



# ARTIGOS

## AN ANALYSIS OF PUBLIC SECTOR SPENDING ON EDUCATION IN PAKISTAN AND ITS IMPACT ON THE PRODUCTIVITY AND EMPLOYABILITY OF PAKISTAN'S HUMAN RESOURCE

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### ABSTRACT

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This paper reviews the budgetary expenditures on public sector education in Pakistan, its issues and impact on sectorial job creation as percentage of GDP. It shows that there are multiple education systems in Pakistan with different medium of instruction and gender segregation at school levels and with multiple problems and inefficiencies. In addition, there are inadequate schools for boys and girls. Budgetary expenditure on Tertiary education is 35% and on school education 65%. There are 185 Universities in the country. The share of Agriculture in GDP in 2012-2018 period declined by 2.5%, of Industry declined by 6.7%, whereas the share of services sector grew by 9.2% increasing job opportunities in the new knowledge-based economy at the cost of manufacturing sector.

Government should build more schools at all levels with modern facilities and infrastructures even at remotest corners of the country. There should be scientific upgradation of teachers at all levels. Textbooks should encourage research-based gender sensitive, environment sensitive and productivity orientated scientific and technological knowledge with a more progressive worldview in order to create greater linkages between school system and Higher Education with emphasis on the knowledge economy of tomorrow that incorporates international labor and human rights standards.

**Keywords:** GDP of Pakistan, Budgetary Expenditure on Education, Literacy Rate, School Education, Tertiary Education.

## UMA ANÁLISE DO GASTO PÚBLICO EM EDUCAÇÃO NO PAQUISTÃO E SEUS IMPACTOS NA PRODUTIVIDADE E EMPREGABILIDADE DOS RECURSOS HUMANOS PAQUISTANESES

### RESUMO

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Este artigo analisa as despesas orçamentárias Paquistanesas em educação e seu impacto na criação de empregos como porcentagem do PIB. O estudo mostra que existem vários sistemas educacionais no Paquistão, com diferentes meios de instrução e segregação de gênero nos diferentes níveis escolares e com múltiplos problemas e ineficiências. Além disso, existem escolas inadequadas para meninos e meninas. As despesas orçamentárias no ensino superior são de 35% e na educação escolar de 65%. Existem 185 universidades no país. A participação da agricultura no PIB no período 2012-2018 diminuiu 2,5%, a da indústria diminuiu 6,7%, enquanto a participação do setor de serviços cresceu 9,2%, aumentando as oportunidades de emprego na nova economia baseada no conhecimento, ao custo do setor manufatureiro.

O governo deveria construir mais escolas em todos os níveis, com modernas instalações e infraestrutura, mesmo nos cantos mais remotos do país. Deve haver uma atualização científica dos professores em todos os níveis. Os livros didáticos devem encorajar o conhecimento científico e tecnológico baseado na pesquisa sensível ao gênero, sensível ao meio ambiente e orientado para a produtividade, com uma visão de mundo mais progressiva, a fim de criar maiores ligações entre o sistema escolar e o Ensino Superior com ênfase na economia do conhecimento do futuro e que incorpore padrões internacionais de direitos humanos e trabalhistas.

**Palavras-chave:** PIB do Paquistão, Despesas orçamentárias em educação, Taxa de alfabetização, Educação escolar, Educação terciária.

## **INTRODUCTION**

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In this global age of information technology and connectivity, Pakistan as a developing economy has tried to increase its public sector investments on school and tertiary education, thus redirecting its policy towards the job creation in the knowledge economy to become part of the fast-changing global economic paradigm. However, at the same time the country's lack of quality school education has created a knowledge gap between not only the urban and the rural parts of the country, but also between the rich and the poor strata of the economy. Which means that while the upper strata of the country is fast entering the modern age of information and knowledge, a large part of the country's population, especially its children are deprived of schooling, or quality education.

Over the years, there has been a structural change in Pakistan's Gross Domestic Product (GDP). While the share of services sector to GDP of Pakistan has been steadily increasing the Industrial as well as the Agricultural sectors of the country has been steadily declining and therefore the manufacturing sectors contribution to the GDP is only 41% and services sector contributes is 59%. Between 2012-2013 & 2017-2018 The share of Services Sector to Pakistan's GDP has

grown from 58.3% to 67.5 %; the share of Industry declined from 20.3% to 13.6% and the share of Agriculture declined from 21.4% to 18.9%. The literacy rate in the country is 60% leaving 40% of the population illiterate. (Ministry of Finance, 2018)

## **PURPOSE OF THE STUDY**

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The purpose of the study is to analysis the budgetary allocations of Federal and Provincial Governments of Pakistan in school and tertiary education.

