure 2.2: Rate of return/benefits

Combining all factors, the overall theoretical frame work

By and large, many theories (see also Becker 1964, Schultz 1960 and Psacharopoulos 1985) confirm the established relationship between economic growth and higher education that followed to consider the importance of production factors for sustainable economic growth. The increasing participation in higher education enrollments help to build human capabilities (Human Capital) by knowledge and skills for economic growth. Moreover, the quality of government and its policies as well as the institutions have contribution for bringing stability for the economic growth of a country. The theories of rate of return are emphasizing the social and private benefits of higher education. These benefits are not only limited to the national economy but also extend to the private or individuals' benefits like better job opportunities, higher salaries, greater ability to save and invest that result in a better health and improved quality of life (Menon 1997, p. 425). The rate of return from higher education in south Asian countries is providing better standard of life in

countries like India, China, Thailand and Taiwan. The enlarged investment in higher education brings both social and private benefits in the terms of financial and non-financial returns.

There exist one more reason for emphasizing the link between investment in human capital and economic growth. In Pakistan, where approximately 24% of the population (The World Fact Book, for the year 2005-06) lives in poverty, the focus of the economic researchers and policy-makers have increasingly shifted to design policies that help to solve social issues by reducing poverty. The economic growth is necessary to benefit society but the sustainability in growth is more important; the case of Pakistan is a good example of this where the growth rate is very high with weak social development and poverty remaining widespread. Therefore, investing in human capital by creating more productive labor force or widening participation will lead to higher future growth and incomes. The higher social spending on education can benefit the society directly by improving their present living conditions, as well as the future prospects (Mohsin 2005, p. 3).

3 TRENDS OF EXPANSION

This is considerable to know about the overall participation of higher education after going through its importance from the section 2, because many countries in the world have planned to become knowledge economy. The overview of different selected countries would broaden the idea of researcher about trends for increasing access and quality in higher education. The participation rate in higher education is 26% in developed countries and only 6% in developing countries, altogether the total 80 million populations is attending post-secondary education in the whole world and 44 million is contributing from developing countries that correspond to almost 55% of the total value (Altbach 2003, p. 2). These statistics show there is much more capacity for further expansion of HE in developing countries. Moreover, the participation rate (6%) in developing countries is more than half of the world population (44 million = 55% of the total 80 million) who get post-secondary education. The developed countries have more participation rate (26%) in higher education even then they are trying and targeting to expand the access in higher education for becoming knowledge economy and getting elevated position in the international market. The trend of expansion in developed central European countries presented in section 3.1. In addition, the planning and practices of the expansion of higher education in many Asian developing countries including Thailand, Turkey, Singapore, Taiwan, India, Vietnam and China are presented in following section 3.2.

3.1 Central European countries

The trends for the expansion of higher education in different developed central European countries including France, the Netherlands and Germany have been analysed in the subsequent section.

France: The study of the case of France illustrates that, in last few decades particularly in 1968, after students' revolt, the higher education system was restructured and selection for the entry was abolished due to the fact that French constitution holds the promise of "free" public education. However this expansion has not fulfilled the hopes of deprived groups to ensure their extended participation in higher education. The available literature presented two reasons for increasing the expansion in higher education in the case of France, the first is the political will to increase the upper secondary school participation, and secondly progressively increase in the rate of success in undergraduate programs (Deer Cecile 2005, p. 233). Therefore both social and political factors were involved in making expansion such as the crucial role of people in restructuring the French

educational system for the expansion of higher education. If people recognise the importance of higher education then social values strengthen the ways for getting higher education. This can also be realised from the success rate of secondary education, which emphasises the people's motivation for higher education. Then another factor is political force, in the form of policies with attractive incentives on governmental level that paved the way for achieving the society demands. The determination of the government for making expansion in higher education has relation with social and political factors.

The Netherlands: The Dutch government has set the target to increase the access to higher education by 2010 up to 50% of the age cohort like UK and Sweden. The way to achieve the determined target has not been specified and the limited numbers of policy instruments are available. Kaiser & Vossensteyn (2005) have analyzed that it will be difficult for the Dutch government to achieve its set target. The sociological and economical reasons at macro-level have importance for the expansion of higher education. There exist three approaches for the massification of higher education, namely: functionalist approach, competition approach and institutionalistic approach (Kaiser and Vossensteyn 2005, p. 187).

The functionalist approach explains that expansion in higher education can fulfill the social requirement. These social requirements can be economic growth and social modernization. This approach also suggests that raising the Human Capital can increase labor productivity. The second approach is related to the individual's competition for the limited number of positions. This competition is a source for the expansion of HE. But this sort of expansion is usually unlimited with limited public funding and motivates collective struggle of different social groups for social mobility. The third institutionalistic approach is considering education as an instrument for enhancing social economic development ((Kaiser & Vossensteyn 2005, p. 188). According to this approach, the global forces are driving this expansion instead of national policies. For instance, science is expanding both with societies and on global level, and academic degree is becoming an essential requirement for playing a role in societies as well as in professions. Moreover, the deprived groups are encouraged both politically and socially to further expand this access. These three approaches are related to the forth one that, now national actors are becoming more involved on global level. The expansion in higher education is a global phenomenon but has variations and demands for Dutch government (Kaiser & Vossensteyn 2005, p. 189).

At micro level, student choices at secondary level are very important. A limited and strict system does not allow following different directions but on the other side, an open system provides many choices at secondary level that lead to higher education. The flexibility at secondary education can

provide alternative paths for various diploma holders for higher education. The subsidy for the cost of higher education directly encourages the individual to pursue higher education and the future possibilities for higher earnings provide indirect encouragement (Kaiser & Vossensteyn 2005, p. 190).

Emerging social and economical reasons in the society motivate the political forces to make policies for the expansion of higher education. As a developed country, the Dutch government has targeted to increase participation rate in higher education up to the 50% of age cohort by 2010. It seems difficult to achieve such a big target without the existence of attractive social incentives and reasons for higher education by the government. If mega new projects, attractive job opportunities for qualified personnel, supplementary benefits for graduates are created in the social set up, then people will be attracted towards higher education. This effort also demands attractive policies with incentives for higher education, which is missing in the Dutch political system (Kaiser & Vossensteyn 2005, p. 203).

Germany: The case of Germany has observed an uneven increase in the expansion of higher education in 1990s (Hubert 2005, p. 205). Hubert has investigated this expansion and links it with the will of consumer; furthermore the students' own desire is the main driving force for this expansion. The growing numbers of international students also show the global trends of expansion in higher education. The German educational authorities consider the major issues of unemployment and longer duration for study. They have introduced the reforms of tuition fee and modified admission criteria to increase uneven expansion (Hubert 2005, p. 212).

In German society, the issues of unemployment and longer duration of study periods in higher education are being dealt with by the educational authorities. The unemployment in any country has indirect effect on the expansion of higher education. If the graduates in specific field don't get jobs then eventually next year the new students will be less attracted to that field (Hubert 2005, p. 221). If unemployment prevails then instead of expansion in higher education, the contraction may occur. If labor market succeeds to provide good jobs with high salaries or in other words the graduates perform well in the labor market then the expansion in higher education sustains. The restructuring of educational policies according to social demands and problems, proves supportive for the expansion of higher education. If the graduates gain distinguished social status and tackle the rising obstacles for the developments of the society and ever growing competition in the job market then more people will have motivation for the expansion of higher education. If the parents and students are satisfied from the commodity or product of higher education they will not mind to pay high

tuition fee. These reforms of new admission criteria and tuition fee in place of free higher education have been introduced to improve the uneven expansion of higher education in Germany.

3.2 South Asian countries

Asian developing countries have considerable diversity with the range of population like 7,000 in Nauru and 1,300,000,000 in China, and GNP per capita ranges from US\$ 200 in Nepal to US\$ 22,500 in Singapore. In Asian region, despite of fewer natural resources, Korea has fast economic enlargement and development in last 50 years just after its war. The major factor that has contributed for Korean outstanding growth is the national importance towards the worth of human capital to become knowledge economy (Jang & Kim 2004, p. 2). According to the World Bank report in 1994, only 20 countries in the world covered 10% of recurrent expenditures from tuition fees in the late 1980s. This trend is changing in China and some other parts of Asia where the average fees have increased and covered 25 to 30% of recurrent costs in 1995 (Ibid, p. 4). The notion, “higher education should be free of charge” is changing with the parallel increase in privatisation because the rich people contribute more in acquiring higher education than the poor. The people from better-off socio-economic groups attend higher education and subsidies for higher education are more likely to help the rich than the poor (Bratti, Checchi, & Blasio 2008, p. 8).

Following the footsteps of developed central European, many Asian developing countries are practicing the expansion of higher education both at public and private sector including Turkey, Singapore, Taiwan, India, Vietnam and China. These trends towards the expansion of higher education have been analyzed to obtain valuable understanding in various higher education systems.

Turkey: With reference to Turkey a study conducted for the period of 1937-1996 that confirms the important relationship between enrolments in different levels of education and Turkish GDP. The enrolments have been increased to 44% in HEIs during this period. Turkish government made a contribution to increase a number of universities by allowing private universities to enter this market of higher education. Moreover, the government provided incentive of land subsidy to private universities for increasing the access in higher education in general and expansion of private sector in particular. These efforts show that every country according to its available resources for education have been planning to expand private sector along with public sector for increasing expansion in higher education. The author has confirmed the important relationship between enrolments in different levels of education and Turkish GDP after investigation (Sari & Soytaş 2006, p. 182).

Public funding is the main source of expenditures for higher education in Turkey. Turkey was spending 0.93% of its GNP to higher education and annual expenditure per student was USD 1,311 in public higher education institutions in 2004, but comparatively in OECD countries this average was USD 7,023 in 2003 (Mizikaci2006, p. 20).

During the period of 1995 to 2004, the average of state-budget allocation, self generated sources and student contributions were 59%, 36% and 5% respectively. Universities have different funding sources in the form of revolving funds that generate additional-budgetary supply of revenues that are by and large consultancy packages and semi-industrial functions. Normally 30% earnings from these revolving funds are utilized for equipment, research projects and teaching staff (Mizikaci 2006, p. 33).

According to Yök, 2004b (i.e. the Report about Present Situation of Turkish Higher System), the 4% of total income of universities came from student fees whereas universities generated 36 % of their income from research and other activities. Turkey spends 3.7% of its GDP on education but for OECD countries this value is 5.3%. The European commission development report signifies that the public funding for higher education in Turkey is lower than other European countries even after its expenditures per student has been increased between 1993 and 2003 from USD 1,924 to USD 2,059. The commission has recommended Turkey to review the educational expenditures due to its importance for development (Mizikaci 2006, p. 37).

Singapore: The return rates from higher education in Singapore are highest among other Asian countries with the exception of Malaysia. The trend towards the expansion and demand for highly qualified labor is expanding in Singapore because I experts require skilled labor for co-operation and production enhancement. Higher education is influential in the search of 'knowledge based economy' and the high private returns point out that higher education is and will remain an attractive investment from an individual point of view. The main objective of government in Singapore is to attract students into engineering and IT; and higher education will help in achieving these targets. The case of Singapore confirms the higher rate of return, which can be attributed to their bigger investment in engineering and IT fields. The higher rate of return is an indication of higher wages or salaries for the employees. The higher salaries show the higher potential capacity of the labor market for accommodating more professionals and graduates. Such incentives in the society motivate the people for getting higher education and expansion occurs. The government policies to provide facilities play a major role for the expansion of higher education. Creating new jobs in the market by setting up new industries or providing expansion of existing industrial sector are major steps by the government for economic growth and prosperity of the citizens. The demand

of labor force by the professional experts provides incentives for the expansion of higher education and technical education (Sakellariou 2003, p. 82).

Taiwan: Tao (2006) favors the demand for higher education in the context of Taiwan society that is one of the South Asian countries. The high school graduates select between entering in the labor market and beginning post-secondary schooling. In fact, higher education has sufficient influence on the quality of the labor market and increases human capital by assisting economic growth and raising the wages of the educated people. The qualities of labor market have strong relation with type and level of higher education. Industries develop according to the available labor force but sometimes machinery, equipment and plants demand new type of graduates or new training of existing labor. The labor market and type of higher education modify and develop each other because these two are interdependent (Tao 2006).

In 1980s the education planners in Taiwan decided to increase the number of enrolments in universities and Junior colleges. The government (Ministry of education) strictly increased the number of students in both public and private sectors of higher education. Gindling & Sun (2000) investigated that the relative wages of employees with HE fell down between 1978 and 1995. This change in wages has been linked with the relative increase in enrolments in HE without creating necessary demand of these workers in the labor market (Gindling T.H and Sun Way 2000, p 154).

India: The neighbouring country India after its independence in 1947 had only 27 universities, which has increased to more than 200 now. The 11% of cohort (18-23) is presently enrolled in higher education but India is not able to reach a comparable level of enrolments with developed countries. Their estimated enrolment target is 20% and the public sector is too small to absorb 2.5 million pool of graduates every year. The case of India is very interesting as a developing country for the enrolment growth in higher education (Agarwal 2007, p. 202). The literacy rate and participation in primary education in India is lower as compared to most of other Asian countries. The major issues of higher education in India are high tuition fee, low participation rate and less enrolment in non-market oriented subjects. The task force recommended in 2000 that students and parents should contribute to the cost of higher education. The central and state governments should fund those disciplines that have no market position. The Ministry determined that higher education institutions should increase the tuition fee to 7% in place of 1% each year since May 2000 (Tilak 2007, p. 237).

The UNESCO has stated by that the average expenditure per students in higher education institutions in developing countries is ten times less than in developed countries (Gill 2000, p. 126). Anyhow, the tuition fee is increasing both in public and private higher education institutions, but

even then people are ready to pay high tuition fee and seek towards private sector due to its better quality. Parents in India have realised the importance of higher education for the better future and expected earnings from higher education. There is a kind of social forces towards the expansion in India, but due to high tuition fees in the public sector the private sector is developing and attracting newcomers in higher education. The main source of expansion is unaided private institutions that have mainly market-oriented subjects but other non-market oriented subjects are being ignored by the system. Indian government has decided to spend more on history, religion, languages and culture studies to preserve country's social values and identities. The number of enrolments is increasing rapidly in engineering, medicine, business & economics and IT sectors of higher education. But the private sector is providing the expansion of higher education only in these market-oriented programs ignoring other programs of arts and social sciences. Due to a large population in India, the public sector is not able to treat the growing expansion in higher education. The government provides funding only to some selected private institutions for subsidising the expansion in higher education.

The enrolment growth was 4% to 5% in the past. But now the nature of enrolment patterns has changed over past two decades that is necessary for economic growth and sustainability of qualified manpower. The 30% of the total enrolment in HE is studying in private institutions that do not obtain government grant and only depend on tuition fee. These institutions are financially independent and set up by individuals and family groups personally involved in governance, financial support and direct or indirect ownership of the institution (Agarwal 2007, p. 203).

China: Wenli Li (2007) has investigated the family background (long term) and financial barriers (short term) to impact the higher education enrolments in China. The family background has more importance than financial barrier. The participation rate of students from rural areas and lower income families is rising with time. In general, the participation rates of students from higher income families are higher than that of lower income families. In particular, this trend is prevailing in higher quality universities. Private lending plays a major role to finance higher education. More than 40% of students (those who did not succeed to get public funding) get private loans for their HE. The author has found that 4% of the samples of students are denied bank loans due to different reasons (Wenli Li 2007, p. 726).

The educational and financial backgrounds of parents enhance the children's scholastic aptitude and assist them to get higher education. In China, the tuition fee and net prices are inversely proportional to the quality of university, so elite universities are comparatively cheaper. The students from educated families perform well in education due to higher intellectual and scholarly

level of their parents and get admission in higher quality universities where comparatively the tuition fee is lower. On the other hand the students from less educated and poor families get access only in lower quality universities and pay high tuition fee. This kind of educational system in China addresses the issues of equity within the system and financial burden on the low-income families. The needy students have not easy access to bank loans and pay high interest rate for private lending. The low-income families confront the dual problem of higher tuition fee and higher interest rate for private loan. The higher tuition fee in lower quality universities increases the burden on lower income families. Therefore, the quality of life for such families is badly affected. The research has found that lowering the high tuition fees in lower quality institutions can improve further access in higher education and lessen the burden on lower income families. The author has concluded that government should give importance to primary and secondary education to improve the intellectual level of students from low-income families (Wenli Li 2007, p. 734).

The rate of return to education is very low in China resulting from the data of 1980s. In this research, Haigheng Li utilised household survey data of 1995 for urban China. The findings show that the present rates of return to education are considerably higher than in the past. The overall rate of return is 5.4% with 4.3% and 6.9% for men and women respectively. According to the author's findings, the overall return to education is comparatively lower in China mainly due to the lower return for elementary school. The average rates of return to education levels above elementary school are remarkably higher. He provides two reasons for this difference. Firstly, he estimated the hourly wages instead of annual earnings because highly educated workers work fewer hours on average. Secondly, the earnings increase with the progress of economic transition. This is in accordance to literature on return to education in transitional economies for Eastern Europe and Russia. The author has found that the private sector awards more to more educated people whereas returns to education are more to low-income and less developed provinces (Haigheng Li 2003, p. 316).

