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### **Flourishing The Higher Education in Pakistan: An Exploratory Analysis of The Role of Higher Education Commission (HEC)**

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#### **ABSTRACT**

*The paramount aim of the underlying study is to explore the efficacy of the Higher Education Commission (HEC) through evaluating the effectiveness of the key initiatives which have been taken by the HEC to flourish the higher education and research environment in Pakistan. Using exploratory analysis, the study unleashes that the higher education and research culture has improved since 2002 owing to the HEC's effective initiatives. These include, but are not limited to, increasing the capacity of in-service teaching faculty, induction of PhD faculty in public and private sector universities, award of indigenous and foreign scholarships, and provision of research grants, all of which had a positive influence on higher education through capacity building. A commendable increase in the number of universities along with the induction of highly qualified faculty has been witnessed, specifically the induction of indigenously produced PhDs. Apart from these, the HEC has played an instrumental role in helping to improve the gender parity by 45% in education sector. Moreover, in order to trace out what problems the HEC has been facing to implement its reforms, we conducted KIIs to the HEC officials who have been remained the part of policy implementation. The KIIs discloses that the deteriorating budgetary allocation, less cooperation from public sector universities, and questioning the HEC's autonomy are the major challenges among others to the HEC in promoting an effective and inclusive higher*

#### **Keywords**

HEC,  
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*education in Pakistan. The KIIs suggest that the autonomy of the HEC should not be compromised, and the liaison between universities and the HEC should be increased.*

## **1. Introduction**

Education is considered as one of the key determinants of the quality of human capital. Specifically, higher education results in boosting up the research and development activity, which ultimately sets nations on higher economic growth and development trajectory. Higher level of innovations through creating a research environment, transforms countries into knowledge economies (Sukhrev, 2020; Marginson, 2010; Brinkley, 2006). The higher education is supposed to be played significant a pivotal role in shaping the knowledge economy of any country. The existing literature highlights that knowledge-based economies, or alternatively countries with quality human capital, have experienced higher level of economic growth and development. Therefore, improvement in quality of higher education always translates in better quality of human capital, thus, contributes significantly to economic growth (Vidotto *et al.*, 2017; Lutz and Samir, 2011; Durrani and Forbes, 2003; Lucas, 1993).

Despite many challenges, higher education has witnessed tremendous growth and development since the inception of Higher Education Commission (HEC) in Pakistan (Qazi *et al* 2014). The HEC ordinance was passed in 2002 by Government of Pakistan to promote higher education in Pakistan. In addition, the commission was empowered to formulate policies, guidelines, and priorities for universities in order to advocate, and publicize the need for tertiary education in the country. The commission has been granted complete authority and power to reform Pakistan's higher education system. According to HEC (2015-16), HEC has made significant achievements in the form of increasing enrollment, hiring well-qualified faculty, increasing the research and educational collaborations at national and international level, improving the ranking positions of universities at both national and international levels, and producing quality human capital by providing indigenous and foreign scholarships to the deserving students.

HEC has taken various initiatives to revive teaching, curriculum, research, and the quality of higher education. The most important initiatives taken, are introduction of Tenure Track System, Interim Placement for Fresh PhDs (IPFP), International Research Support Initiative Program (IRSIP), National Research Program for Universities (NRPU), Local Challenge Fund (LCF), Technology Transfer Support Fund (TTSF), Grand Challenge Fund (GCF), Innovative & Collaborative Research Grant (ICRG), Technology Development Fund (TDF), RAPID Research & Innovation Initiative (RRII), Problem Based Applied Interdisciplinary Research Program (PBAIRP), Outstanding Research Awards, Travel Grants for Presentation of Research Papers, HEC digital library, the establishment of new HEIs, establishment of

Quality Enhancement Cells (QECs), establishment of the Office of Research Innovation and Commercialization (ORICs), establishment of Business Incubation Centers (BICs), and initiation of the indigenous and foreign scholarship schemes (HEC, 2015-16 and 2019).

Capitalizing on the above-mentioned diversified initiatives, HEC has changed the paradigm of higher education in Pakistan by promoting access, quality, and relevance of quality education. Those initiatives have eventually created a mammoth impact on the quality of higher education sector in respect of access to higher education, teaching, curriculum, research, and quality of higher education (Jahangir, K. 2008; HEC, 2015-16).

However, HEC is also facing numerous challenges such as limited budgetary allocation, obstacles related to institutional autonomy, and lack of cooperation from some big public sector universities. Specifically, expansion in financial capacity is one of the most significant demands by HEC in order to implement its effective policy agenda regarding flourishing higher education. The commission demands higher budgetary allocation from every incumbent government of Pakistan. For instance, federal HEC demands a budgetary allocation of PKR 120.00 billion, but only PKR 66.25 billion are allocated for the fiscal year of 2021-22 by federal government of Pakistan. Figure-1 demonstrates that on average, HEC budget ranges between PKR 63 billion to PKR 66 billion during the fiscal years 2017-18 to 2021-22 (Government of Pakistan). These estimates unleash the gap of around PKR 53.75 billion (45%) to meet the demand of HEC to implement the effective higher education agenda in Pakistan.