## **DESIGN/METHODOLOGY/APPROACH OF THE STUDY**

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It is a secondary study using quantitative data from the official budgetary documents of respective Governments of Pakistan to analysis the education sector and the growth opportunities in industry and services sectors of the country

## **PROBLEM STATEMENT:**

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Pakistan is sixth largest by population in the world with almost 60 percent of the population categorized as youth. At the same time, 40 percent of the population is illiterate. Half of the school going children are out of school and another 50 % drop out before reaching class five and a majority of these are girls. On the upper spectrum,

there are 185 universities and professional institutes in the country-producing professionals in different disciplines (Ministry of Finance, 2018). The present paper will look into the relationship between budgetary spending and impact of education on the economy of Pakistan from 2013 until 2018.

### **OBJECTIVES OF THE STUDY ARE**

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1 To analysis the impact of Public Sector investments (Budgetary Expenditures) on School Education in Pakistan.

2 To analysis the impact of Public Sector investments (Budgetary Expenditures) on Tertiary Education in Pakistan.

3 To analysis the impact of education on industrial sector and Services sectoral growth in the country and the job Market of Pakistan.

### **THEORETICAL BASE OF THE STUDY**

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The theoretical base of the study is the Public Choice theory of Budgets and its implications for Education in Less Developed Countries (Gallagher, 1993) States that “when governments cut budgets they tend to allocate in a socially inefficient way”

### **EXPECTED RESULTS**

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H1 = Public Sector Budgetary spending and policy measures are not giving the desired results in the school education in Pakistan.

H2 = Public Sector Budgetary spending and policy measures have significant impact on University and Professional education in Pakistan.

H3 = School and University Education has significant impact on Industrial and Service sector growth in Pakistan.

### **ORIGINALITY/VALUE OF THE STUDY**

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The paper will have an original value that it would contribute to the general body of knowledge in assessing the trends of investments on human resource in a developing country like Pakistan. It should pin point the issues where the budgetary allocations have misfired and give a theoretical direction to policy makers as well as donors around the world of solving such issues in the near future

### **PRACTICAL IMPLICATIONS OF THE STUDY**

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The practical importance would be for the policy makers in Pakistan at both Federal as well as Provincial levels, and the educationists in less developed world, the private sector employers and foreign investors as well as for the future researchers.

## Literature Review

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(Ashraf & Ismat, 2016) Write, that the constitution of Pakistan provides free and universal education for all, but in reality the enrollment rate and literacy rate has remained below 60% because the government and other stakeholders in education sector could not perform well enough (Ashraf M. A., 2018). Writes that the religious education (Madrassa system) and modern education systems (public and private schools) in Pakistan are not compatible because these systems use different types of curriculum creating multiple socio-economic and political problems for students of different strata of Pakistan. (Memon, Spring 2013) Writes, “The participation rate at higher education is low comparatively to other countries of the region. There are problems of quality of staff, students, library and laboratory.” (Hussain, 2015) Pinpoints seven major problems in the education system of Pakistan. (i) Lack of proper planning for future needs of the economy and society. (ii) Social constraints towards education. (iii) Gender gap between educating boys and girls, (iv) High cost of education, especially for the poorer strata. (v) War on terror where terrorists and extremists blown schools effected areas, (vi) Lack of funds for education and (vii) lack of technical

education in the educational system of the country. (Rasheed & Mukhtar, 2012) Point out that “The natural calamities, political turbulence, provincialisms, and political motivations make the best planned, fail. The allocations towards the sector of education could not be enhanced because of the earlier. We have to revisit our priorities to keep the country on the track of progress”

(UN News, 2007) writes that the UNESCO report shows that “the United States (USA) spends 28 per cent of the global education budget although only 4 per cent of the world’s children and young people live there” Therefore the US is in fact the single largest investor in education”. (UNESCO, 2017) Stressed that “Governments should fulfil their commitment of spending at least 4% of GDP on education or allocating 15% of total government expenditure”.(UNESCO, 2018) Member states on 14th November 2017 adapted the recommendations of its education commission (See <https://en.unesco.org/news/education-commission-meets-unesco-general-conference>) and the member states endorsed the implementation of SDG4 Education 2030 (see <https://en.unesco.org/education2030-sdg4>) and budgets for implementation of Sustainable Development Goals (see <https://en.unesco.org/education2030->

sdg4/targets). Especially target 4.7 that states “By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture’s contribution to sustainable development”.