In 1997, nearly 65% of workers were employed in state owned industries, whereas in Russia in 1994, nearly 70% of workers were employed in private or privatised firms. These figures show that in Russia mass privatisation has already occurred whereas in China this process is still going on. That is why the increase in rate of return in China is still smaller than other transitional economies (Haigheng Li 2003, p. 327).

Vietnam: According to Moock (2003) the salary reforms were introduced in Vietnam after 1993, so rates of return to education on average are lower. For males and females, the returns to higher education are 10% and 12% respectively. Private rates of return are lower for secondary and

vocational education than for university education; 4% compared to 11%. In Vietnam, more than 80% of workers are self-employed and involved in multiple jobs. The best data available for 1992-93 have been used in the research. Moock did not include self-employment in his research, so the rates of return to schooling are much lower than for international students. The author argued that younger cohorts get higher rates of return to schooling than older cohorts. Rates to schooling in Vietnam are lower in private sector as compared to public sector. Most of fresh graduates, three to four years ago, got recruited in public sector showing a high return to public spending. In contrast a recent study shows that the trends are changing and now more graduates get positions in private sector. As a part of cost recovery, the introduction of tuition fees in 1993 and by reducing the unit cost of education, the rates of return can be significantly increased in coming years (Moock 2003, p. 504).

In developing countries public resources are limited, it is important for policy makers to understand the individuals' behaviours to access higher education. This notion would be supportive for policy makers to adopt effective policies related to tuition and students loan decisions. If students of developing countries have financial support in the form of tuition fee or loan from public then access to higher education will not be restricted due to funding. In those circumstances, the society and government will encourage expansion of higher education.

3.3 Combining all significant factors of the presented countries

The analysis of the above mentioned countries present the picture that many countries are targeting and determined to increase the access in higher education for improving the economic growth and becoming knowledge economy. There are different examples of Western European countries that favour the widening participation in higher education with restructured policies (Greenbank 2006, p. 160). In France, since 1968 the major changes in higher education policies happened by restricting the entry for wide participation, and managing the increasing success rate in secondary and undergraduates programs, thus the social forces were active for bringing the changes in access opportunities. Due to the related private and social benefits, Germany also experienced uneven expansion in 1990 by introducing the reforms of increased tuition fee and selection at entry. The Netherlands determined to become knowledge economy by improving the access of higher education up to 50% of the age cohort. Pakistan has 3% participation rate in higher education and the government is planning to increase access. There exist social benefits in society that increase attraction of people for having access to higher education in Pakistan. These social forces push

political authorities to invest in higher education; additionally Human capital theory gives more worth to this idea, which was earlier neglected in Pakistan. There is a shortage of qualified labor in the job market for consumer and new graduates at both public and private sector in Pakistan.

In Pakistan, there are limited directions for students at secondary level such as medical, engineering and social sciences. Curriculum is not revised and new educational programs have not been created at institutional level, which build hindrance for expansion. More incentives in tuition fee or loan subsidies and alternative ways at secondary level will attract students for having access to higher education in Pakistan.

In the South East Asian countries such as China, India, Turkey, Singapore and Taiwan due to the associated private and social benefits, governmental authorities are providing more importance to higher education sector by increasing financial incentives and participation. Most of the countries like China, India and Vietnam have high tuition fees but along with providing student support loan for increasing access in higher education (Wu & Zheng 2008, p. 1). Pakistan has not started these reforms which are necessary for increasing access and is lacking financial resources for universities. Moreover, the Commonwealth of Learning recently estimates that 150 million students will be in need of postsecondary education by 2020 (Altbach 2008, p. 1).

In Pakistan most of the people make their earnings from agricultural sector. But now the society members have realized the importance of education for the economic growth. The government's planning for the expansion of HE will only succeed with the parallel expansion of industrial sector and job market. Otherwise the new graduates will confront the issues of unemployment, congestion and low wages like Taiwan and China. The issues of unemployment, quality of graduates and job market should be addressed in the planning for the expansion of higher education (Thomas 2006, p. 4). Therefore, the experience of several countries emphasizes and encourages the participation in higher education for attaining a better position in the labour market and getting private as well social benefit for the economic growth. The figure of global trends about the expansion of higher education in Western European and South Asian countries is attached in appendix 1 for consideration.

4 THE CONTEXT OF PAKISTAN

The present chapter is organised to present the context of Pakistan related to its social-economic features and the higher education system of Pakistan for understanding the challenges faced by the country regarding access and quality issues. Moreover, the analysis of the system is presented regarding expansion trends.

4.1 The social-economic background of the country

The Islamic democratic Republic of Pakistan is located in South Asia having borders, in the East with India, in the West with Iran and Afghanistan, and in the North with China. The population growth rate 1.6% (CIA World Fact Book 2010) is quite high which places the country as the sixth most populous country of the world and second most populous country in the South Asian region with an estimate of 167 million (2008) inhabitants. Pakistan is the lowest income country according to Human Development Index (HDI) and ranked at number 141 out of 182 members (Human Development Index 2009). Pakistan was one of those 12 countries in the world that spent less than 2% of GDP on education until 2004-05 (Higher Education Policy Note 2006). The country suffered many wars and continuous disagreement with neighboring India over Kashmir since its independence in 1947. Due to political crisis in the South Asian region and internal political disputes, the development situation is quite slow and unstable.

Along with the above data, it is also considerable to mention that such circumstances resulted from poor quality of governance, a high rate of corruption, an unsecure political climate, and multi-dimensional poverty such as unemployment, low-income, and brain-drain. The literacy rate is only 53%, whereas the participation rate in higher education is 3% of the age cohort (18-23), which proves the importance of education among young people. The carried above examples moderately explains that the transition of Pakistan towards a knowledge economy manifested by economic social and political changes of impulsive breadth and depth.

4.2 Higher Education system of Pakistan

The restructuring of higher education system would manifest the starting point of essential revolution in Pakistan. The higher education sector started to undertake numerous political changes after the period of 2004.

The higher education sector in Pakistan consists of 124 universities that comprised of 67 in public and 57 in private sector. Furthermore these universities have been categorized as general and professional, their constituent colleges and centers, affiliated colleges and professional colleges. The numbers of general universities are more than professional ones. Various types of professional universities are engineering, agricultural, medical, management sciences, arts, architecture and others. Apart from universities, 754 Science & Arts degree colleges and professional colleges, provide higher education in the country. All colleges are affiliated with universities for the examination and degree awarding purpose. Two thirds of the whole population of the age cohort is studying in affiliated colleges that provide teacher training, technical and professional training, and social sciences. The affiliation system has more contribution towards the deterioration of the academic standard in the country. For example the oldest university of the Punjab has more than six hundred affiliated colleges in different provinces of Pakistan. Many graduate courses in the universities last two years while honor degrees require three years, engineering four to five years, medicine five years, and agriculture four to six years. The master program required two years, MPhil one year and PhD four to five years (The Task Force 2002, p. 56).

In the past, University Grant Commission (UGC) was functioning as an intermediate body and passed on funds generated by the ministry of finance to the universities. The universities were not performing well and the quality of graduates was comparatively low to other countries. The HEC is a totally different institution with different types of functions. HEC was established under the Presidential Ordinance No. L III in September 2002 to improve and promote the higher education and research in the country for the socio-economic development (Higher Education Commission Ordinance 2002). The government has delegated necessary powers to the HEC and enlarged financial support to upgrade the higher education sector. The task force (2002) recognized the access and quality as major issues for the development of higher education in Pakistan. The new introduced projects of HEC is the foreign faculty-hiring program, hiring Pakistani PhDs from abroad, the linkage program between local and foreign universities for research and faculty development (The task force 2002, p. 33).

The HEC has rapidly evolved the information & technology infrastructure for increasing efficiency of the projects and to increase connectivity among universities in the country. The digital library for supporting the research activities and providing latest information and knowledge has been established by HEC. All public and private sector universities have access to the HEC digital library and their websites are formalized about their programs and activities. In the period of UGC, there was not digital infrastructure existing for universities and the task force also pointed out the need of

easy accessible information about universities. The digital reforms provide latest information of peer review journals, electronic books and articles for many disciplines (The Task Force 2002, p. 35).

There were only 2 HEIs at the time of independence of Pakistan in 1947, and the yearly increase in number of public higher education institutions until 2006 has been shown in figure 4.1. In the early 1970s, the President of Pakistan Zulfikar Ali Bhutto, nationalized all the educational institutions. Pakistan’s whole system of education was run by the state until 1980s. The new public universities were established to meet the growing demand for higher education. During that period only 25% of applicants (high school graduates) got admission in HEIs due to limited number of institutions (i.e., 20 institutions). In 1979 a commission from the government was appointed to review the capacity of public sector institutions to increase the access. The commission concluded that the public sector could not provide the education at all levels. In the mid 1980s, the private sector institutions were permitted to operate on the condition that they should fulfill the required standards. The first private institution was established in 1983 (Sedgwich 2005, p. 3).

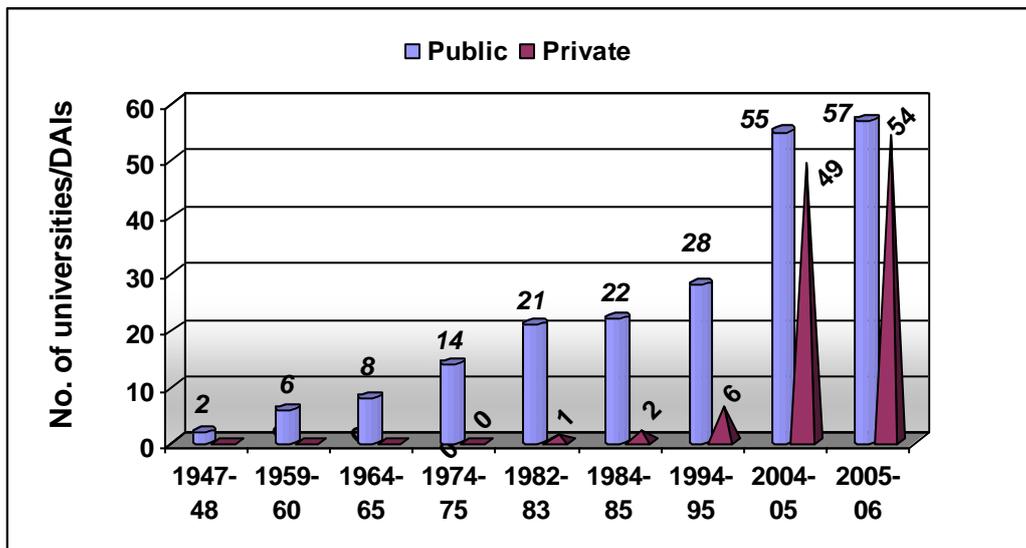


Figure 4.1: The growth of Universities and Degree awarding Institutions

The student enrollment in public sector is 0.34 million, whereas in private sector it was 0.061 million in 2003-2004. The over-all access in higher education is approximately 3% of the age-cohort that is comparatively low compared to other Asian and middle-income countries. The following table presents the data about the number of students appearing in all examination Boards

for higher secondary examinations (11-12 grades). The annual percentage of success rate increased from 38.30% in 2000 to 50% in 2004. The participation rate of students for this examination is also increasing every year and corresponds to annual growth rate of 9.8% as calculated in Table 2. At present the success rate in higher secondary examination has increased slightly in Pakistan. The students' success rate in higher secondary level should be increased further to enhance the access in higher education (Higher Education Policy Note 2006, p. 68).

Table 4.1: The statistics of high secondary certificate examinations (for grade 12) showing the access to post secondary education

Year	2000	2001	2002	2004	Annual growth rate
Appeared	525,739	558,031	502,209	777,680	9.8%
Passed	201,395	248,023	239,967	388,840	16.44%
Pass rate	38.30%	44.4%	47.8%	50%	

Where, Growth rate = $[\text{natural log (final year)} - \text{natural log (first year)}] / 4 * 100$

Source: (Higher Education Policy Note 2006, p. 69)

The calculated annual growth rate has been illustrated in the table for presenting the success rate in different years on the basis of high secondary certificate examination that provide entrants for higher education. Meanwhile, the above mentioned features depict the past and present condition of success rate in higher secondary school examination in Pakistan from 2000 to 2004.

4.3 Challenges Faced by the Higher Education of Pakistan

The major challenges to the higher education system of Pakistan are inevitably related to the overall restructured perspectives of higher education and particularly with the widening access of the latter. Among these challenges peculiar for the national sector the following ones can be identified.

Low literacy rate: The literacy rate is only 53% that provide lower rates of entrants for higher education than in any country in South Asia. There exist many reasons of this lower value as the primary and secondary education is not compulsory in the country and the net enrolment rate of 52% and 19% respectively (Higher Education Policy Note 2006, p. 4). These facts show that both government and the society are not attaching required importance to primary and secondary education that provides entrants for higher education and therefore the recent literacy rate of 53% (2007) is comparatively low. The desire to provide the expansion of HE for well-being and economic growth of the country instead of other levels of education demands a necessary cooperation between the political and social forces.

Insufficient public funding: The public spending provided insufficient budget for education sector of only 2% that is half of the value recommended by the United Nations (4%). The governmental authorities brought changes regarding the funding allocations of higher education that were Rs 3.9 billion in 2001-2002 whereas this value increased up to Rs 10.9 billion in 2004-2005 and further Rs 17.3 billion in 2005-2006. An increase of more than 450 percent occurred in just four years including both recurrent and development (Higher Education Policy Note 2006, p. 31). The authorities have tripled the public funding for higher education which had never happened in the history of Pakistan. This large increase and the HEC restructure policies showed that the government had keen interest in improving this sector.

Low access to higher education: In 2005, the number of enrollments was 534,000 or 2.5% of the age cohort (18-23) and if the numbers of enrollments in affiliated colleges are also included then this value would increase up to 807,000 which still represent 3.8% of the cohort (Higher Education Policy Note 2006, p. 67). Beside, the task force in 2002 recognized the low access in higher education as one of the major issues in Pakistan.

Low quality of graduates: As per student expenditure is related to the quality of graduates, accordingly the expenditure increased up to US\$ 956 in 2005 (Higher Education Policy Note 2006, p. 25). The issue of low quality of graduates along with low access to higher education provides certain challenges that can only be resolved by joint efforts. The faculty development program, the universities' access to HEC digital library, the internal ranking system among universities all these efforts were launched for encompassing the issues of deteriorating quality of graduates.

Comparatively low tuition fee: The public HEIs generate 41% of their recurrent expenditures from own resources (11% from tuition fees, 12% from affiliation, 8% from sources like examination fee and others), therefore depending on the government for more than the half (i.e. 59%) of recurrent expenditures (Higher Education Policy Note 2006, p. 11). The tuition fee would increase by 5% per

annum (in per capita terms) and would increase at the same pace while other fees (like affiliation fee) and revenues twice as fast for the universities (Ibid, p. 77). The equity of access can only be maintained in parallel with increasing tuition fees if the need based scholarships and loan schemes are introduced for students having poorer socio-economic backgrounds.

Less-intake in scientific fields: The general universities have diversity and largest share of total enrollments that is approximately 79% in 2005, in which science programs like physics, chemistry, biology etc make up about 40% of the total enrollments and arts, social sciences, business, IT and languages make up 39%. The intake in agriculture, engineering and medicine is 5%, 13% and 3% respectively. If the existing trend continues then the gap in general and other universities (agriculture & engineering) would increase up to 90% in 2015 (Higher Education Policy Note 2006, p. 67). The proportion of intake in scientific and general fields has relation to the evolving labor markets needs.

Issue of left aside cohort: The students succeeding in the Higher Secondary Examination (HSE) are the possible candidates for the higher education. The participation rate as well as the success rate for the higher secondary examination is increasing in Pakistan. The annual percentage of success rate increased from 38.30% in 2000 to 50% in 2004 (Higher Education Policy Note 2006, p. 69). The participation rate of students for this examination is also increasing every year and corresponds to annual growth rate of 9.8% as calculated in above mentioned Table 2. As only 3% of the cohort has access to higher education so then the remaining is left side. There should be some systematic and flexible policies for further increasing the success rate at secondary level that is necessary to improve the access to higher education.

Growing disproportion of student teacher ratio: In 2005, the student teacher ratio was 19:1 that would be raised to 25:1 by 2010 (Higher Education Policy Note 2006, p. 78). Due to the determined target of increasing participation in higher education sector, this step would increase the work load of faculty members but improvement in teaching methods and intense use of technology would ensure that quality would not be compromised by this measure. This avenue would improve the internal efficiency within the university system.

Low qualification of the major part of faculty members: A small number of (i.e. 25%) faculty members have PhD degrees that are mostly concentrating on teaching activities and the research environment is not being promoted in universities. The major part of the faculty is selected by the competition exams and afterwards faculty members are being cut off from research activities due to the absence of expecting working environment. Additionally, assuming the established student teacher ratio, the total number of full-time staff was 10,500 in 2004 that would increase up to

47,000 in 2015 with the average annual increase of about 3,300 staff (Higher Education Policy Note 2006, p. 74). This large increase in faculty members is required to handle the increasing number of graduates in universities and also demands qualified or PhD degrees holder faculty for promoting the research environment among graduates.

The listed above challenges are primarily caused by the overall socio-economic circumstances of Pakistan and illustrate the conditions under which the national higher education system operates. Therefore, these practical and daily issues state the deficiency of the capacity of national higher education system to take action promptly and efficiently to the new challenges arising from worldwide growth in general as well as from the international higher education policies in particular. The HEC restructured policies are the most significant example in this sense.