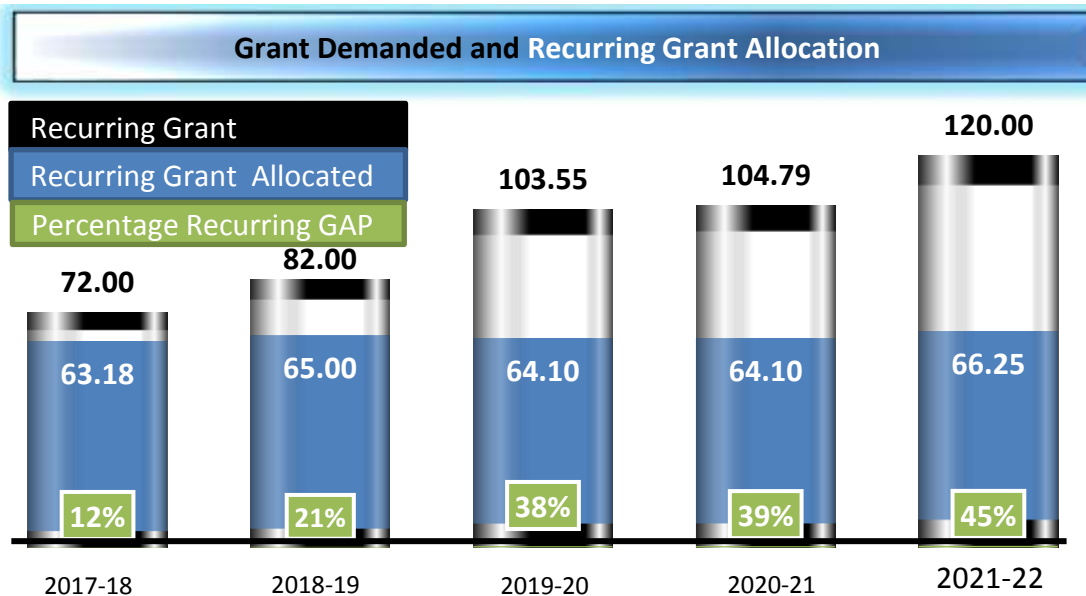


Figure-1: Budgetary Demand and Allocation to HEC by Federal Government of Pakistan  
Source: HEC 2021, Government of Pakistan

Given these limitations, the role of HEC is inevitable in promoting the higher education in the country. Consequently, the underlying study aims to conduct an exploratory analysis of the achievements of HEC since it came into existence in 2002. Primarily, the focus of this study is to (i) identify the key reforms taken by HEC to flourish higher education and research environment in Pakistan, (ii) to highlight the achievement made by the commission in this regard, and (iii) to explore the key challenges HEC is facing currently through in-depth interviews of key informants.

## **2. Data and Methodology**

Primarily, the underlying research is exploratory in nature. For descriptive analysis the data is collected from both primary and secondary sources. We have utilized two types of data: secondary data, and primary data. The former is extracted from various relevant reports published by HEC, and Government of Pakistan about the range of indicators which includes information of HEC reforms, higher education enrollment, establishment of Higher Education Institutions (HEIs), faculty hiring, PhD produced, and some other indicators which measure the achievement of HEC. The data has further been presented through graphs and tables to depict trends over the years and to draw some meaningful conclusions.

In addition to secondary data, Primary data is gathered through conducting in-depth Key Informant Interviews (KIIs) to the HEC senior officials. The objective is to ascertain the nature of problems and bottlenecks HEC is facing in implementing its policy agenda and to track the performance of HEC in achieving its targets. All our 13 respondents are from HEC have been playing active roles in policy making and they belong to all the four provinces i.e., Punjab, Sindh, Khyber Pakhtunkhwa, and Baluchistan<sup>1</sup>.

In line with the objectives of the study questions have been asked and verified through a checklist after detail discussion with each of the respondent. The checklist includes three sections: i) questions related to HEC goals and their accomplishment, ii) challenges HEC is facing, and iii) questions regarding the effectiveness of Tenure Track System (TTS), mode of hiring, policy. Therefore, first two sections of checklist are specific to the objectives of the study. Such questions are related to the major challenges, HEC is facing and manner of dealing with it, the role of HEC in developing linkages of universities with industry, HEC role in placement of PhD degree holders, the measures HEC is taking to improve the quality of education and research, and issues regarding budgetary allocation to HEC. Last but not the least, questions regarding targets set by HEC and their fulfillment have also been asked. In a nutshell, the overarching objective

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of the interviews is to critically investigate the role of HEC in implementing an effective higher education policy agenda in Pakistan to improve the quality of education.

Therefor keeping in view, the objectives of this study we have provided a situational analysis related to reforms by HEC and its achievements over the years, later conclusions have been drawn from the interviews to HEC officials.

### **3. Reforms by HEC and its Achievements: Situational Analysis**

This section conducts the situational analysis regarding what types of reforms HEC has implemented and their accomplishment. The situational analysis has been conducted through demonstration of graphics and tables.

#### **3.1 Key Reforms by Higher Education Commission (HEC)**

HEC has formulated multiple reforms to expand higher education and research environment in Pakistan. Some notable reforms are outlined as follows.