4.4 The analysis of Higher Education system of Pakistan

In conditions of the HEC restructured policies including enlargement in public funding, new enrollment patterns for increasing access and initiative for improving quality of graduates, the higher education system of Pakistan faces challenges caused by the relationship between economic growth and higher education. Specifically, the main concern would be the response of the Pakistani universities towards coping expansion trends.

Although the above mentioned situation obviously encompasses the critical conditions for the higher education, however the successful adaptation of the HEC reformulated policies looks challenging within the Pakistani university system. Anyhow some positive features can be identified when analyzing the higher education in Pakistan. First of all, the success rate at secondary level has increased up to 50% providing more entrants to higher education sector. The existing diversity in the social set up makes the system heterogeneous by the level of development. Even though from other perceptions the following aspect is a disadvantageous one, but according to the labor market needs diversity creates more competition and motivation in the society to respond accordingly. The mentioned feature represents the fact that if the participation rate in higher secondary examination increases than there exist more chances of increasing access rate in higher education institutions.

There are several considerable weaknesses of the higher education system of Pakistan including the fewer possibilities for the left aside students that are unable to access HE. Merit is the only criteria for entering into the universities. The enlargement in funding is a significant factor that was utilized for increasing access and quality of graduates but the coordination among faculty members and

graduates is necessary for the mentioned changes and reforms. Another peril that impedes the national higher education to make contribution for the economic growth of the country is the increasing population with highest growth rate. Therewith, the instability of political forces in Pakistan restricted the efficient implementation of the future structural reforms in higher education.

Though, regardless of multiple challenges, issues and weaknesses of the Pakistani higher education system there are numerous opportunities that can be specified here. Firstly, the government authorities have increased the higher education budget three times more which is an essential starting point for increasing enrollments in the form of financial incentives associated with funding formula for the universities. The contribution of governmental authorities is quite dynamic for achieving the goal of knowledge economy. Secondly, the establishment of an organizing body that can make decisions according to the variation and modification in the circumstances namely the Higher Education Commission (HEC). Therefore, the Pakistani higher education system can be perceived as a system which is passing through a transitional phase in which political and executive forces both make joint efforts to improve the system after recognizing its deficiencies and issues. Thirdly, the role of social forces in the form of low tuition fee is rather passive and requires more attention. The absences of multiple loan schemes and scholarship options create hindrance for parents and graduates to respond more actively and willingly. The summary of the analysis of the higher education system of Pakistan in the perspectives of expansion trends is presented in Appendix 2.

5 TRENDS TOWARDS ACCESS AND QUALITY IN PAKISTAN

The theoretical reasons in chapter 2 emphasize the importance of higher education for the economic growth of a country whereas chapter 3 presents the experiences of different countries for increasing access in higher education in the response of social and political forces. The present chapter is aimed to overview the trends and developments in higher education in Pakistan for increasing access along with currently adopted quality measures for the higher education sector by the Higher Education Commission. Moreover, the existing rationale and motivation for improving participation would be analyzed.

5.1 Rationale for the Expansion of Higher education in Pakistan

According to previous studies, even countries that until recently have had small and elitist systems are facing pressures for expansion and there is no country that is immune from the pressure for massification (Altbach 2008, p. 1). Increasing expansion in higher education has become a global trend that paved the way to the qualified labor force for participating in the global market.

Trow (1973) illustrated the world's academic system and divided into three categories such as elitist system that was limited in size and scope (under 15% cohort participating in postsecondary education), mass system (between 20% and 30%) and universal one (above 30%) – arguing that higher education was inevitably moving towards universal access. While the traditional university structure could accommodate up to 15% of cohort, participation rate beyond that would require structural changes (Altbach 2008, p. 2). Furthermore, the author argued that some countries in Asian nations and in Central and Eastern Europe are expanding rapidly (Ibid).

Generally, the economic cycles significantly affect the expansion and demand for access continues always. The expansion is always steady in most of the developing countries including China and India. Despite regional variations, expansion is a worldwide trend at the end of this century (Altbach 2008, p. 3). Considerably, Pakistan also planned to increased participation in higher education for resolving the existing economic problems and getting place in the labor market. The existing issues like poverty elevation, fewer possibilities of social mobility, low literacy rate, lack of qualified personnel and higher growth rate can be managed and handled if the people would be qualified and competent. Furthermore, the World Bank also finds that social rate of return of 10% or more in many developing countries also indicates that investment in HE contributes to labor productivity and to higher long term economic growth (Clark and Neave 2000).

Many studies like Schultz (1960, 1961), Becker (1960, 1964) and Psacharopoulos (1985, 1996, 2003) also confirm that investment in higher education is higher than the rate of return from investment in physical capital (Holttta 1995, p. 123), thus it is necessary to prepare qualified labor by increasing access and quality in requiring fields for bringing the desirable changes in the country.

5.2 HEC's steps towards access and quality

Enrollments pattern: The process of making proposal and suggestions for higher education uncovered that Pakistan has very small size participation group in higher education which is 2.5% (i.e., 534,000) of the age cohort, and if the enrollments in affiliated colleges is also included then this value would increase up to 3.8% (i.e. 807,000) of the age cohort 18-23 for the year 2004-2005 which still represents low participation in higher education sector. The HEC target is to raise enrollments in higher education sector up to 10% of the age cohort by 2015 (Higher Education Policy Note 2006, p. 66). The educational policy and Medium Term Development Framework (MTDF 2005-2010-2015) endorsed steps to raise enrollments in higher education sector by using different modes of education such as mainstream education, distance education and virtual education. The considerable reason for using extended period stem is that in higher education sector many measures need more time to be absorbed and have an impact. The base year is 2004-2005, that means it would be the most recent year for which current figures are known with a sufficient level of confidence. According to the HEC, the equity of access would be the main objective of higher education that motivates to provide the admission of socio-economically disadvantaged students, from under-represented regions and provinces (Higher Education Policy Note 2006, p. 67).

The mentioned university enrollments estimation consists of four areas of study like general, sciences, agriculture and engineering. This estimation also covers Bachelor, Master and PhD programs. The intake in different disciplines of the university is based on the past five year's rapid growth of admission. Merit is the only criteria for accessing university education. The pattern of enrollments has serious incidence to the evolving labor market needs and the country will move towards a knowledge-based economy with modern agriculture, light manufacturing and IT industries (Higher Education Policy Note 2006, p. 72).

General Universities: The general universities have major share of total enrollments as compared to other (engineering and agriculture) universities and have two major categories of general and pure science studies. Different areas of study like arts, social sciences, business, IT, languages are

included in general studies whereas physics, chemistry and biology etc. are part of science programs. The enrollments in general universities made up 79% of total higher education enrollments in which 47% is for general programs and 32% for science programs but this trend does not reflect the future needs of the labor market (Higher Education Policy Note 2006, p. 72). The general universities have much diversity so the largest growth occurred in general and pure science studies. If this trend continues its natural course, there would be substantial increase in enrollments of general universities in both major disciplines of general studies and pure sciences. The situation presents that only few students would be enrolled in the fields of study most needed. There is need to take measures and induce more students into engineering, scientific and technological fields. According to the HEC, the number of enrollments will grow at 16% per annum in general universities and the projection of enrollments will increase up to 579,412 by the year 2010. The general university enrollments would increase their share of total university enrollments from 79% to 85% during the period of 2005 to 2010, in which the distribution of enrollments would be increased approximately to 51% in general fields and 34% in scientific fields, the gap between general and other (Engineering and agriculture) universities would increase more and a substantial increase in both major disciplines of general studies and pure science studies (Higher Education Policy Note 2006, p. 72).

Engineering and Agriculture universities: In 2005, the enrollments were 43,094 and 16,879 in Engineering and Agriculture universities respectively. According to the HEC in 2010, the enrollments would increase with the growth rate of 8% and 5% and the projection of enrollments would reach up to 64,688 and 22,033 in engineering and agriculture universities correspondingly. The overall increase in enrollments would be distributed as 10% in engineering and 3% in agriculture universities by the year 2010 (Higher Education Policy Note 2006, p. 71).

Distance education: In 2005, the total enrollment were 175,183 in distance education that increased fast and reached up to 282,133 with an average growth rate of 5% by the year 2010 in higher education sector (Ibid). As some universities have distance education programs this also contributes for increasing access in higher education.

Importance of Higher Education Certificate: The Higher Secondary Certificate (HSC i.e., exam after grade 12) mainly regulates access to universities. The number of students taking HSC has increased steadily more than 10% per year during 2000-2004 and the pass rate has increased from 38% to 50% respectively. For instance, in 2004, the total 778,000 students took exams and half of them 388,840 passed as a result in the same year, the universities admitted 1/5 (389,00) of those who passed the HSC exams. Those students, who passed the exams but are not admitted to the

university, usually enroll in professional colleges which are affiliated with the universities and some enter in the labor market (Higher Education Policy Note 2006, p. 69). But the left aside group is large enough and there is need to create more options to absorb the large bulk of successful candidates in higher Secondary education in universities or professional colleges for widening participation in higher education.

According to the available data from the HEC by R10, the enrolment trends in the period of UGC have been compared with the era of higher education commission in figure 5.1 by the researcher for the ten public universities that gives a clear picture of sharp increase in enrollments in the period of HEC (2000-2007) as compared to that of UGC (1995-1999).

The percentages of annual growth rate and increase in enrolments between different periods have been calculated with the following formulas.

- % annual growth rate = $[\text{Natural log (final value)} - \text{natural log (initial value)}] / \text{number of years between the intervals} * 100$
- % increase = $(\text{Final value} - \text{initial value}) / \text{initial value} * 100$

Between the period of 1995 and 1999, the increase in enrolments accounts for 30% whereas this increase between the period of 1999 and 2008 results in 58% as shown in figure 5.1.

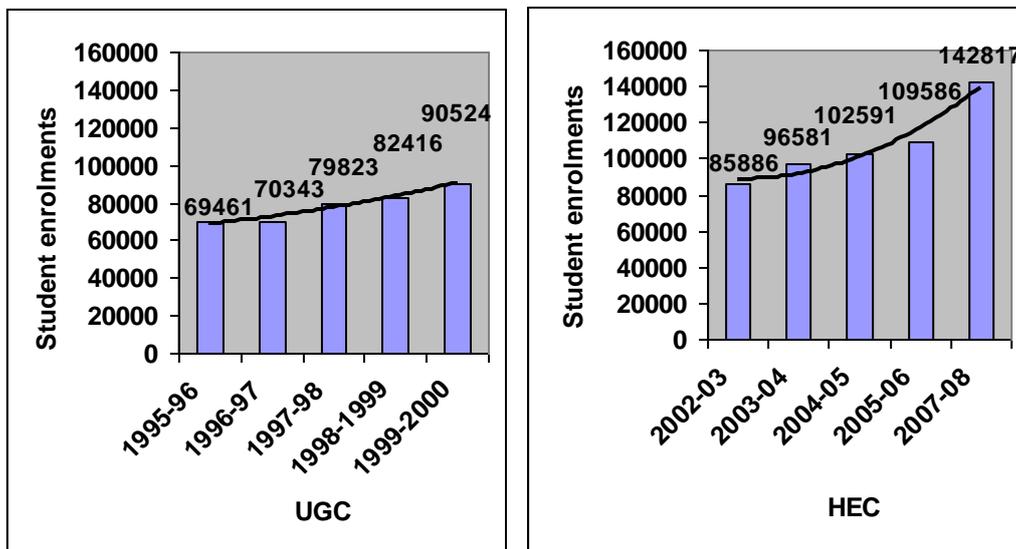


Figure 5.1: Student enrolments in different years in the times of both UGC and HEC

Student Teacher Ratio: The student teacher ratio is related to the internal efficiency within the university system. It can be achieved by increasing an average of 19:1 to an average of 25:1. The main purpose is to reduce the pressure on faculty staff needs and secure considerable savings. The teaching methodology improved by using Information & Communication Technologies (ICT) so the quality would not be compromised by adopting this measure (Higher Education Policy Note 2006, p. 78).

The student-teacher ratio is an important parameter to deal with the cost and growing enrolments in higher education. The idea behind is that if the enrolments increased two times more than the result in doubling of the student-teacher ratio; then the cost per student can be reduced from 30 to 45% on an average scale. The concerning matter is a controversial subject. Many analysts say that extra financial resources cannot increase students' achievements. But many economists have also analyzed that students graduating from well-funded institutions succeed more in the labor market as compared to students belonging to poor institutions. Hiring the required-number of well-trained teaching staff provides encouragement for producing graduates of better quality. Besides, a single teacher can enhance his efficiency by using telecommunication techniques to deliver his lectures in this technological era. Both student and teacher have the advantage of storing and distributing the data electronically (Altbach & Johnstone refer to Hartnett 1993, p. 135).

With the help of modern instructional technologies, the cost of higher education can be reduced without compromising on quality and by increasing the student-teacher ratio. The student teacher ratio for the ten public sector universities from the period 1995 to 2008 is presented in the figure for analyzing the modified situation among universities after the implementation of HEC policies as compared to the previous era (1995 to 2000) in figure 5.2. Firstly, the reason for this trend is that the rate of increase in enrolments is higher than the increase in faculty members. Secondly, the rationale for this increased ratio is to make universities more efficient and cost effective for accommodating the increasing expansion in higher education. It is necessary to accommodate the rapidly growing expansion in higher education for a country where the growth rate for population is also very high.

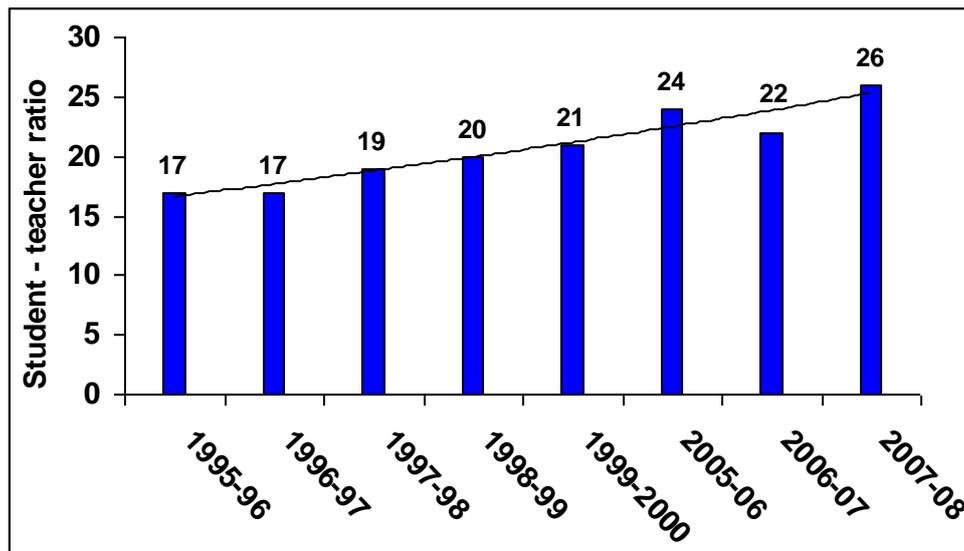


Figure 5.2: Student-teacher ratio is gradually increasing¹

If we compare the student teacher ratio with other countries then the minimum ratio fluctuates among New Zealand (9:1), Finland (12:1), Austria (13:1), USA (15:1), India (16:1), UK (18:1), and the maximum varies amid Thailand (35:1), Greece (30:1), Pakistan (26:1) (Higher Education Policy Note 2006, p. 26).

➤ *Per student Expenditure:*

The expenditure per student is recognized as a measure of the quality of graduate as well as the average-public spending for each student (Dahar & Iqbal 2009, p. 4). Before the creation of HEC, the low spending on higher education resulted in lower spending per student in the period of UGC. When the governmental authorities' attached greater importance to higher education and the HEC increased the recurrent and development grants for HEIs then the amendments gave increase in the expenditure per student. The figure 5.3 shows that in recent years, the public-sector HEIs spend two times more on a single student as compared to the past. If we compare the per student expenditure with other countries then the difference seems high. India (US\$ 2,486) and Turkey (US\$ 2,059), for example, spend more than the double for a single student as compared to Pakistan (US\$ 956). Moreover, the USA (US\$ 20,545) spending is the highest one in the world and Australia (US\$

¹ The data of 2001, 2002, 2003 and 2004 was unavailable.

12,416) and the UK (US\$ 11,822) make the second and third positions respectively (Higher Education Policy Note 2006, p. 30).

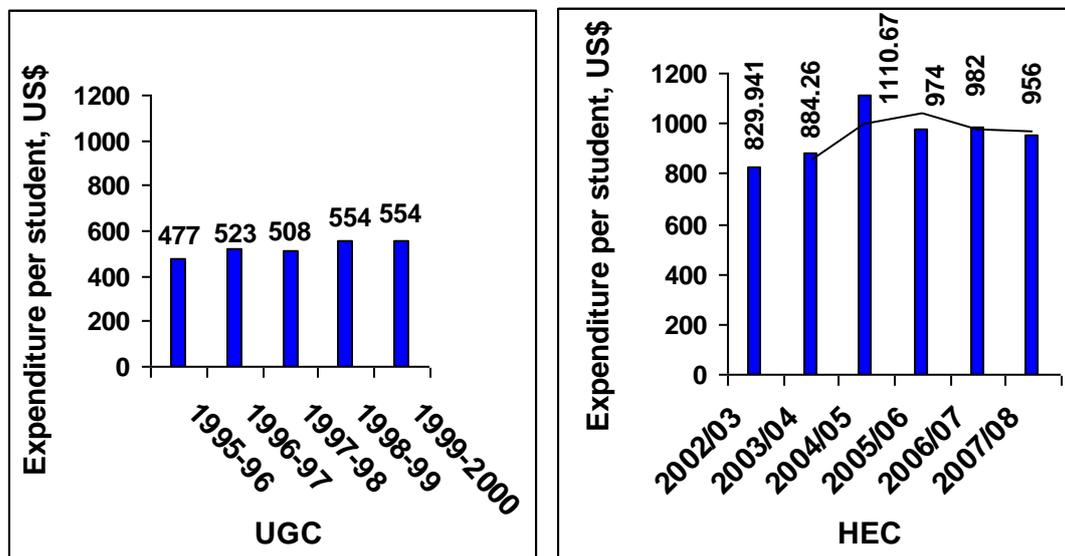


Figure 5.3: The expenditure per student in public universities in the times of UGC and HEC

➤ *Tuition fee*

As mentioned earlier, the public universities get 11% of their recurrent expenditures from tuition fees. The student contribution in the total fee is comparatively low and the major part is paid by the government allocations (The World Bank Report 2006, p. 30). The team of World Bank has suggested Pakistan to increase the tuition fee in the universities and affiliation fees collected from colleges, by 5% annually along with other fees and revenues having double speed. With this increase during 2005 – 2015 the universities’ own resources will contribute to 23% of the total resources (Ibid). The fee range varies from university to university with the requirements of the programs. Now public universities are increasing their tuition fee after the HEC reforms but the increase is negligible according to the inflation rate in the country (R3). In fact, the equity of access can only be maintained if the need based scholarships and loan schemes are introduced for students having poorer socio-economic backgrounds with the increase in tuition fee (The Boston group 2002).

➤ *Formula funding*

In the past the universities got the government grants in lump sum amounts based on negotiations. Due to the absence of systematic accountability and determined targets in most of the universities, the annual grants sometimes decreased instead of increasing. Moreover, the universities did not have the autonomy to spend these funds according to their needs to become more productive. Among the universities there was no balanced system to distribute the funds according to the size, need and performance (Salmi 2006, p. 3). To address the above mentioned issues, the HEC introduced a formula funding system that enabled the distribution of government grants on the basis of equal rights. In 2004, the HEC declared a formula about funding the universities which consisted of four elements. The enrolments accounted for 40%, performance 25%, cost adjustment 25% and historic inequities 15% for any public HEI according to this formula. The required factors of maintenance and cost adjustment have been given worth in this initial formula of HEC. When the universities cost adjustment issues resolved to some extent then the formula was again revised (Higher Education Policy Note 2006, p. 36).

The new formula has direct relation with the main issues of universities that are low access and poor quality of graduates. In 2006 the HEC changed its formula by giving the enrolments a worth of 85% whereas the performance - 15%. This formula has more emphasis on enrolments due to the low participation rate in higher education of the age-cohort (i.e., 3%). The universities get every year an increase in their grants with respect to the size of students and performance in teaching and research through formula (Ibid).

➤ *Incentives for faculty members*

The new funding formula of 2006 is providing the expansion in higher education at all levels of education and specially enhancing the research activities in the public universities. Due to this funding formula a rapid expansion in higher education is occurring in Pakistan and new researches are being conducted in almost all universities that was not the case before 2004. There exist incentives for faculty members in the form of revised pay scale and upgrading by the HEC. Thus the increased number of PhD students and the number of faculty members having PhDs is related to the issue of performance of university personnel. The performance is also providing the expansion at PhD level to bring more talented graduates towards research. To pursue PhD degrees not only the researchers but also the promoters (PhD holders-senior professors) become involved in the research. As compared to the past, now the large increase in the number of publications by Pakistani researchers can be noticed in the international journals (Higher Education Policy Note 2006, p. 75).

➤ *Ranking criteria*

The ranking is a tool to inform the public about the universities and their current performance. This will give prestige to the universities, increase competition among them and provide devices to compare themselves against their peers. The ranking has not direct link with the funding of universities rather provides information about their performance. The Chairman of the HEC announced a board to approve the ranking criteria. By analyzing international systems and practices, the methodology of ranking was developed by the HEC's quality assurance committee (QAC) first in 2004. The ranking process shared the valuable data with general public concerning the condition of higher education in an institution. Moreover, the ranking of universities gives the information about the key indicators of higher education institutions and enables students, parents and all other stakeholders to make wise decisions on higher education institutions (Ismail 2008, p. 2).

The universities and degree awarding institutes awarded charters after 2001 have not been included in this ranking. Likewise the private universities, which are not fulfilling the cabinet criteria, have been excluded from this ranking. Universities providing distance learning have not been included in this ranking. The relative percentage of key issues of students, facilities, finances, faculty and research being 17%, 15%, 15%, 27% and 26% respectively is taken as the basis of ranking (Ranking of Universities 2006).

Quality Enhancement Cell:

For improving the standard of quality assurance, the Quality Enhancement Cells (QEC) were primarily established in ten public sector universities in 2005 by the HEC, however presently these quality cells are in 45 public sector universities (Fakiha 2006, p. 3). The major functions of these cells is to evaluate the degree programs by preparing self assessment report on the basis of the HEC prescribed criteria, reviewing departmental performance within the framework of quality standards, internal academic assessment of different programs and departments, and generating research based activities. The QECs utilize innovative assessment strategies for the measurement of learning, and recognize that not only teaching rather other educational entities such as digital library, regular library, guest lectures, seminars and other scholarly facilities maintain a standard according to the satisfaction level of the stakeholders (Fakiha 2006, p. 8).

The Dean heads the QEC and reports directly to Vice Chancellor/Rector as well as communicates with the outside bodies. The QEC enhances the public confidence in quality & standards of the awarded degrees. The quality of teaching and learning in each subject area is reviewed and various

quality evaluation methods are developed. The academic affiliation with other institutions is examined for assessing management and quality of programs (Fakiha 2006, p. 20).

Additionally, those areas are identified where international collaboration can be established as well as administrative support is needed to update their current practices according to the international scenario. The information related to the projects, conferences, scholarships and funding is provided to the faculty as well as students to learn and participate in scholarly activities locally and internationally. Different workshops are conducted about topics like communication skills for faculty and administrative staff, innovative teaching methodologies, presentation skills, classroom assessment and access to digital library (Ibid).

5.3 Major achievements and progress made by HEC in increasing access and quality

According to the World Bank Report, revolutionary changes were made in the higher education system of Pakistan to address the major issues identified by the Task force (2002). The Boston Group in 2002 and the Higher Education Commission (HEC) of Pakistan in 2004 were established to implement the practical framework. In the perspective of increasing access, fifty one new universities and degree awarding institutes, and 18 campuses of existing universities were established during the period of 2003-2008. In addition, the university enrollments tripled from 135,000 in the year 2003 to 400,000 in 2008. This major achievement can compare well to the previous era situation and also present the active participation of the age-cohort group after introducing revolutionary changes of the HEC in Pakistan (Executive Director HEC interviewed, 20th July 2010).

Alongside, the key amendments were introduced for the universities to motivate graduates for increasing participation in higher education and the number of private enrollments increased from 25% to 30% that meant self-finance seats increase in the public universities. According to the amendments, if the graduates have negligible eligibility differentiation in the merit criterion then self-finance seats would increase participation in the relevant fields of study.

Beside the above mentioned modifications, the ranking criteria for the universities were introduced first time in the history of the Pakistan for increasing competition among universities and providing information to the beneficiaries including students, parents and stakeholders in 2006. Every year the obtained ranking points which are related to the quality of features of the universities are published by diverse media sources such as newspapers, universities' own journals and television channels.

Earlier the public universities have not had the legal right to increase the tuition fee but now it would increase by 5% annually and the universities would be eligible to generate 21% of their resources in place of 11% from diverse sources. Moreover, the central achievement of the HEC was in increasing the higher education budget three times more which is a big step towards increasing access and quality of the higher education in Pakistan. Interestingly after adopting the new funding formula, a bigger financial grant would go to universities which are almost 85% on the enrolment basis and 15% on the quality basis for increasing access and quality. This major amendment would motivate universities to pre-adjust their goal according to the social and economical circumstances or background for improving the low access and quality issues.

As the Government of Pakistan determined the objective to become knowledge economy, the higher university enrollments would give to scientific fields in general universities. The enrollments in engineering, medical and agriculture universities would increase by 8% and 5% respectively and the general universities would grow at 16% per annum that consist of diverse social sciences and science programs.

In order to deal with the issue of low quality of graduates, the HEC established a digital library and all students of public universities have access to 45,000 textbooks research monographs as well as 25,000 international research journals, which is regarded as one of the best digital libraries anywhere in the world. Moreover, other improvements like hiring foreign qualified faculty members, revised pay scale for professors and increase in tuition fee are associated with per student expenditure and have a direct link to the quality of graduates. As a result, the growth of international research publications from Pakistan was from only 600 research papers in the year 2003 to 4300 research papers in 2008 (Executive Director HEC interviewed, 20th July 2010).

Therefore, as it follows out of the presented above information, a considerable progress can be registered during the period 1947-2003, there was not a single Pakistani university that could be ranked among the top 600 universities in the World but now three are in this category (The Daily Times 2007). The higher education was among the priority areas by the governmental authorities for the economic growth and resolving the social issues of the country. Approximately 5,000 Ph.D. level scholarships have been awarded for study in technologically advanced countries that is considered the largest program in the developing world along with some 3,000 indigenous scholarships (Executive Director HEC interviewed, 21st July 2010). The whole systematic planning and restructured policies were a considerable attainment by the HEC for bringing desirable changes after considering the issues of low access and quality.

5.4 Major obstacles facing the higher education system about access and quality

As it was argued in section 4.3, the overall higher education context was in improvement and upgrading phase, however “the political and economical instability of the country” (The Newspaper Dawn 2010) caused numerous problems within the higher education sector of Pakistan. Along with the overall contextual obstacles of the higher education sector discussed in the 4.4, there are a number of challenges which are caused by increasing access and quality reforms. Therefore, the present section gives brief overview of the challenges faced by the higher education system of Pakistan on its way of transferring from the elitist system of higher education into mass system practices.

In fact, higher education needs governmental support for organizing long-term projects, as the Pakistani universities do not have diverse sources of funding except of tuition fee, affiliation fee and governmental assistance, yet they are struggling to attain prominent position in the international market. If the financial support by the government would be stopped then the healthy survival of universities seems difficult (Zubair 2008, p. 3). Due to the alteration in political forces, the continuity in higher education funding looks complicated, as media is giving various remarks about the universities’ financial situation. If it happens in the near future then the most possible solution would be high increase in tuition fee that would hinder the participation of deprived groups. There is need to find out other options for increasing access in higher education in Pakistan instead of government funding.

Another major challenge faced by the higher education of Pakistan is the lack of opportunities for graduates after completing their degrees. The unemployment rate was 14% and 12.5% in 2009 and 2008 respectively (CIA World Fact Book 2010) if the HEC is not able to manage the existing 3.8% of age-cohort (2010) graduates then it will be challenging to approach 10% age cohort in 2015 according to the determined target. For resolving the socio-economic issues, more options like Technical Training colleges at the higher secondary education level should be promoted as the bulk of graduates are not frustrated in the job market and prove a source for raising the economy of the country.

6 CASE STUDY

6.1 Introduction

In this chapter, I will mainly present data collected during field work in Pakistan in July 2010. I visited three public universities and got different amount of data from them. The given data accomplish my needs to some extent, and correspond to each other. With this fact in mind, I find it most meaningful to deal with the data as three case studies for understanding the expansion and quality perspectives in different universities. I will present data particularly related to the two parameters of **students' enrollment**, and **expenditure per student** for analyzing the expansion and quality measures in three universities. Moreover, the student-teacher ratio was measured and the funding perspectives were discussed while interviewing the concerned officials. The contributing factors for the economic growth presented in subsection 2.1.1 will be overviewed and applied to the three case studies of public sector universities in Pakistan.

6.2 General description and Analysis of three Universities

6.2.1 Case 1: University of Agriculture, Faisalabad

Background: Primarily, it was founded in 1906 as the Punjab agriculture college and then upgraded to university on 1st November 1961. Currently the university consists of 4 institutes namely, institute of food science and technology, institute of horticultural sciences, institute of soil and environmental sciences, institute of animal nutrition and food technology. The university has 6 faculties and 32 affiliated institutes.

The authorities of this university consist of the senate, the syndicate, academic council, the selection board, the finance and planning committee, and advanced studies and research board. In most of these groups vice chancellor is the chairman whereas all deans, chairmen and associated professors are the members. In some of these groups a member from provincial assembly, judge of higher court and member of the HEC take part.

This agriculture university has high-quality ranking, so the research investigates the trends of the University for increasing access in higher education along with the adopted strategies for improving the performance and quality of graduates.

Students' enrolments for measuring access – C1:

The figure 6.1 is showing that the number of students in this university increased gradually with low growth rate in the previous era of 1995 to 2001. But after 2001, the university observed uneven increase in the number of students until 2004. However, in the past three consecutive years from 2005 to 2008, the number of students is increasing steadily in the university. This sort of linear and sharp increase in the number of enrolments shows that there was planned expansion of higher education in the university by the government (HEC) from the year 2005.

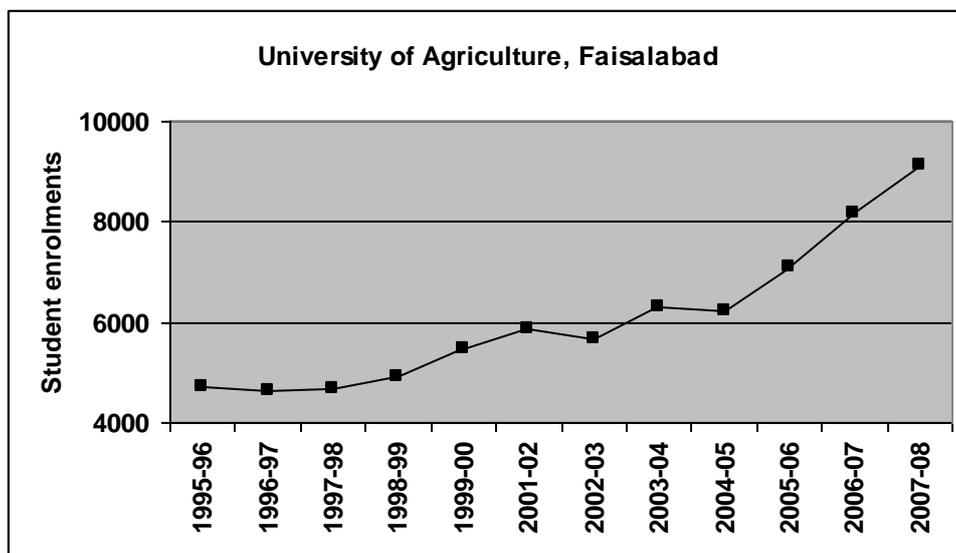


Figure 6.1: Student enrolments in different years for the university of agriculture Faisalabad

During the interview R1 illustrated that “*Actually the new disciplines have been created and the number of fixed seats in existing programs also slightly increase each year but the merit criterion is maintained, additionally, the GRE tests and other screening tools also implemented for the purpose of admission selection in the University*” The university intended to increase participation but there was no conciliation about the merit rather due to the creation of new disciplines, more students have opportunity to be selected after accomplishing the GRE test and merit conditions. The number of fixed seats in already existing programs increases indistinctly e.g. by 50 to 52 each year that does not overload the teaching staff. In this university, the enrollments have increased for PhD to 575, for M.Phil to 1682, for Master in Science to 2183 and for Bachelor in Science to 5560; enabling total enrolments to reach 10,000 for the year 2008-2009. *University was lacking the research activities until the previous decade whereas the new research students are contributing*

substantially to increase the access according to R2. The HEC funding incentives are encouraging faculty members and students to participate in research activities therefore the increase in PhD and M.Phil students is improving in the university; this was described in section 5.2.

According to the university, one new sub-campus in Depalpure has been established in 2006 with the approval of financial grant by the Prime Minister of Pakistan during his visit to nearby city Okara in 2005, thus 200 acres land were allotted by the Punjab government for campus building and research farm. Currently, the new campus is offering four year bachelor programs and three years B.Sc honors, additionally three major disciplines initiated including Agronomy, Soil Science and Plant Pathology during the winter semester 2006-2007. The twenty six new qualified and committed faculty members were recruited in the sub-campus, in which six are PhD, two are visiting scientists who have experience of working in foreign countries, and eighteen are selected under the faculty development program from abroad. Similarly, the other new-sub campus of Faisalabad University initiated in the city of Toba Tak Singh by the Punjab government for skill development in poultry and allied sectors in 2005. One may speculate that the widening participation possibilities were limited in the previous period of UGC but the financial incentives from the governmental authorities encouraged the university to expand access in higher education. According to the HEC policies, the agriculture sector would increase enrollments with the growth rate of 5%, therefore, the above mentioned evidences show the planned increased of 7000, 8000 and 9000 students for the years of 2006, 2007 and 2008 respectively.