##### **3.1.1 Faculty Development Programs**

Human resource development is the most important component of the HEC reform process. Very soon after its formulation, HEC has made vital and significant progress in order to launch faculty development programs with twofold objectives of increasing institutional capacity and increasing local research activities. This also aimed to improve the academic qualification of the university teachers (HEC, 2015-16; Naqvi, 2010). Initially, for 60 public sector universities, it was targeted that each university must have faculty members of 300 to 400 PhDs, while at department level at least 15 to 20 PhDs before it can be considered as a legitimate "university". To develop a qualified cadre of bright young women and men, additional 15000 to 20,000 individuals were to graduate from foreign universities in the subjects of national priority over the next five years to carry out research and teaching activities in universities. The group was also supposed to provide consultancy to boost up industry in the country (HEC, 2003-04).

Moreover, HEC has adopted the reforms in hiring the teachers for public universities against the existing system of Basic Pay Scale (BPS). The new system is termed as Tenure Track System (TTS) which provides additional incentives to the existing and newly being hired teachers. The primary objective of the TTS is to promote educational and research productivity by believing in classical incentive theory.

Figure-2 demonstrates that 3410 PhD teaching faculty members are employed as TTS faculty while 8456 teachers are working under BPS, mode of hiring in public universities. Similarly, 3551 PhD faculty are hired by private universities, while 508 faculty members are working on contractual basis (HEC, 2020).



Figure-2: Number of PhD Faculty in Public Universities by Mode of Hiring  
Source: (HEC, 2020)

Such faculty development programs have positive impacts on the induction of PhD faculty in public universities. As table-1 demonstrates, out of 7840 faculty members in higher education institutions (HEIs), there were only 2281 PhD in 2002-03, making it only 29.09% of total faculty members.

**Table-1: Total Number of PhD and Non-PhD Faculty in Higher Education Institutions (HEIs)**

Year	Ph.D. Faculty	Non-PhD faculty	Total Full Time Faculty	% PhD Faculty
2018-19	16478	35016	51494	32.00
2017-18	14507	32683	47190	30.74
2016-17	13975	33854	47829	29.22
2015-16	11960	31314	43274	27.64
2014-15	10133	27295	37428	27.07
2013-14	9475	25121	34596	27.39
2007-08	3,683	13,069	16,752	22.00
2002-03	2,281	5,559	7,840	29.09

Source: (HEC, 2020)

Table-1 further demonstrates that after the establishment of HEC in 2002, a significant increase in number of PhDs faculty has been witnessed by HEIs. Similarly, overall increase in total full-time faculty is also experienced by HEIs from 2002-03 to 2018-19. In 2020, there is 32% PhD faculty in universities and degree awarding institutions in the country, this shows the shortage of PhDs in universities. The target in MTFD-II was to have 40% of PhDs in HEIs by the end of 2015. HEIs produces PhDs at a rate of 1600 per year (HEC, 2020). KIIs have informed that PhD faculty has increased enormously due to various reforms opted by HEC. However, the desired level is yet to achieve due to i) constrained level of funding, ii) brain drain at local and

international level, iii) the over usage of non-PhDs visiting faculty in private universities, and iv) non-availability of required level of PhDs in specific subjects.

### 3.1.2 Local and International Scholarships Schemes

To fulfill the need of PhDs in universities, HEC has started different indigenous and foreign scholarship schemes. Under Indigenous scholarship scheme, over 5000 scholarships have been awarded with special emphasize on the quality of PhDs. The objective of this scheme was to increase the PhD faculty in universities. This mega project was approved by Executive Committee of the National Economic Council (ECNEC) on August 11, 2003. The total amount of the project was Rs.6402.767 million. A total of 5000 scholarships were awarded in five years. Almost every area of this endeavor, including science & technology, humanities, and life sciences, were addressed (HEC, 2020). The list of local and foreign scholarships is presented in table 2.

**Table-2: List of Scholarships Offered by HEC**

	<b>Local Scholarship</b>
	<ul style="list-style-type: none"> <li>• 5000 Indigenous PhD Fellowships</li> <li>• Development of Science &amp; Technology Manpower through Indigenous 300 PhD Scholarships</li> <li>• Merit Scholarship Scheme for PhD Students in Science and Technology (200 Scholarships)</li> <li>• Scholarships for PhD Studies in Social Sciences, Arts and Humanities for University Teachers</li> <li>• Five Information Technology related HRD Scholarship Programs/Projects</li> </ul>
	<b>Foreign Scholarships</b>
	<ul style="list-style-type: none"> <li>• Overseas Scholarship Scheme for PhD in Selected Fields</li> <li>• PhD Scholarships for Sciences and Engineering in Germany</li> <li>• PhD Scholarships in Science, Technology and Engineering in Austria (Phase-I)</li> <li>• PhD Scholarships in Natural and Basic Sciences, Austria (Phase-II)</li> <li>• PhD in Natural &amp; Basic Sciences in France</li> <li>• PhD Scholarships for Engineering Sciences, China</li> <li>• PhD Scholarships for Basic Sciences, China</li> <li>• Development of High-Level Science &amp; Technology Manpower through Split PhD Program</li> <li>• Post-Doctoral Fellowship Program for University Teachers</li> <li>• MS/MPhil leading to PhD Scholarship in Engineering, Natural and Basic Sciences/Humanities/Social Sciences for the Teachers of Weaker Universities</li> <li>• Partial Support for PhD Studies Abroad</li> <li>• HRD Program for Strengthening of Universities/Institutes of Higher Learning</li> <li>• Strengthening the Existing Teaching Faculties of Public Universities and Degree Awarding Institutes of Pakistan through Jointly Sponsored Scholarships Program of HEC &amp; Asian Institute of Technology (Thailand)</li> <li>• Short Term Foreign Faculty Hiring Program / former Expatriate Faculty Hiring Program</li> <li>• Reclamation of Talented Pakistanis Working for Promotion of Teaching and Research in Professional Universities (Reverse Brain Drain)</li> <li>• Visiting Scholar Program</li> <li>• Transfer of Knowledge through Expatriate National Program</li> </ul>

Source: (HEC, 2020)

According to HEC (2020), nineteen scholarships projects are successively implemented by Higher Education Commission to increase the PhD faculty in universities. There are nine foreign scholarships and fellowship programs and ten indigenous programs. The HEC started a variety of scholarships programs both outside and within the country to address the shortage of faculty in universities.

### **3.1.3 In-Service Training Programs**

Since its establishment in 2002, HEC has been making every attempt to foster academic vitality by offering educational and in-service training programs which maintains updating the skill level of university faculty. The empirical and theoretical literature is also suggestive of the importance of the training and skill development programs for employees (McConnell et al, 2009). Therefore, in order to update the skill level of university faculty, HEC has launched in-service training programs. National Academy of Higher Education (NAHE) project was launched by HEC to enhance standard of teaching and learning in universities of Pakistan. NAHE organized trainings, workshops and organized national conferences for the university faculty in developing high quality, efficient, relevant teaching, and learning methods. Moreover, faculty development programs have been commenced in order to enhance capacity of faculty members. The faculty development programs contain such modules: i) professional development, ii) research methodologies, iii) testing & assessment, iii) curriculum planning & development, and iv) teaching & communication skills, v) international computer driving license, and vi) instructional resources. These programs have indicated beneficial influences on updating the skills of the faculty members of universities (HEC, 2020).

Apart from these, HEC initiated the English Language Teaching Reforms Initiative (ELTR) in 2004 in order to improve the quality of teaching and learning at universities. For the English and Social Sciences faculty of colleges and universities, this was the first ever unique language-based program. This reform aimed at capacity building of English language teachers in colleges and universities in Pakistan for sustainable development. Two phases were completed under this initiative of HEC. Phase I catered 1398 faculty of colleges and universities. After completion of ELTR Phase I, HEC launched Phase II in 2010. The initial target was 1400 English faculty to be trained through short-term and long-term courses. Besides, many seminars and workshops have been arranged for faculty member of universities to align them with the latest development in teaching, pedagogical skills, and other contemporary issues (HEC, 2020).

In sum, above discussion has weaved up that HEC has formulated multiple reforms to enhance the enrollment, producing PhDs, research environment among students and faculty members through launching in-service training programs, local and international scholarships, and faculty development programs. The most notable program regarding



faculty development is the implementation of TTS mode of hiring against prevailing BPS in public universities.

### **3.2 Capacity Building in Higher Education Institutions (HEIs) and the HEC**

After discussing the prominent reforms promulgated by HEC, the underlying research moves ahead to discuss the impacts of such reforms on the capacity building of HEIs in term of their numbers, enrollment rates, and PhDs graduates.

#### **3.2.1 HEC and Higher Education Institutions (HEIs)**

According to HEC (2003), in 1947, Pakistan had only one university, The University of the Punjab, with the student enrollment of 644. There was no private university at that time. It was the fourth university to be established by the British in subcontinent. The British rulers established the first three universities at their strongholds of Bombay, Calcutta and Madras. After war of independence in 1857, the University of the Punjab came into existence as result of a long-drawn struggle of the educators. The second university was the University of Sindh, which was established in 1951. In 1960, there were only 5 HEIs operating in the country.

**Table-3: Number of Universities and Degree Awarding Institutions (DAIs): Pre-and-Post HEC**

Year	Universities		DAIs		Total
	Public	Private	Public	Private	
Before HEC					
1947	1	0	0	0	1
1960	4	0	1	0	5
1980	15	0	2	0	17
1990	19	2	3	0	24
2002	29	12	5	5	51
After HEC					
2010	62	41	11	19	133
2020	118	56	16	28	218

Source: HEC, Pakistan

Table-3 contains the information of the number of universities and DAIs before the establishment of HEC (before 2002), and after HEC (since 2002). After the 2002s, rapid growth has been observed in the development of Higher Education Institutions (HEIs) across Pakistan, Furthermore, there has been a significant growth in numbers from 51 in 2002 to 218 in 2020. It is undeniable that Pakistan has seen the increase of new institutions since the inception of the Higher Education Commission (HEC) in 2002.

Likewise, figure-3 presents the bifurcation of HEIs into public and private sector universities in Pakistan. Trend analysis demonstrates that after the establishment of HEC, on the whole an overwhelming increase in both public and private universities

has been witnessed during 2002-03 to 2019-20. The public sector universities are higher than the private sector universities. However, these figures demonstrate the positive impacts of HEC policies to flourish higher education in Pakistan.