Expenditure per Student for measuring quality – C1:

The expenditure per student (EPS) is a different parameter to identify the quality of the university. The value of EPS can be measured by dividing the total amount of recurrent and development grants by the total number of students. First the **reasons and different evidences** of increase in EPS are elaborated, afterwards the change and improvements in the quality would be considered.

First of all, the data of figure 6.2 presents that during the year 1996-1999 the increase in the expenditures per student was very slow or sometimes negligible, whereas after 2004 the expenditures per student grew gradually. The value of the expenditure per student was nearly 52000 Rs and 68000 Rs (i.e. US\$ 788) in this university for the years 2004 and 2007 respectively with the annual growth rate of nearly 5000 Rs (US\$ 46). There is considerable difference between the expenditure per student within three years that was not the situation before 2004. The data presented

in figure 6.2 shows that the expenditures per student were raised in this university after 2004. Many reasons and evidences contribute to this amplification.

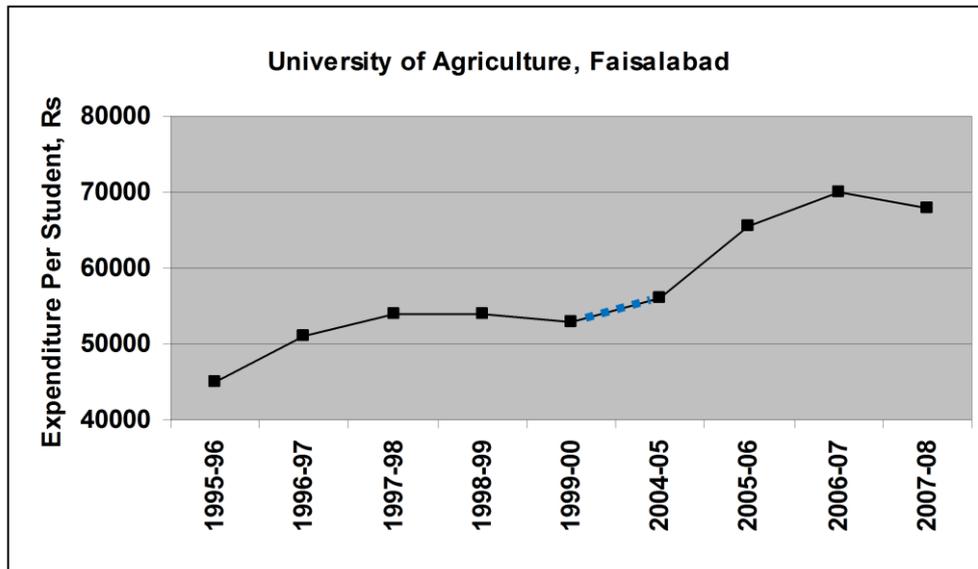


Figure 6.2: Expenditures per student (Pakistani Rs) for different years in the University of Agriculture Faisalabad²

One main reason of the increase of expenditure per student is the enlargement in government funding for both development and recurrent grant of the university. According to the data, the trend in figure 6.3 shows that during the period of 1995 to 1999 the sector of higher education was ignored as the government grant was not increased sufficiently during this period. After the establishment of HEC in 2004, the sudden raise in the public funding shows the government's importance for the higher education sector. Thus, since 2004 the regular and quick rise in the public funding of 350 million Rs, to 610 million Rs for the years 2004, to 2007 respectively has been observed. The own resources of university such as tuition fee, affiliation fee and research project money increased along with the government funding but at a lower rate; for instance the difference between university own resources and government grant for the academic year 2007-2008 was huge (610 million Rs vs. 200 million Rs). Therefore the increase in government funding raised the expenditure per student in this agriculture university that is mainly dependent on public funding instead of own resources.

² The data of 2001, 2002 and 2003 was not obtainable.

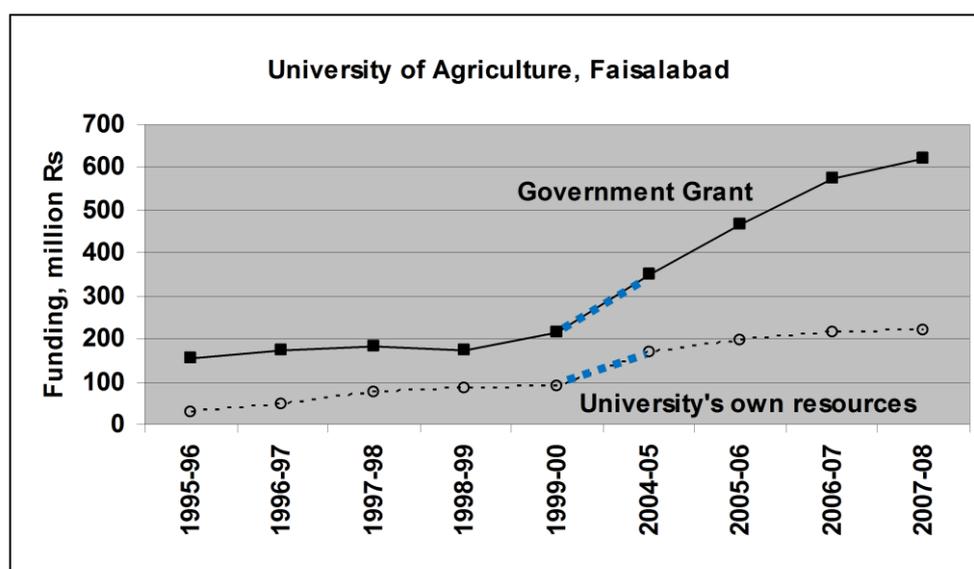


Figure 6.3: Funding trends in different years for the University of Agriculture Faisalabad³

The issue of tuition fee is worth mentioning here. During the interview, it has been clear that this public university does not have high tuition fee and the government financial assistance is a major factor that improved the expenditure per student. The R1 responded during interview, “*the tuition fee is not high in this university, for the local students it is 11335 Rs (US\$ 131.5) for the first six month semester and 4500 Rs (US\$ 52) for the second semester, whereas the foreign students pay 24000 Rs (US\$ 278) and 7000 Rs (US\$ 81) for the first and the second semester respectively; the tuition fee increased negligibly with respect to the inflation rate*”. It has been mentioned in section 4.3 that government authorities recommended an increase of 5% in the tuition fee from the year 2006 but this university had a smaller increase in tuition fee and the governmental endowment is contributing more for increasing per student expenditure.

Secondly, there was a lack of foreign qualified faculty members in the university but with the help of financial support under the foreign faculty hiring program (FFHP) a number of PhD holders have been hired by offering high salaries. According to R1, “*there was need of more allocations for brain gain and the increase in expenditure of the university offered attractive packages to foreign qualified*”. Furthermore, R2 explained that “*since 2005 due to the large increase in government grant the pay scale of indigenous university professors is revised and funding for new projects enlarged*”. The evidence clarifies the importance of more funding and expenditures for upgrading

³ The data of 2001, 2002 and 2003 was not accessible.

the quality of faculty members. The R1 additionally illustrated that, *“the 22 faculty members are pursuing their post-doc degrees in different technologically advanced countries under HEC and other agencies scholarship programs. The collaboration among foreign as well as local faculty members is providing necessary educational and research services”*. Furthermore, due to the qualified academics the numbers of research articles have increased in international journals from this university.

As this university was increasing access opportunities, there were many chances that academic staff might become overloaded from the increasing number of students in different programs and sub-campuses. But the administrative authorities maintained the standard student teacher ratio (STR) with the help of increase in per student expenditure. The student teacher ratio has been taken from the total number of faculty members and divided by the total number of students in the university. The data of figure 6.4 shows the student teacher ratio of 30:1 and 15:1 for the years 2004 and 2007 respectively. This trend shows that the ratio of students and teachers increased gradually except for the year 2004 where this ratio escalated up to 30:1. The reason is linked with hiring less faculty members for accomplishing the requirements of growing numbers of students in the university; therefore the figure is showing a big curve. According to the administration, *“currently the number of faculty members were 594 for the year 2008-2009, in which 50% were foreign qualified and 128 faculty members were on the panel of the HEC approved PhD supervisors. The university hired faculty members to teach ever-increasing number of students entering university after the increase in funding resources. The idea behind was that the students per teacher should not be high to avoid the deterioration of graduates’ quality and academics’ performance. The average student teacher ratio of 16:1 for the year 2009-2010 is appropriate according to the standard”*. Furthermore, the R1 explained in the interview, *“Every supervisor cannot have more than five PhD students”*. With the help of financial resources the university managed to keep standard STR and provided additional support to the faculty members in the situation of overwork for maintaining the quality.

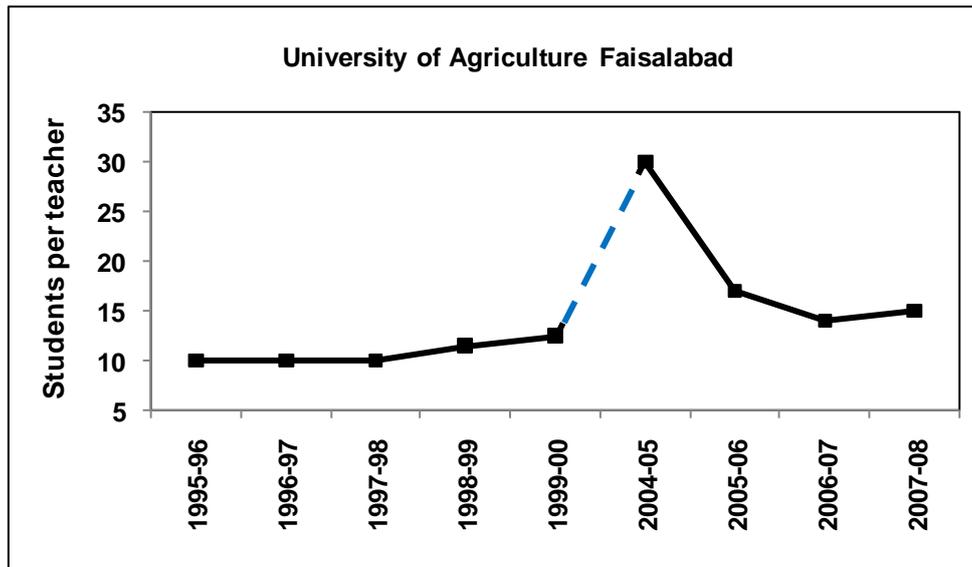


Figure 6.4: Students per teacher in different years for the University of Agriculture Faisalabad⁴

Thirdly, there was a shortage of well equipped laboratory as well as better learning class facilities. Due to the increase in expenditures per student, the university has provided the required facilities to the student to improve their learning and research activities. The first funding formula presented in section 5.2 provided allocation to the universities for improving the inequity facilities to the students. One of the students explained, “*Now the students have required modern lab equipments, multi media facilities and access to the new HEC’s digital library. These facilities provide assistance for increasing student efficiency*”. The digital library is of great help to students that was not the case in the previous era or before the HEC. The mentioned evidences emphasize the required enlargement in expenditure per student for improving students’ and academics’ efficiency at bachelor, master and PhD levels.

All the above mentioned reasons and evidences confirm the large increase in expenditure per student for upgrading the quality of agriculture university of Faisalabad. Now I would explain about the quality of the university by measuring different factors due to the increase in expenditure per student.

Firstly, the research publications of a university show the performance of academic members and graduates. The quality or performance of this university can be measured with the help of growing numbers of research publications. According to the administration, during the year 2008-2009, the

⁴ The data for 2001, 2002 and 2003 was unavailable.

research scholars have published 871 research papers among which 301 were at international level and 570 at national level. The improvement in research publications is showing that the increase in expenditures upgraded the quality of research work and enhanced the advanced research contribution in international and national journals.

Secondly, the sources of funding have increased for this university; the R2 explained that, *“the university won 155 research projects in different faculties during 2008-2009, additionally collaborations with overseas universities for many projects are under process”*.

The third factor that measures the quality of the university is the establishment of Quality Enhancement Cell (QEC) in university by the year 2005. The R2 responded during the interview, *“For addressing the issue of low quality, the Quality Enhancement Cell (QEC) was established by the HEC; this cell revises the curriculum according to the standard, controls the research performance of each department and conducts student surveys for teacher ranking within the university”*. The administration mentioned that, each department has a program team and an assessment team in the university that implement three performas including faculty course review, student course evaluation questionnaire and student research progress review. The feedback on three performas is submitted and entered into the database. Then the self assessment teams further evaluate the respective program. Moreover, the best teachers' awards are granted yearly on the basis of the students' evaluation forms. Monthly meetings and workshops at HEC have been attended by the QEC responsible person”.

The fourth factor is the university ranking that confirms the increased quality of this university. According to the administration, due to the better performance in research and teaching this university was ranked number one according to the HEC's evaluation in 2006 in the agriculture sector and 4th among all universities in Pakistan with the high ranking points.

The analysis of agriculture university Faisalabad presents the enlargement in funding by the government as well as the per-student expenditure. Many required facilities in the university have been provided to measure and improve the quality. The university has more research projects, more research students, more research publications and more graduate programs according to the labor market needs. The improvements in research and teaching facilities have upgraded the quality of the university that can be verified by the good ranking points.

6.2.2 Case 2: University of engineering and technology (UET) Lahore

Background: This University was setup as Mughalpura Technical College in 1921, afterwards transformed into a university in 1961 and now is considered the oldest engineering institute of Pakistan. In 2000, the university had 16 departments, 2 research centers and one campus. Anyhow currently, it has 6 faculties in which departments are 33, research centers are 14 and the established new campuses are 4 in the cities of Gujranwala, Kala Shah Kaku and Faisalabad to accomplish the growing needs of engineering graduates in the country. This engineering university is one of the best universities of Pakistan in engineering and technology field according to the HEC ranking in 2006.

Students Enrolments for measuring access- C2:

If we consider the history of student enrollments from 1995 to 2008 according to the figure 6.5, a progressive increase in the number of students occurred in this university except two years of 1999-2000 and 2004-2005 in which an enormous increase in the student enrolments happened.

According to the interview with the administration of the university, there were only 11 graduate programs before the year 2000 in the university but 8 new programs such as computer engineering, mechatronics & control engineering, building and architectural, environmental, transportation, geological, polymer and product & industrial design engineering started after 2000 in the main campus of the university. Moreover, there were 32 postgraduate and master programs before 2000 but 23 new programs like control engineering, electronics & telecom., manufacturing, management of engineering, building engineering, integrated building design, transportation, applied physics, applied chemistry and applied math masters were initiated in the university. The new PhD and M.Phil programs also started in some particular master programs. Therefore, the university has a trend of progressive increase in which 6000 students mounted up to 9000 during the period 2001 to 2008. The PhD enrolments have reached up to 188, international students' enrolment is 640, undergraduate are 7005 and post graduates are 1860 that are included in the total number of enrolments. The accommodation facilities for the hostel students have been upgraded and can accommodate 2700 students now. During the interview R3 mentioned that, "*The student enrollments would increase up to 9725 by the year 2010*".

Furthermore, the administration of the main campus explained that Faisalabad campus was established in 2005 and became the centre of all industrial endeavors. This campus is offering bachelor's degree in four areas of chemical, electronic & telecom, mechatronics & control

Engineering and basic sciences in which altogether 435 students were enrolled for the year 2008-2009. The 50 new faculty members were hired in which 7 are PhD holders and approximately 10 have completed their PhD from the main campus. The senior faculty from the main campus is also involved in teaching activities in the new campus of Faisalabad. The 209 acres land is provided by the government of the Punjab for this new campus of engineering university. Some new engineering departments' buildings like textile engineering & management and faculty of civil engineering are under construction. Furthermore, the campus administration would interact with the industry for consultancy and research purposes that is situated in the Faisalabad city (Administration of UET, 15th July 2010).

The second new campus of the University was established in the Kala Shah Kaku city in the year 2006. This campus is providing bachelor degrees and technology programs in three disciplines of chemical, electrical and mechanical engineering. The bachelor in technology is a new program that is started by the campus in 2009. The university administration illustrated that *“the total number of students is 450 for the year of 2008-2009, and the university planned to recruit 70% academic staff with PhD degree for improving and upgrading the quality of graduates”*. This campus is also established in the industrial sector of the country for promoting research activities in the university (Administration of UET, 17th July 2010).

The third campus of the university was established with the name of Rachna campus for accomplishing the needs of industries in Gujranwala, Sialkot, Gujarat and other cities in the year 2005. This campus is also offering bachelor's degrees in four disciplines of electrical, mechanical, industrial engineering and computer science by the government of Punjab in the year 2005. The total number of students is 420 in graduate programs and the number of the faculty members is 52 in which 5 are PhD holders (Ibid).

Moreover, this university has one new institute with the name of AL-Khwarizmi Institute of computer science that was established in 2006 for promoting collaboration and linkages with indigenous & international industries in the field of software engineering and digital control system. All the above mentioned evidences that were gathered during the interview from the administration of the university show that the governmental authorities have established three new campuses and one research institute for expanding access opportunities in the field of engineering and technology after the period of 2005. It is also apparent that quality is not affected by the amounting trend of students' enrolments and access is increasing by the establishment of other new campuses in this university. The merit criterion is high in the university and the expansion has not affected the quality of the graduates.

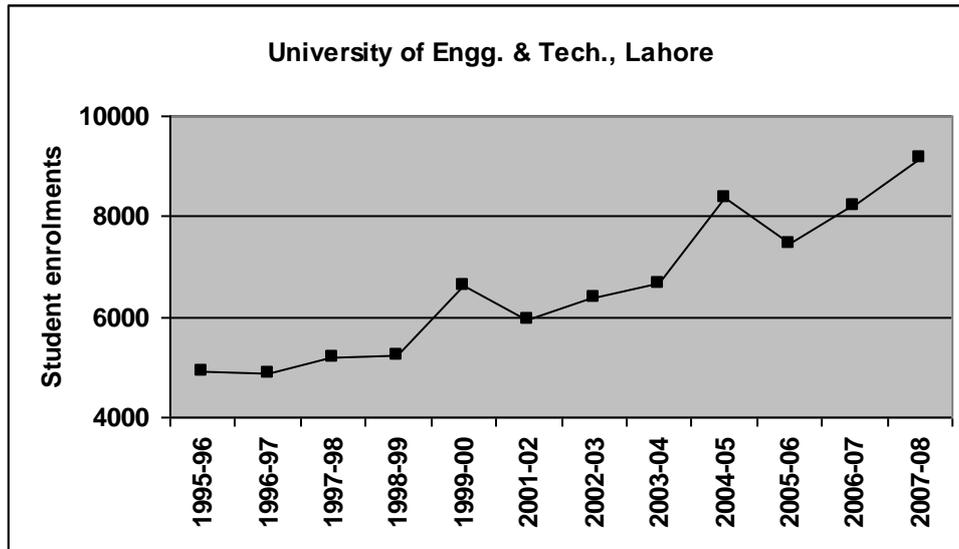


Figure 6.5: Student enrolments in different years for the University of Engg. &Tech., Lahore.

The R3 who is a Focal Person of HEC in this university mentioned, *“The Self-finance seats are banned in Engineering and Medical universities since last two years. Only the sole criterion is merit for taking admission in this university. As the university departments increased from 16 to 33, so the student’s access in new disciplines is the major cause of improving participation”*. The focal person of the HEC establishes a link between particular university and the HEC. One may speculate that this engineering university has trend towards widening participation by increasing access opportunities in the form of new disciplines and establishment of three new campuses in different cities. The self-financed students’ entry is prohibited by the governmental authorities therefore the merit or quality is not affected by the expansion and more opportunities have been created for the successful students of higher secondary level as mentioned in section 4.3. The administration of the university mentioned that *“the competition among the students for entering the university is very tough and students with GPA higher than 3.5 are usually admitted”*.

Per student expenditure for measuring quality- C2:

The figure 6.6 demonstrates that per student expenditures were not high in the period from 1995 to 2004 that is almost ten years, but after recognizing the importance and necessity of qualified labor force the overall expenditure per student increased up from almost 37000 Rs (US\$ 429) to the level of 67000 Rs (US\$ 777) for the year 2004 and 2005 respectively. Then the increases reach up to

76000 Rs (US\$ 881) and 75000 Rs (US\$ 880) approximately for the year 2006 and 2007 respectively. One may consider there is comparatively large increase in per student expenditure from the year 2005. Many reasons are involved in this large increase. The R5 was interviewed for the research purposes who explained, “During vacations one summer course was conducted by the foreign qualified professor which was considerable to broaden the graduates’ synopsis; however it was free for the university students and the university paid 50000 Rs (US\$ 580) for the lessons.

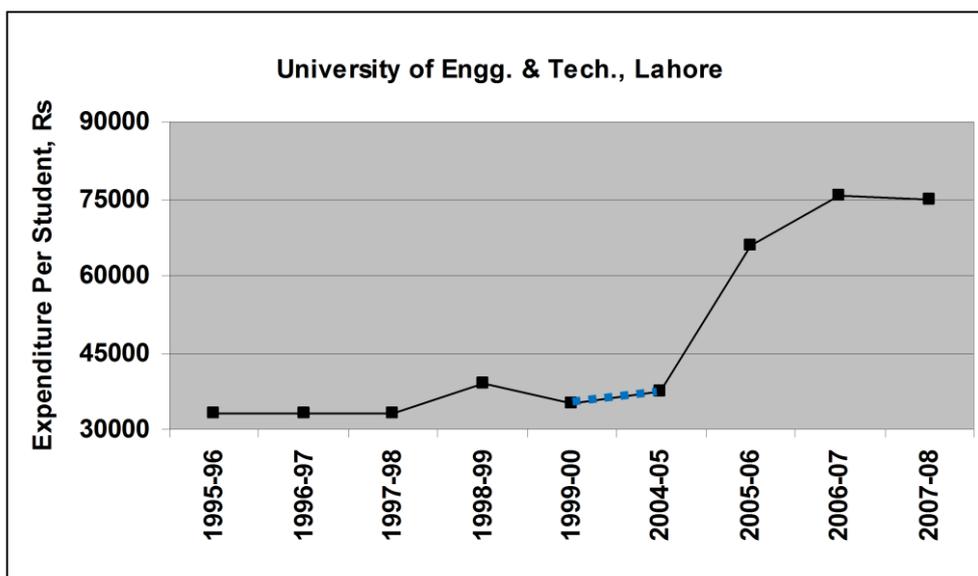


Figure 6.6: Expenditures per student (Pakistani Rs) for different years in the University of Engg. & Tech., Lahore.⁵

Anyhow, the figure 6.7 presents the evidence of increase in expenditure per student in this university. The government funding has increased from 325 million Rs in 2004 to 725 million Rs in 2007. There is considerable difference in both values (i.e. 325 million Rs and 725 million Rs), thus the expenditure has increased enormously within three years. The large increase in government funding is the main reason for upgrading expenditure per student in the university. But on other side, it can be observed that university’s own resources only once increased from 150 million Rs to 225 million Rs for the year 2004 and 2005 correspondingly but the value remained almost constant for the next two years of 2006 & 2007. The figure is also presenting the huge difference between the government grant and the university own resource, anyhow this engineering university is depending on governmental funding and the tuition fee is not high.

⁵ The data for 2001, 2002 and 2003 was not obtainable.

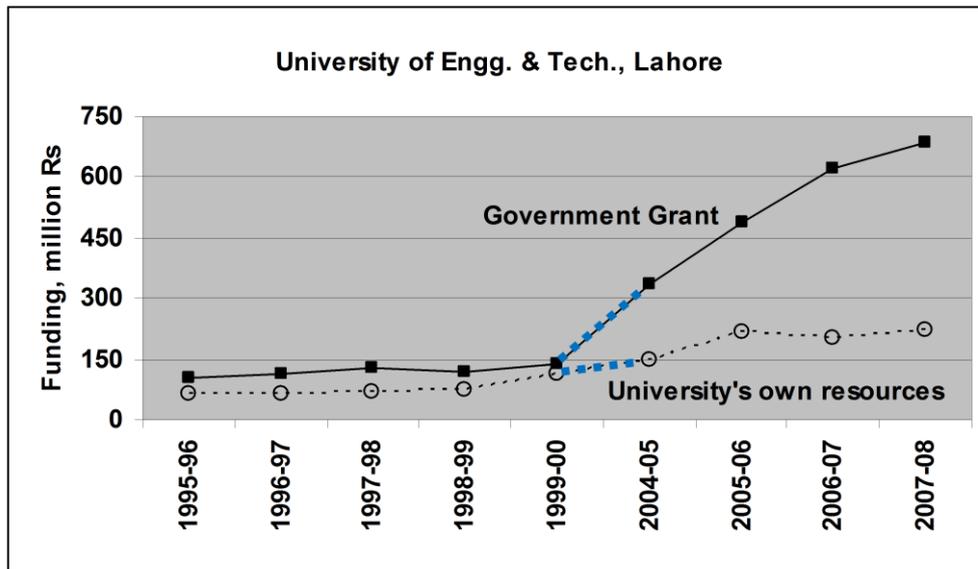


Figure 6.7: Funding trends in different years for the University of Eng. & Tech., Lahore.⁶

The HEC amplified the allocations for the year 2004-2005 and started diverse mega projects like three new campuses in other cities, establishment of new departments, formation of 12 new research centers, hiring foreign faculty and more PhD students. All amendments targeted to improve the different features and make the university the best one. The quality enhancement Cell is also established in the university that overviews the curriculum of graduate and Master programs according to the innovation and developments. Currently, this university is ranked 281 among top 300 universities of the World. These trends show that both the university and the government targeted to improve the performance of the graduates and the quality of university by increasing the governmental allocations instead of tuition fee.

The increase in per student expenditure is supported by the enlargement in university funding. This university is also widening access opportunities by introducing new disciplines and establishing new campuses. It is significant to analyze the situation of student teacher ratio for understanding the affects of increase per student expenditure in the university. The student teacher ratio is extracted from the total number of students divided by the total number of faculty members.

The figure 6.8 is presenting that the student teacher ratio started to increase during the year 2000 and the trend was very exceptional in the year 2004 but very soon due to hiring more faculty members the standardized ratio is achieved that is 16:1 in the year 2008. The figure is making a big curve as the required faculty members have not been hired for the year 2004 and the scenario

⁶ The data of 2001, 2002 and 2003 was not accessible.

changed abruptly by hiring academic staff to fulfill the demands of increasing numbers of students. The administration of university explained, “In 2000 the number of faculty members was 281 which have increased to 741 in 2009; the foreign and local PhD students are 122 and 37 respectively”. Moreover, R3 explained, “The university has future vision to expand the number of faculty members to 750 by the year 2010 and 865 by the year 2015 and foreign PhD training (50–70% of total teachers) by 2015”. Therefore the university would improve participation along with the increase of faculty members to tackle the issues of congestion and supplementary burden on faculty members. On average the number of students in undergraduate class is 40. With the help of increase in per student expenditure the university was capable to maintain standard student teacher ratio by hiring qualified faculty members.

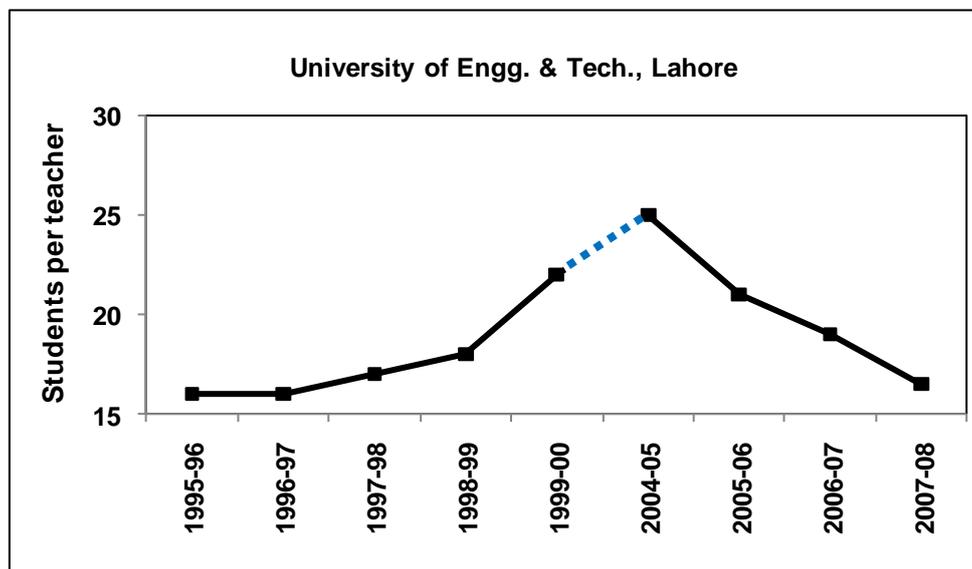


Figure 6.8: Students per teacher in different years for the University of Eng. & Tech., Lahore.⁷

The R4 argued, “The government contribution for the university is 70% whereas the 30% funding of this university is self-generated, furthermore the university conducts consultancy to different companies. The Alkazmi Institutes that conduct teacher communication courses is significant source of income generating”. This university is depending more on the HEC funding for development projects and recurrent expenditures. Moreover, R4 mentioned that, “the tuition fee is 25000 Rs (US\$ 290) per semester of six month but more than half is paid by University loan scheme and students

⁷ The data of 2001, 2002 and 2003 was unavailable.

contribute only 14000 Rs (US\$ 162) for one semester". These evidences show that the university is not depending on tuition fee rather makes huge contribution in the half portion of tuition fee by loan subsidies for increasing access possibilities.

Moreover, the concept of digital libraries is expanding since 2000s due to global connectivity of universities with each other. The university has access to the HEC digital library for collecting, organizing, preserving, and accessing knowledge that improves the research capabilities.

Due to the improved quality, the university publishes one research journal. Earlier this university was among top 600 ranked 595 but due to all the financial support of the HEC the University has improved enormously and was ranked 281 among top 300 in the World in 2009. The university has the target to become the leading world class engineering university and play a leading role as a university of Engineering and Technology by conducting teaching and research for the industrial, technological and economic development.

6.2.3 Case 3: University of the Punjab, Lahore

Background: This University was established in 1882 and now has become the oldest and largest in Pakistan. Three Noble laureates from this university have made the university more prestigious. This university is located in historically and culturally enriched city of Lahore and plays a leading role in the higher education of the country.

This university has 14 faculties in which departments are 73, constituent colleges are 10, and affiliated colleges are 557. The university has in total 4 campuses; 2 in Lahore, 1 in Gujranwala and 1 in Khanspur near Murree. The total number of the faculty members is 634. The library of this university is called Punjab University Library and was built in 1882.

Student enrolment for measuring access – C3:

This university is providing access to a gigantic pool of graduates. The figure 6.9 is demonstrating that the university has largest number of students that is almost 28,000 for the year 2008. When we look at the previous years from 1995 to 2003, the student enrolments increased gradually and slowly whereas an enormous increase in the enrolments occurred in the year 2004. Therefore, after 2004 the trend of increase in student enrolments continued steadily but irregularly and unevenly. For instance, there were almost 25,000 to 24,000 enrolments for the year 2003 and 2005 respectively. But afterwards, the enrolments have increased up to 27,500 and 28,000 for the year

2006 and 2007 respectively. The evidences show that sometimes the increase is up to 1000 students (i.e 2005-2006) whereas for the next year the increase is 2000 students (i.e 2006-2007).The year 2007-2008 is showing the increase of only 500 students.

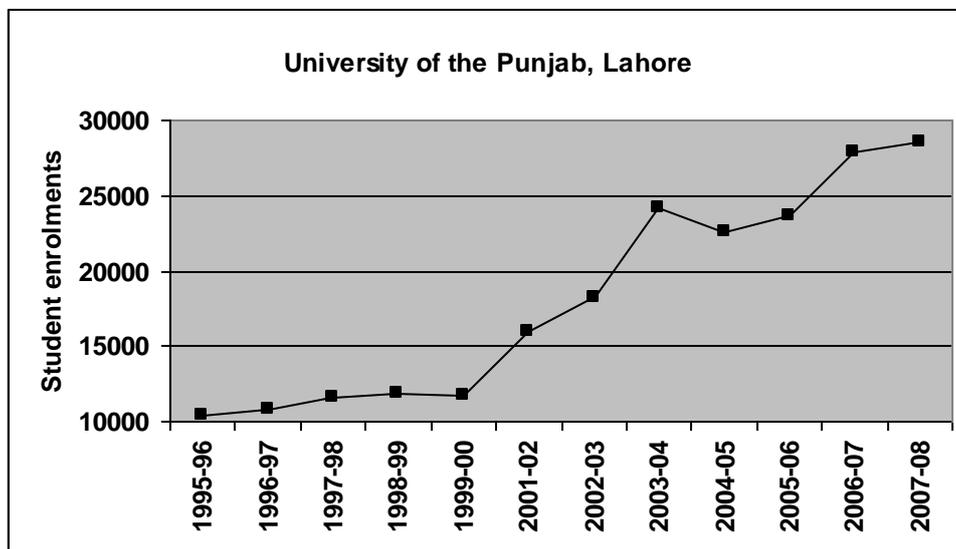


Figure 6.9: Student enrolments in different years for the University of the Punjab, Lahore.

According to the administration, the first campus Allama-Iqbal (Old Campus) was established in 1882 and situated in the oldest building of the university that has 14 departments related to the languages and Fine arts studies. The second campus' name is Quaid-i-Azam Campus (New Campus) that covered a vast area of Lahore city and has 13 faculties such as Arts & Humanities, Behavioural & Social sciences, Commerce, Economic & Management studies, Education, Engineering & Technology, Islamic Studies, Law, Life sciences, Medicine & Dentistry, Oriental Learning, Pharmacy, and Science with different departments. The university has more than 63 departments in which 620 permanent faculty members are performing research and teaching activities. The third new Gujranwala campus of this university was established in the city of Gujranwala in a rented building that comprised of four departments including business administration, commerce, law and IT with the help of the Prime Minister of Pakistan. The fourth new campus was established in the Khanaspur city with the name of Sir Syed Campus. For the year 2008-2009, the total number of on campus students have increased up to 30,000. Currently for the year 2009-2010, the University has 73 departments in which Master level programs are 90 and bachelor level programs are 30. The university has many off campus programs for the graduate and

post graduate students, therefore every year about 350 exams are conducted and the number of off campus students is 442,000 for the year 2008-2009.

According to the R8, *“the university is conducting classes in the evening for self-supporting programs since 2006 and the total strength is approximately 25 students. These self supporting programs have been started in particular demanding disciplines”*. It has been clarified after conducting interviews with administration and the particular respondents that a number of seats in the form of self supporting evening programs have been created for increasing access as well as new departments and disciplines were introduced in the university since last four years.