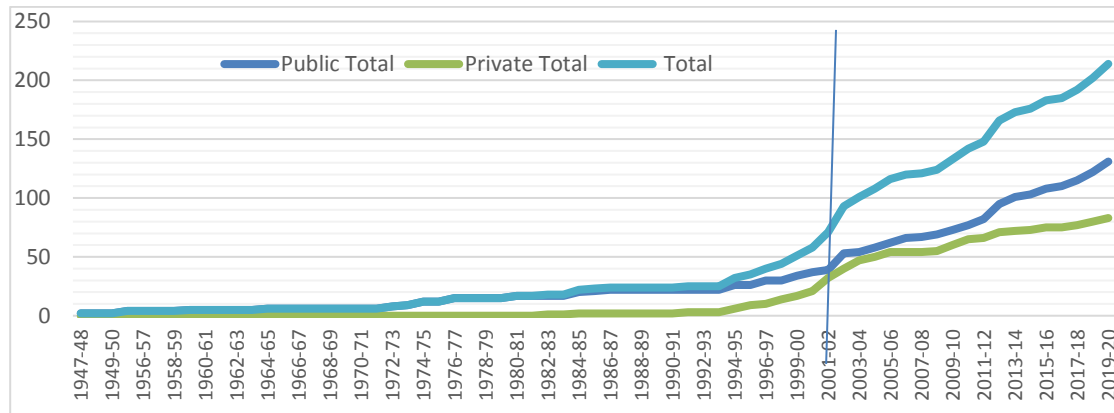


Figure-3: Number of HEIs Chartered from 1947-48 to 2019-2020  
Source: (HEC, 2020)

The underlying research identifies the construction of HEIs by provinces and other parts of the country in order to estimate the regional differences. Figure-4 highlights that Punjab province seems at top of the list wherein 73 HEIs have been established. The analysis for subsequent regions displays that Sindh province has 62 HEIs while there are Khyber Pakhtunkhwa (41), Islamabad (22), Balochistan (10), Azad Jammu and Kashmir (7) and Gilgit-Baltistan (2) number of universities and degree awarding institutions have been established respectively (figure 4).

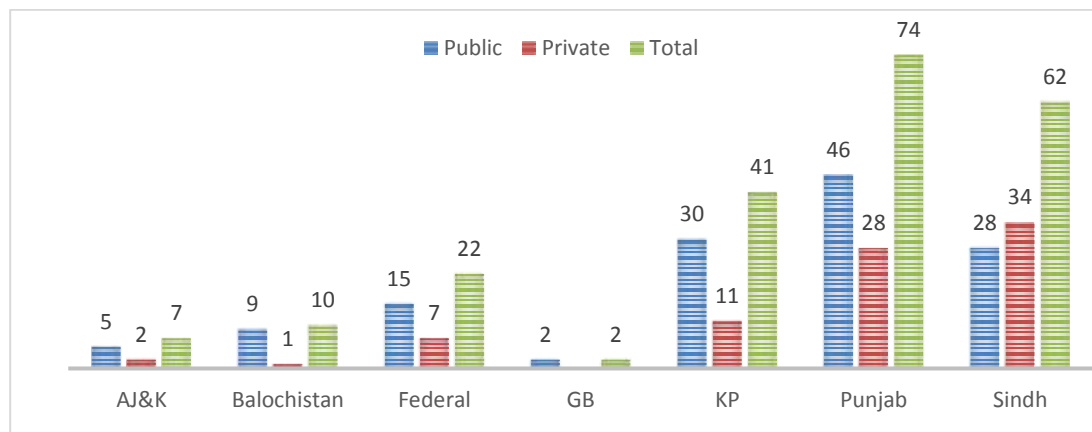


Figure-4: Public and Private Sector HEIs at Sub-national Level in Pakistan during 2019-20  
Source:(HEC, 2020)

In conclusion, this section determines the positive impacts of HEC policies on construction of HEIs in Pakistan which are precursor to boost up the higher education in Pakistan.

### **3.2.2 HEC and Higher Education Enrollment**

A country with a population of approximately 220 million people is the sixth largest in the world. Pakistan has limited natural resources and its economy is struggling. It has 64 percent of its population comprised of young population i.e their age is less than 30 and 29 percent of its population are between 15 and 29 years of age, and this is the age group which is called youth. Currently, Pakistan is the country which has the youngest population in the world and this trend is forecasted to continue to till 2050. Therefore, providing proper opportunities through education to youth to become an asset for a nation is the most desirable objective to the policy makers in Pakistan (UNDP, 2018).

HEC aims to provide and increase opportunities of equitable access for gender balanced and quality higher education to a larger part of the youth 17-23 years old to make them able to participate in the development of a country. The foundation of the agenda of economic development is to invest in society to polish their cognitive skills, talents, and enhance their constructive competencies (HEC, 2014). Higher education sector of Pakistan has shown satisfactory progress in term of access to higher education. In 2002, only 2.5% access to higher education of aged 17-23 years, while HEC has steered numerical expansion of universities and degree awarding institutions from 51 HEIs in 2002 to 218 in 2020, increased enrollment 0.028 million in 2002 to 1.93 million in 2020, increased gender parity from 37% in 2002 to 45% in 2020 (HEC, 2020). Hence, table-4 presented annual increase in enrollment in public and private sector HEIs in Pakistan during 2001-02 to 2019-20. Enrollment of affiliated colleges is not included. The increase in enrollment over the years represents the demand in Pakistan for higher education. Despite its rapid growth, Pakistan lags behind India, Bangladesh, and Sri Lanka in terms of higher education access. To improve access to higher education in Pakistan, more practical and calculated efforts are needed (HEC, 2020).