These amendments and measures are providing a pool of students for this university with more funding possibilities by the permission of governmental authorities. The interviewee R6 illustrated that, *“this university has already enormous access but now the need is to improve features concerning quality matters”*.

Expenditure per student for measuring quality – C3:

The R7 explained *“the chief mission of the university is to increase the quality, the member of the QEC review curricula design according to the determined objectives”*. The data shows that expenditure per student was rising constantly in this university during the period of 1995 to 1999. The data about expenditures per student from 2000 to 2003 is unavailable but in 2004 this expenditures dropped down dramatically compared to the past period instead of increasing. The figure 6.10 shows that in 2004 a large increase occurred in the number of students with higher students per teacher ratio. Due to higher students per teacher ratio the expenditures per student became lower in 2004. After 2004 the expenditures per student started to increase again due to hiring more teachers in the university. During the interview R6 explained that, *“the Punjab University has self-supporting programs in few disciplines that are conducted in evening classes for providing student participation. In self-supporting class, all students are paying comparatively higher tuition fee than the morning students”*.

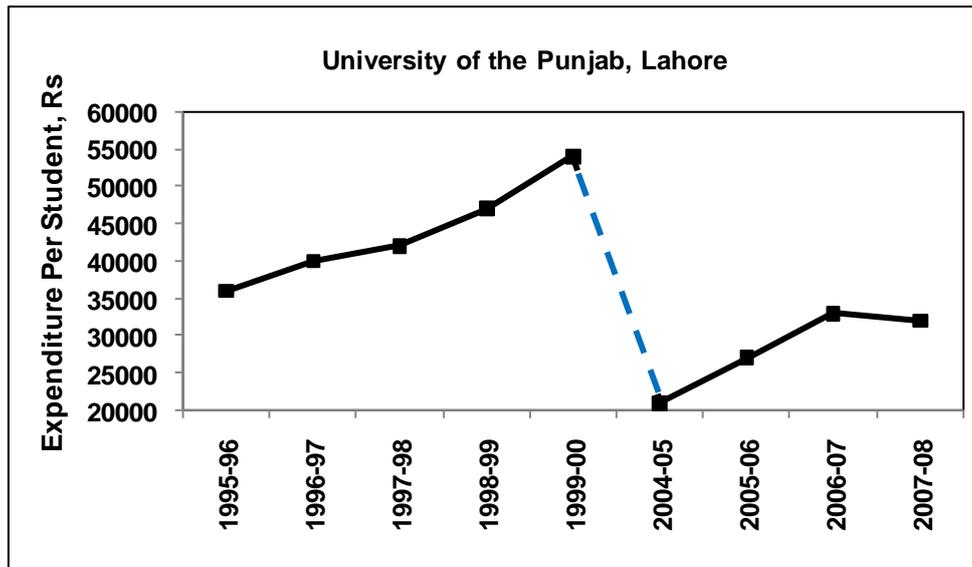


Figure 6.10: Expenditures per student (Pak. Rs) for different years in the University of the Punjab, Lahore⁸

According to the figure 6.11, the distinguished feature of the Punjab University is that the university owns financial resources always remained higher than the government grants in spite of lower tuition fee. This university has diverse sources of income but the main income in the own resources comes from the affiliation of 634 colleges in different districts of Pakistan. Therefore, this university is not depending much on the HEC rather on its own resources although the HEC is providing financial support. On the other hand the university's own resources increased at higher rate almost double compared to the government grant due to two reasons. Firstly the university increased the number of seats in all degree-awarding programs and colleges besides earned money from affiliation and for providing examining facilities. Secondly the teaching staff was not increased to teach the increased number of students, making the system more efficient economically.

⁸ The data for 2001, 2002 and 2003 was not obtainable.

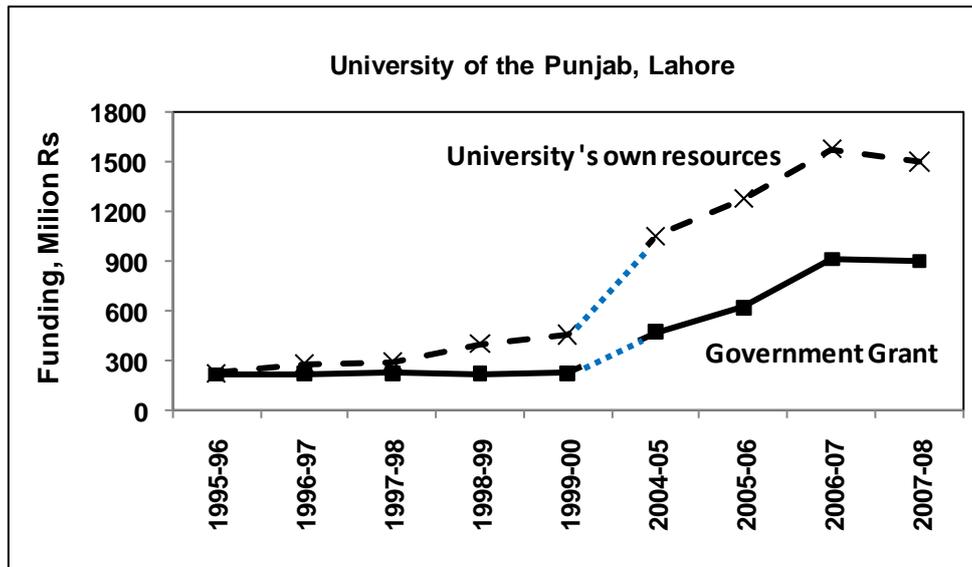


Figure 6.11: Funding trends in different years for the University of the Punjab, Lahore.⁹

According to the administration, “the 205 faculty members out of 634, which is almost 32% of the regular faculty members, hold PhD degrees. The total 117 regular members of this university are doing PhD degrees and getting the PhD allowance of 10,000 Rs (US\$ 116) per month. However, the university has planned to increase the number of PhD holders up to 70% in the next five to six years”. The presented figure shows that the student per teacher ratio is comparatively high in this university that is approximately 43:1 which is highest among the selected three universities. We can observe as shown in the figure 6.12 that the students per teacher ratio is quite higher because the number of students increased without hiring more faculty members in this general university or in other words, the university did not hire further faculty members with the parallel increase of number of students. These aspects are economically efficient but as to quality concerns, the quality of graduates has been affected and the faculty members cannot accomplish teaching and research activities due to heavy load of work.

According to the administration, the library of the university with respect to its volume and size is the largest resource of information in the country. This library has all the digital and online facilities to provide quick access and was equipped with a computer lab. Moreover, in the past decade with the help of HEC, the university collaborated with different 21 universities in subcontinents of Asia, Europe, America and Australia. Its collaboration with 17 international universities is in process.

⁹ The data for 2001, 2002 and 2003 was not accessible.

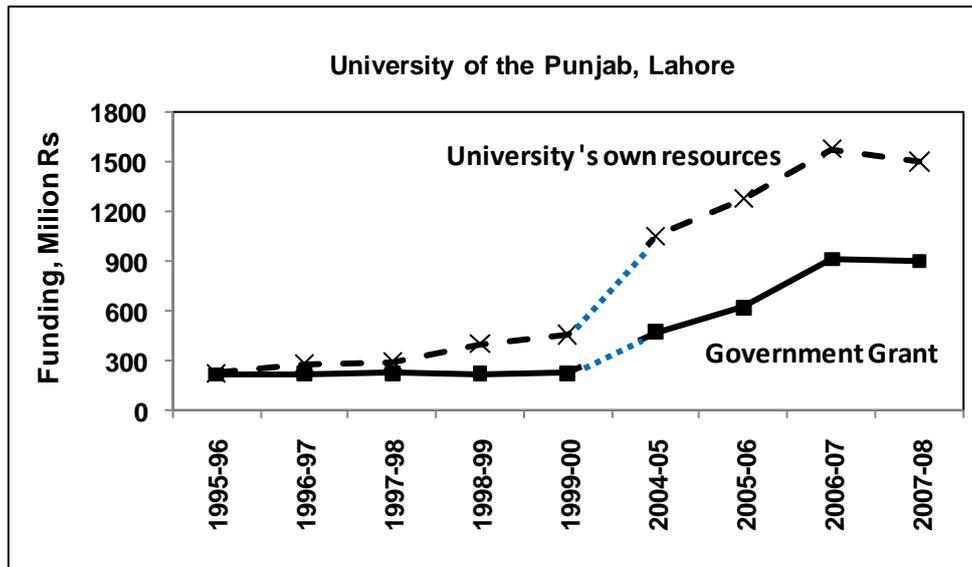


Figure 6.12: Students per teacher in different years for the University of the Punjab, Lahore.¹⁰

Consequently, one may observe that the university has different features in terms of access because the number of seats has been increased by self supporting evening programs initiated in many departments for providing access and generating university funds. Therefore the student teacher ratio in this university is the highest one among the selected universities. The case also presents that the university’s own resources increased enormously as opposed to the government funding but expenditure per student is still lower than in the other two universities. The main reason concerning the matter is that the social sciences as well as applied sciences subjects required less funding as compared to agriculture and engineering universities so the expenditure per student is lower in this general university. Furthermore, for addressing the issue of low quality the quality enhancement cell is also established in the university by the HEC. According to the interview with R9, “*the university hired faculty members on temporary basis to the subject requirements and assisting the academics, many qualified graduates have been given a chance to serve for one or two semesters, so this is quite helpful for managing the increasing number of graduates in the university*”. According to the HEC policies, the general universities would increase the number of enrolments with 16% growth rate as explained in 5.2. This is also one reason of having high enrollments in the general university as compared to the two agriculture and engineering universities.

¹⁰ The data of 2001, 2002 and 2003 was unavailable.

7 CONCLUSIONS

The current chapter is aimed to present the final conclusions of the present research. Some research limitations along with the validity and reliability of conducted study have been presented therewith.

7.1 Main results and achievements

Nowadays the expansion of higher education is not an exceptional phenomenon. Many countries in the world have determination to increase participation in higher education including both developed and developing countries such as the Netherlands, France, Germany, the UK, China, India, Vietnam, Taiwan, and Thailand. The basic reason is that many social and economical benefits are involved in the decision of increasing access (Gallacher 2006, p. 366). Several theories verify the relationship between economic growth and higher education. The quality of the labour (Human Capital) and the enrolments factor are used for increasing access for the economic growth. Moreover, the quality of government and its policies as well as the institutions have considerable importance to establish stability for the economic growth of a country. The theories of rate of return also emphasize the social and private benefits of higher education.

The undertaken study was aimed to explore the trends about enrolments and per-student expenditure factors. Therefore, primarily the higher education system in Pakistan was explored regarding its restructured policies and expansion trends for becoming knowledge economy. Then the three case studies of public sector universities were analysed to investigate the answer of the following research questions.

1. What is the response of universities for increasing access of higher education in Pakistan?
2. How quality is being affected with increasing access?

The first question was envisaged to identify the response of universities for widening access of higher education. The first selected case of agriculture university of Faisalabad shows a sharp increase from approximately 6,000 to 10,000 student enrolments from the year 2004 to 2010 correspondingly. The second case of University of Engineering & Technology presents a progressive increase from 6,500 to 9,725 for the year 2004 to 2010 respectively whereas the third case university of the Punjab demonstrates an uneven but enormous increase of 23000 to 30,000 from the year 2004 to 2010 respectively. According to the response of universities, my research has found out that the access increased in three universities but the number of seats has been slightly increased in the existing disciplines. In fact, the establishment of new campuses, new departments, new disciplines and research centres created the opportunities of widening access in universities.

The increase in the number of PhD student-enrolments from negligible to sufficient amount is one of the sources of increasing access in universities. Moreover, it has been argued and exemplified based on three case studies that the universities hired more faculty members including foreign qualified and PhD holders to uphold the standard student teacher ratio along with the increasing number of students. However, the enlargement in government funding has increased the access possibilities in public universities.

The second question was considered to discover the effect on quality by increasing access in universities. The first case of agriculture university of Faisalabad shows that quality has been improved in the university by the huge increase in expenditure per student from 57000 Rs to 69000 Rs approximately for the year 2004 to 2008 respectively, whereas the second case of University of engineering & technology shows a gigantic increase in the expenditure per student from 37000 Rs to 75000 Rs for the year 2004 to 2008 respectively. The third case of the University of the Punjab presents a low increase in the expenditure per student from 21000 Rs to 31000 Rs for the year 2004 to 2008 respectively. The research finds out that due to the large increase in government funding, many changes occurred in universities with respect to quality including the establishment of digital library, providing multimedia facilities in class rooms, offering modern lab facilities, establishment of quality enhancement cell, and hiring foreign faculty and PhD holders for maintaining the standard student teacher ratio. These major improvements resulted in more expenditure per student, a quality measuring parameter. In contour of the above conclusions, it seems relevant to interpret the figure that explained the theoretical framework of the current study (see figure 2.1) by applying it to the higher education of Pakistan after discovering the trends of three case studies (See Figure 7.1). The research identifies that if the government funding increases for the higher education then the access and quality in the sector improves to produce qualified labour force. Afterwards, this human capital or qualified labour force facilitates the increase in government funding or economic growth of the country. Hence the contributing factors involve improving access and quality to build up the human capital that eventually raises the economic growth and government funding in return.

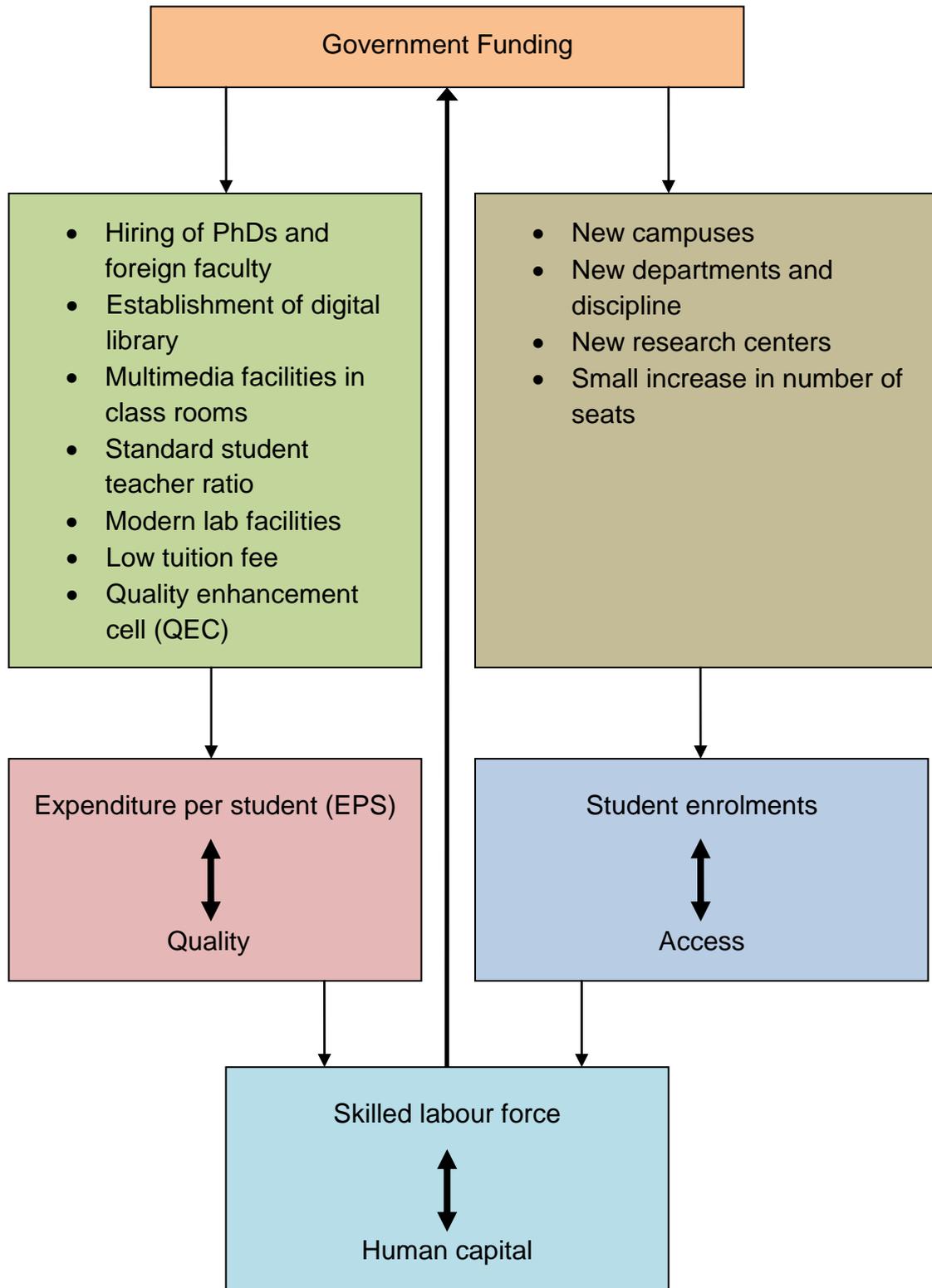


Figure 7.1: Different contributing factors to increase access and quality for economic growth

Furthermore, it has been concluded through this research work that the quality has been improved in three selected universities. The quality improvement in these universities was found to be associated with the HEC ranking criteria, increasing number of research publications in international journals, new research projects with more funding possibilities and better performance of graduates in the labour market. However, the study finds out that the above mentioned different parameters give prestige to the university as well as enhance the quality of the university. If the quality improves then more funding goes to the particular university due to its better performance, so the expenditure per student (EPS) would be increased subsequently in the university. The researcher has considered these whole phenomena as a cyclic process to demonstrate a relationship among different parameters as depicted in Figure 7.2.