**Table-4: University Level Enrolment in Pakistan (Million)**

Year	Male	Female	Total
2001-02	0.17	0.10	0.27
2002-03	0.20	0.13	0.33
2003-04	0.24	0.18	0.42
2009-10	0.52	0.43	0.95
2011-12	0.56	0.48	1.04
2012-13	0.62	0.52	1.14
2013-14	0.68	0.56	1.24
2014-15	0.72	0.58	1.30
2015-16	0.76	0.64	1.39
2016-17	0.84	0.65	1.49
2017-18	0.88	0.70	1.58
2018-19	1.03	0.83	1.86
2019-20*	1.07	0.86	1.93

Source: (HEC, 2020)

Table-5 presents percentage distribution of university enrollment by region, university sector, and gender wise. It demonstrates that, in public and private sector universities, female students and students from Balochistan, Khyber-Pakhtunkhwa, and Sindh are underrepresented. The estimates highlight those female students from Balochistan in private and public institutions is 20% and 31% respectively. Similarly, 21% and 27%, respectively, are female students from Khyber-Pakhtunkhwa in private and public universities, while Sindh registered female students by 34% and 39% in public and private universities respectively. Thus, in these regions, female students are severely underrepresented and access to higher education is a major concern.

In Punjab, female enrollment in private and public universities is 38% and 51%, respectively, while female students in Islamabad are observed by 41% and 50% in public and private universities respectively. Likewise, in Azad Jammu and Kashmir, female enrollment is 55% and 52% respectively (table 5). Two public sector universities run in Gilgit Baltistan, 50% male students and 50% female students are registered in these universities (HEC, 2019).

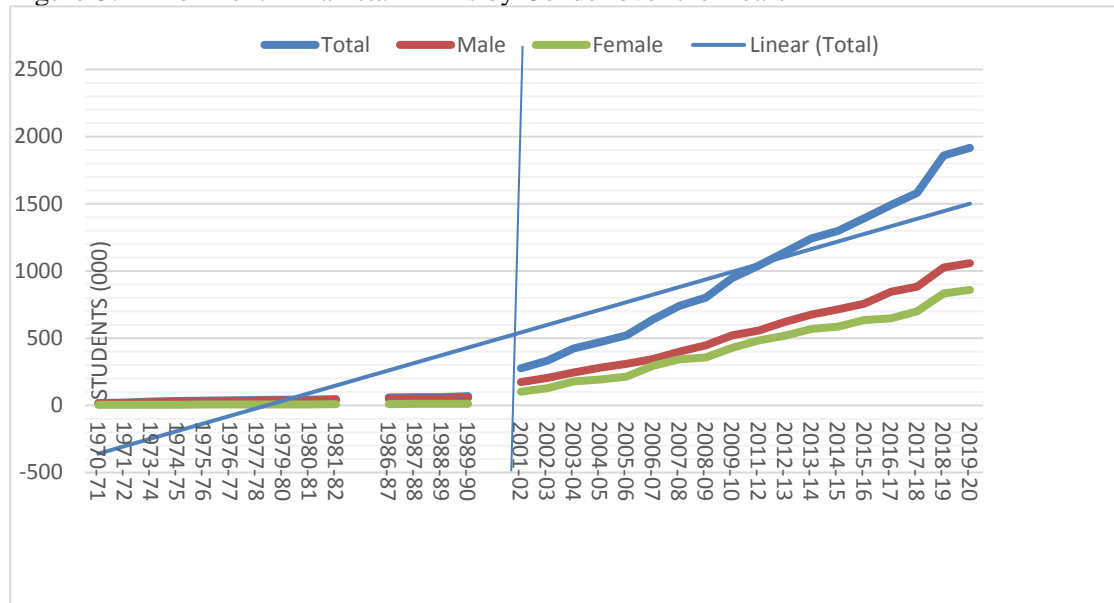
Table-5: (%) Distribution of University Enrolment by Region, Sector, and Gender during 2018-19

Province/Region	Public		Private		Total	
	Male	Female	Male	Female	Male	Female
AJK	48	52	45	55	48	52
Balochistan	69	31	80	20	70	30
Federal	50	50	59	41	50	50
Gilgit Baltistan	50	50	0	0	50	50
Khyber Pakhtunkhwa	73	27	79	21	75	25
Punjab	49	51	62	38	53	47
Sindh	61	39	66	34	63	37
Total	53	47	65	35	55	45

Source: (HEC, 2020)

Figure-5 presents enrollment from 1971 to 2020, the graph shows sharp increase in enrollment after inception of HEC. It is evident that HEC is succeeded in refurbishing enrollment in HEIs. Despite of these reforms, positive shocks are needed to enhance enrollment to compete with the World in general and with South Asian countries in particular.

Figure-5: Enrollment in Pakistani HEIs by Gender over the Years



Source: (HEC, 2020)

### 3.2.3 Producing PhDs

The HEC policies have brought a significant increase in the university faculty in general and indigenously produced PhD graduates in particular. Moreover, the impact of different HEC scholarships schemes implemented during last two decades is evidently demonstrating a sizeable increase in PhD graduates. Figure-6 exhibits that during 2003-04, 271 PhDs have been produced which have reached 1778 during the year of 2019-20. The value for 2020-21 seems declining which has justification— to date data is being compiled for analysis, HEC has not received complete data. But the data for 2020-21 is expected to be increased for rest of the year (Government of Pakistan, 2020-21). The linear trend line helps comprehend that after 2008-09, an overwhelming increasing trend for PhD producing is evidently observed which could be attributed to increase in budgetary allocation of HEC as compared to the previous years.

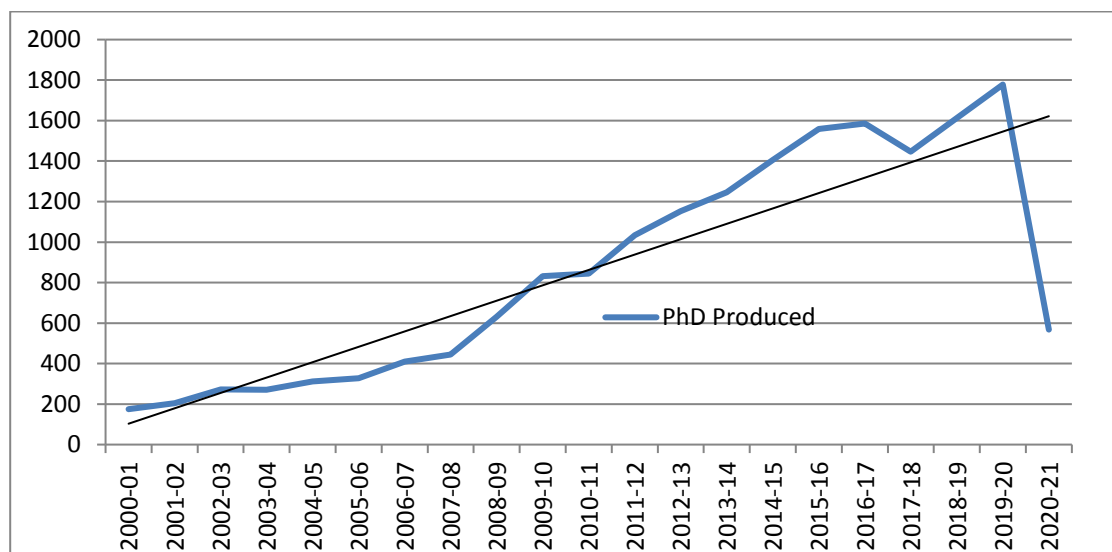


Figure-6: Number of PhD Produced in Pakistan during 2000-01 to 2020-21  
Source: Pakistan Economic Survey (2020-21) & HEC (2020)

Table 6 gives detail about discipline wise PhD produced in the country since 1947 to date. It demonstrates that 4866 and 4744 PhDs produced in Physical Sciences and Social Sciences disciplines respectively. Similarly, 4468 PhD produced in Biological and Medical Sciences and Pharmaceutics disciplines. Whereas only 1053 PhD in the discipline of Engineering & Technology has been produced, along with 789 PhD in Management Sciences and Business Education. Therefore, number of PhD graduates in the field of Engineering & Technology and Management Sciences need to be increased to cater to the high market demand in the country

Table-6: Discipline wise PhDs Produced (P) by Pakistani HEIs since 1947

Disciplines	Female	Male	Grand Total
Agriculture and Veterinary Sciences	363	2044	2407
Arts & Humanities	731	1645	2376
Biological & Medical Sciences, Pharmaceutics	2045	2423	4468
Engineering & Technology	133	920	1053
Honorary	4	125	129
Management Sciences and Business Education	180	609	789
Physical Sciences	1579	3287	4866
Social Sciences	1444	3300	4744
Grand Total*	<b>6479</b>	<b>14353</b>	<b>*20832</b>

Source: (HEC, 2020)

### **3.3. Research and Development**

HEC has launched a series of research projects to promote the research culture in Pakistan. The promotion of university teaching faculty is linked with research paper publications which instigate the faculty to enhance their research activities. Despite this, at least one research paper publication has been made compulsory for PhD scholars before award of PhD degree. As a result, number of research publications have been increased since the year of 2002 to onward (HEC, 2020). Moreover, HEC has launched some programs related to research grants. In this regard, the key initiatives are outlined as: National Research Program for Universities (NRPU), Pak-France PERIDOT Research Program which for Pakistani researchers and PhD students visit France and carry out research in the universities in France, Scientific Instrumentation, Business Incubation Centers (BICs), ORIC, Technology Development Fund, CPEC-Collaborative Research Grant, Pak-TURK researchers mobility grant program, Grand Challenge Fund, Local Challenge Fund, Innovative & Collaborative Research Grant (ICRG), and Problem Based Applied Interdisciplinary Research Program (PBAIRP). These programs have created competitive environment in universities. Thousands of research proposals received to HEC, this show demands for funding and competitive research culture in universities (HEC, 2020).