Earlier, before 2006, there was no single university among the top 600 universities in the World but due to the financial incentives by the HEC and improved quality, now there are two universities in Pakistan that stand among the top 300 universities in the World in 2009 (Director of External Linkages of UET interviewed, 18th July 2010). Moreover, the selected university of engineering and technology was ranked at the position of 281 among the top universities worldwide in 2009. The case study of Engineering University recommends that the university has improved its prestige by following quality measures; therefore more funding goes to this university on the basis of its performance and the university has good quality ranking. Currently further funding projects are going to the University of Engineering and Technology. The researcher concludes if the university achieves high prestige by better performance and quality then more funding goes to the university based on its performance.

This also implies to the case of Agriculture University that is one of the reputed and prestigious universities in the agriculture sector. Due to more research publications in various agricultural research areas, the quality, the number of new research projects and further funding possibilities are rising in this university. In fact, all these changes have increased the expenditure per student in the agriculture university (see figure 7.2).

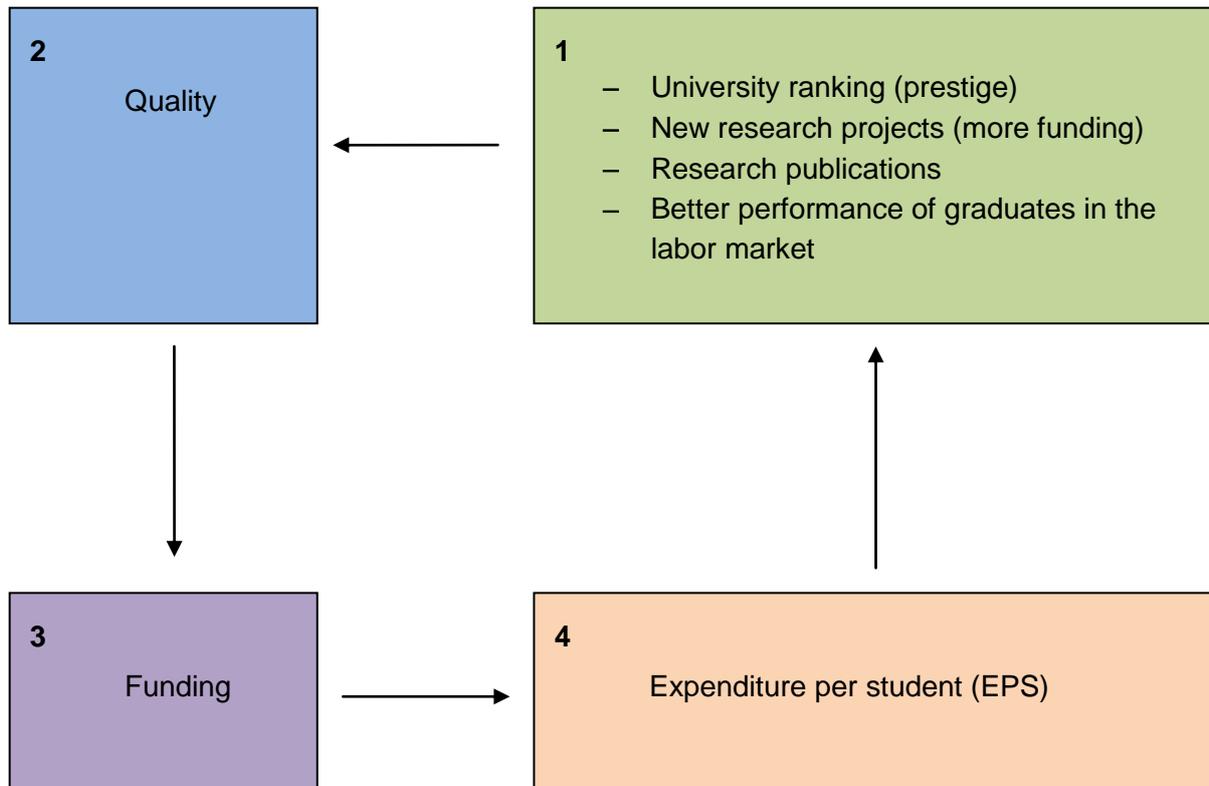


Figure 7.2: Research findings conclude a cyclic relationship among different parameters

Therefore, every university has a different strategy depending upon the situation of the enrolments per class as well as the quality. The Case of Punjab university showing higher student teacher ratio also evidenced through the interview, is emphasising to improve the quality of graduates and teachers by setting up quality enhancement cell (QEC). I have investigated that this university has lower expenditure per student which can be attributed to two reasons; the first one is higher student teacher ratio and the second one is that this university is a general one where more students have been enrolled for the social science programs. On the other hand, the engineering students use well equipped laboratories furnished with costly equipments, chemicals and other safety auxiliaries that eventually make their education costly. Therefore the expenditure per student is comparatively high in university of engineering & technology as well as Agriculture University as compared to general university.

The sustainability in economic growth is a challenging and desirable goal that can only be achieved by improving the low access and quality in universities. Several other researchers found out that the increased funding in higher education sector enhances the growth but the quality of institutions and policies play a significant role in achieving sustainable economic growth. The conducted study about the case of Pakistan further concludes that the regional political crises as well as internal hazards like recent floods have brought policy changes and funding disturbances for higher education sector. Currently, the dispute between government and university authorities has been partially resolved as the government agreed to give part of allocated funds to the universities. Including the universities, everyone in Pakistan has suffered the disastrous effects of flood. Now some provincial governments are stressing the universities to generate their own funds more to run the universities. The issue of decreased funding for universities has not been fully resolved and implementing further the existing policies has been badly affected. This whole situation emphasises the reforming of higher education policies to make the universities more independent and confident about funding. My own view is that, in this decade, although the Pakistani universities have improved their performance both in quality and access with the help of increased government funding, the funding crises are apparent to hinder the universities' plans and functions. The analysis of various South Asian countries presents that China, India and Vietnam introduced tuition fee reforms and loan programs to maintain sustainability the expansion trends, even the case of Germany shows the tuition fee reforms along with widening access opportunities. While Pakistan has low tuition fee and fewer student support programs for continuing the expansion, the study of three cases suggests the Pakistani universities should adopt a strategy of gradual increase in tuition fee as an alternative option to cope with the current financial crises.

7.2 Implications in terms of policies

Many researchers and policy analysts like Psacharopoulos (1985, 1994 & 1996) state that the developing countries including Pakistan should spend more on education for social and economical developments, and for high rate of returns. The higher education creates not only doctors, engineers, designers, philosophers, developers, creators, professors and researchers to contribute to the economies, developments and new creations but also reduce criminality in the society by creating flexible job opportunities in the market. The spending on higher education has always remained controversial in developing countries (Haizheng 2003, p. 326). The government policies and funding incentives in Pakistan both indicate the authorities' desire to increase the access in higher education. Due to high earnings and better social status for the university graduates, people will

gradually realize the further importance and economical worth of higher education in the coming years. Therefore, the governmental authorities should focus on higher education regarding the funding incentives and favouring subsidies for universities to achieve long term economic growth.

Pakistan has the issues of access as well as the quality in the sector of higher education. Being a populous country it is difficult for the system to accommodate the rising number of enrolments along with the promise of better quality. It is not an easy task for a country that has always suffered economical, political and geographical tensions. Perhaps this is the reason that better performing universities like agriculture and engineering universities are not focusing to increase access but the quality. Thus, there should be more emphasis on quality as it is the backbone of any higher educational system. To enhance the new research and developments as well as the knowledge economy, it seems impossible without a quality higher education.

7.3 Reliability, Validity and limitations of Research

All through the undertaken study an objective to assure better validity and reliability of the research was pursued. The study mentioned that the use of the collection of methods or multiple operationalism would reduce the effect of the peculiar biases of each one (Blaikie 2000, p. 263).

Yin applies the concept of reliability to case study, “the goal of the reliability is to minimise the errors and bias in a study”. Reliability in case study can be established as an enquiry which uses multiple sources of evidence. The use of multiple sources of evidence is a manner encouraging convergent lines of inquiry and this tactic is relevant during data collection that increases the construct validity of the research (Yin 1995, p. 36). In following the above argument, it was intended to combine several research methods for supporting greater credibility of the research. Therefore, the mentioned data was obtained through the use of multiple sources such as semi-structured interviews, documentary analysis and official reports with the purpose to maintain the validity of research. The combination of different methods assists the researcher for constructing the reliability in this research.

Moreover, in semi-structured interview as part of case study research, each person is allowed to respond in his unique way. So it is difficult to ensure reliability by using unstructured interview because of the deliberate strategy of treating each participant as a potentially unique respondent (Marshall & Rossman 2006, p 63). But Steinar argued that reliability can be recognized as how many persons are being interviewed to get similar results (Steinar 1996, p. 235). Within the subsequent idea, the researcher interviewed ten persons in three universities that included the two

directors of quality enhancement cells, the three directors of departments, one focal person of the HEC, and three university students in selected three universities as well as the one Executive Director of the HEC. Thus the reliability has been sustained in this research as the same pattern of interview related to the issues of access and quality is investigated from diverse concerning people.

Validity is often defined in interview by asking the question: “Are you measuring what you think you are measuring”? (Steinar 1996, p. 238). In this conducted study, the researcher formulated the interview questions that can measure or describe the trends related to the number of enrolments and per student expenditure in three case studies. After conducting the interviews, the researcher became familiar with the response of three different universities about both access and quality developments, along with the effects of increasing access on quality aspects.

Marshall & Rossman further argue about the validity of case study in terms of how the evidences are collected and compared with other sources of evidence? (Marshall & Rossman 2006, p. 65). Hence, firstly the examples of different countries and their trends provide the diversity in emerging trends in access and quality of higher education. Secondly, the empirical facts have been analysed in terms of contributing factors and mainly two of them were operationalised in three case studies. Thirdly, the researcher carefully accounts the evidences during interviews and compares them well with documentary report of the HEC, as well as the collected data presented in figures for consideration and extracting valuable results. All the mentioned measures that are adopted by the researcher assure the validity of the study with the aim to measure the research findings appropriately. The permission letter from the HEC proves considerably helpful to collect funding allocation data, attached in appendix.

Many possible actions were undertaken to achieve better reliability of the conducted study, it is important to recognise the limitations of the study that restrict research. The major limitations drive from the qualitative interviews, the main source of primary empirical data, where many weaknesses are related to the bias of the interviewer. All along many other technical limitations as unavailability of corresponding yearly data about the investigated factors affected the research process. Furthermore, there is limited reliable data on the current developments in the field of higher education in Pakistan and especially limited amount of scholarly studies on the issue of student enrolments and expenditure per student. Anyway, in the outline of present study it can be expected that the conducted research will serve as a source of valuable information for students, researchers, university academics & administrators, and of course for the policy makers.

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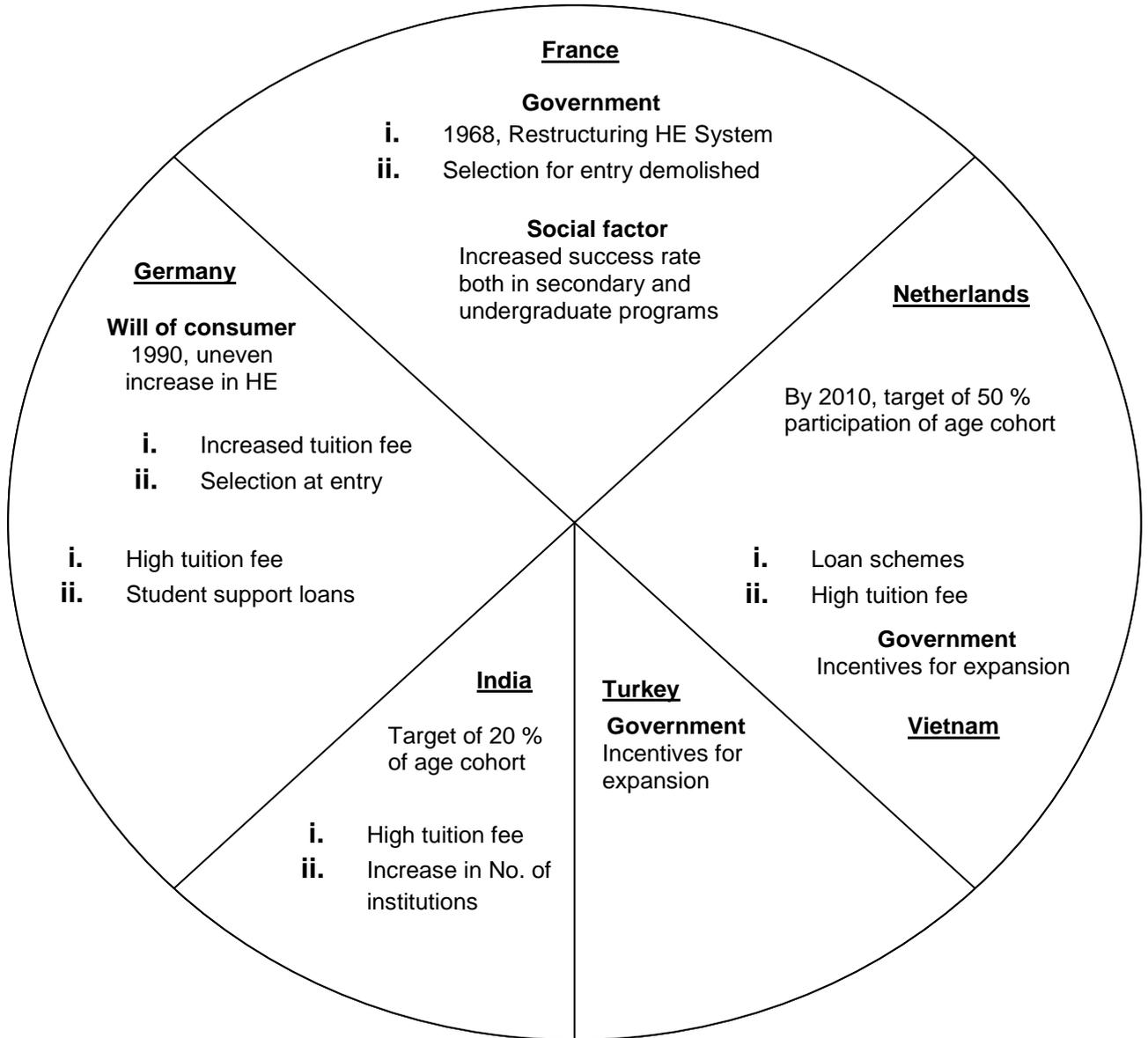
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APPENDICES

Global trends in expansion in Central Europe and South East Asia



Summary of the analysis regarding expansion and quality



Letter to get permission from Chairman of HEC Pakistan for the data of universities

The Chairman

Higher Education Commission

Sector H-9, Islamabad

Dear Sir

After receiving my master degree in secondary education from the Punjab University Lahore, I was selected as Erasmus Mundus student through the European Union scholarship program (master in higher education) for the joint degree in the University of Oslo-Norway, University of Tampere-Finland and University of Aveiro-Portugal.

Now I am quite busy in preparing my thesis pertaining topic of “*Trends in access and Quality of Higher Education in Pakistan*”, so I need details of students’ enrolments and funding data given by the HEC to the public sector universities in Pakistan.

I would be very thankful to you if you provide me the required data as soon as possible due to time constraints for my thesis schedule.

Best regards,

Shahida Rashid

E-mail: shahidabe@yahoo.com, shahidar@student.uv.uio.no

The list of Persons interviewed during the fieldwork undertaken in Pakistan in July 2010.

1. Assistant Director of Advanced Studies, Dr. M Khalid Bashir of Faisalabad Agriculture University
2. Director of Quality Enhancement Cell, Dr Anwar Sahib of Faisalabad Agriculture University
3. Focal Person of HEC, Prof. Dr. M Khaleeq-ur-Rahman of University of Engineering and Technology
4. Director of External linkages and Chairman of Chemical Engineering Department Prof. Dr. Shahid Naveed of University of Engineering and Technology
5. Second year student Ahmed Tariq of University of Engineering and Technology
6. Director of Public Relation Prof. Dr. khawaja Tahir Jamil of Punjab University Lahore
7. Director of quality enhancement cell (QEC) Dr. Khawaja Amir of Punjab University Lahore
8. Second year Master student Bushra Rasheed of the university of the Punjab
9. Final year student of the Agriculture University Faisalabad
10. Executive Director, Mohammad Yaqoob of Higher Education Commission

The answers, opinions and ideas of the interviewees, quoted and referred to within the present study are codified and presented as Respondent 1 to Respondent 10 (R1.....R10). The orders of the interviewees in the above list correspond to the coding R1 through R10. The information on the coding principle is furthermore available exclusively to the author of the present research.

Basic topic/categories of the discussion during interviews conducted in Pakistan

- Universities' reaction and response towards increasing access in graduates programs
- Adopted measures for improving access in the universities
- Changes in the tuition fee policy of universities
- Implemented measures for improving quality of the graduates in universities

- Major challenges and obstacles facing universities for widening access and improving quality of graduates
- Progress made and evident outcomes achieved so far