### **4. What HEC Thinks: Discussion on Interviews of HEC Officials**

Previous section comprises discussion on situational analysis. So, to learn the reasons of success and failures to achieve some goals, we have conducted the Key Informant Interviews (KIIs) to the HEC officials. Following are the main outcomes we have obtained from KIIs.

#### **4.1 HEC Targets and Its Achievements**

***HEC Take on Access to Higher Education:*** the interviewed HEC officials discloses that 2.329 million enrollment targets have been set till 2020 in HEC Vision 2025, but this target is not achieved, the actual enrollment during 2020 has been observed 1.942 million, which demonstrates the failure to achieve the targeted level. The respondents have informed multiple reasons not to achieve the desired level of enrollment: i) every incumbent government intends to support HEC, but due to financial and economic constraints governments are found fail to support HEC what governments have been pledging, ii) they have further unleashed that HEC funds are static over the past few years, and iii) The other reason not to maintain the targeted level of enrollment is due to the failure of establishing new universities and sub campuses at required level, and iv) students' affordability.

***Quality of Education in Universities:*** The HEC respondents are admitting the concerns related to quality enhancement. They disclosed the reasons of deteriorating quality of education: i) some public universities are not fully cooperating with HEC, ii) most of the universities do not implement the HEC policies regarding quality enhancement since

HEC is an advisory body not a regulatory body, and iii) governance and leadership issues in universities which are also affecting the performance of universities.

**Faculty Development:** In various documents of HEC, it is emphasized, on the enhanced PhD faculty in universities, in this regard, In MTDF-II (2010-2015) and HEC vision 2025 that 40% PhD faculty of total faculty in universities. currently 32% PhD faculty are there in universities, which is evidently showing the missing of target. HEC officials have informed that PhD faculty has increased enormously due to various reforms opted by HEC. However, the desired level is yet to achieve due to i) constrained level of funding, ii) brain drain at local and international level, iii) the over usage of non-PhDs visiting faculty in private universities, and iv) non-availability of required level of PhDs in specific subjects.

#### **4.2 Major Challenges to HEC**

The outcomes from Key Informant Interviews (KIIs) regarding what challenges HEC has been facing in the pursuance of effective policy agenda to boost up the higher education in Pakistan. They have revealed the key challenges such as i) insufficient funding allocation to HEC, ii) lack of political will to prioritize higher education by incumbent governments, iii) lack of commitment by universities to follow the commissions' recommendations, iv) apprehensions to the autonomy of HEC from political governments which may predicament the commission to implement their effective agenda to boost up higher education in the country.

#### **4.4 University-Industry Linkages and Placement of PhD Degree Holders**

The KIIs are asked the role of the HEC to link the educational research with industry, they reveal that for this purpose, the commission is making efforts such as: i) assisting the universities to establish Office of Research, Innovation and Commercialization (ORIC) to commercialize the academic research, ii) helping to establish Business Incubation Centers (BICs), and iii) expanding the internship related opportunities for students during their study in industries. Apart from these, the KIIs are designed to ask the steps taken by HEC to fix placement of PhD degree holders. They have reported that HEC is offering Interim Placement for Fresh PhDs (IPFP) to fix the fresh PHD degree holders along with Tenure Track System (TTS). The KIIs also discloses that ORICs, in particular, has played an important role in boosting research activities in universities.

### **5. Concluding Remarks**

Since its inception in 2002, HEC has implemented its policy agenda to bring reforms in higher education to improve access, relevancy and improve quality of higher education in Pakistan. This underlying paper has three specific objectives i.e., i) to identify the key reforms taken by HEC to flourish higher education and research environment in Pakistan, ii) to highlight the achievement of HEC geared towards



increasing higher education and research activities in Pakistan, and iii) to explore challenges HEC is facing to implement its higher education policy agenda in Pakistan.

To that extent, we have employed situational analysis through secondary and primary data. The secondary data includes HEC published reports and Pakistan Economic Surveys, while primary data through conducting the Key Informant Interview (KIIs) is collected from HEC officials who have been playing a pivotal role in policy making.

Exploratory analysis demonstrates that HEC has implemented multiple reforms in order to improve the productivity and quality of university teaching faculty. For that purpose, HEC has launched numerous indigenous and international scholarships, training programs, and TTS mode of hiring which have triggered increase in PhD faculty in public and private sector universities. Since the inception of HEC, a massive increase in establishment of universities and induction of PhD faculty members in rising number of universities has been witnessed.

Tremendous increase in enrollment rates at university level has been observed from 2002 to 2020 owing to reforms implemented by HEC, specifically an increase in females' enrollment has been notably observed which may be helpful to enhance the gender parity by 45%. On average, 1000 to 1800 PhDs have been produced annually from 2008-09 to 2019-2020 with the courtesy of multiple indigenous and foreign scholarships by HEC. Despite these achievements, the commission has initiated multiple programs to foster research environment, and collaboration amongst the local and international researchers.

The KIIs demonstrate that the commission is failed to achieve the desired outcomes despite multiple successes: i) lack of political will, ii) squeezing budgetary allocation for higher education, iii) lack of cooperation from public universities, and iv) intimidating the autonomy of HEC by incumbent political regimes. Furthermore, they have recommended that a task force of educational experts, comprising the representatives from all provinces/regions be constituted to devise a comprehensive and systematic future strategy for the higher education in Pakistan.

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