### **Issues of Education in Pakistan**

Almost 70% of the educational institutions in Pakistan are in the Public sector and 30% are in the private sector (Hussain, 2015). Major issues in the Education System of Pakistan are:

#### **MULTIPLE SYSTEM OF EDUCATION**

There are multiple education systems in the country. (i) The state of the art public or highly expensive ‘elitist’ private schools where modern, holistic education is dispensed usually in Cambridge system of examinations (A or O levels), enabling these boys and girls to become part of the international mainstream success stories. (ii) The government schools and private schools with relatively less fee structures give irrelevant, outmoded and unscientific education in government sponsored Metric

and Intermediate (FA / FSc) system of examination. (iii) Madrassas (Mosque-based Religious Schools), which are further divided into sectarian lines. Most of these madrassas do not impart any kind of job or vocational oriented education, nor do they follow any general syllabus of general education, rather they concentrate on their each version of sectarian religious teaching and learning the Quran by heart. The environment in most of them is harsh and child-unfriendly. (iv) The Public Sector Vocational and Training Institutes that also give segregated education for boys and girls. Most of the vocational training for girls is oriented towards ‘house’ confinement, because they teach these girls cooking, sewing and embroidery that do not create many opportunities for the girls to earn an active income away from home in the agricultural, industrial or services sectors.

#### **GENDER SEPARATION IN EDUCATION**

Important issue in education system of Pakistan is the gender segregation of schools and colleges for male and female students. There is no specific policy about schools for transgender children because until recently they were not issued National Identity Cards (CINIC) without which one cannot get admission or a job or own

property and business in the country. The first school for transgender children has opened in Lahore in 2018 by an NGO.

### **THE LANGUAGE DEBATE IN EDUCATION (MEDIUM OF INSTRUCTION)**

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An important issue in Pakistani education system are – the language issue – where medium of instructions in the ‘elitist’ schools, colleges and at University levels is in English language with Urdu (the national language of Pakistan) as a subject. While in government schools and colleges in the Punjab, the medium of instruction is Urdu with English as one of the subjects and in the rest of the provinces, the medium of instruction is in regional languages with Urdu and English as subjects. There is practically no research base in Urdu (or the regional languages) nor are there any significant translations of world knowledge in these languages.

### **SUBSTANDARD TEXTBOOKS**

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Most of the Public Sector schools as well as the private schools for the poorer strata of the country lack a vision of what education is all about. There is a ‘textbook racket’ in the country that provide substandard books to students. The level of textbooks published for schools, (especially in Urdu language) are of poor quality, have gender

biases and lack the basic scientific direction needed for modern day industrial and technical base of a rapidly developing society. These textbooks do not teach productive habits, nor analytical skills, not any basic form of citizenship behaviors needed for entering the 21st century’s knowledge economy.

### **LACK OF TEACHER TRAINING IN SCHOOL SYSTEM OF PAKISTAN**

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There are few facilities for teacher training in Pakistan. Although Public sector provides regular teacher training, this training lacks vision, scientific teaching methodology and human touch that modern teachers should have. There is a system of ‘root learning’ and scientific or modern methods of analytic thinking and learning are usually missing among both teachers and students. Private schools get good teachers through trial and error. Salaries of schoolteachers in Pakistan are less than that of cooks and drivers in urban centers of the country, therefore many of the teachers lack motivation and compassion towards their students.

### **ADMINISTRATIVE LACK OF GOOD GOVERNANCE IN EDUCATION SYSTEM**

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As there is no uniform regulatory body for the school system in the country like the Higher Education Commission (HEC) that governs the Universities and professional

institutions. Education Departments in each province govern the Schools system. There are massive issues of bad governance, corruption mismanagement and nepotism in the education Departments, Text Book Boards, school inspectors, as well as the head masters of the schools. For each Euro spent on the school education system of the country, the teacher and the student only get just 20% of the money intended for them.

### **Economy of Pakistan**

According to the census figures of 2017, total population of Pakistan is 207.8 million people, out of which - 106.45 million (51.23%) are males, 101.32 million (48.76%) are females, and 10.4 thousands (0.01%) are transgender. Out of the total population - 132.2 million (63.6%) People live in rural areas and 75.6 million (36.4%) people live in urban areas (Ministry of Finance, 2018). Provinces wise the breakup of the population of Pakistan is as follows – Punjab 110.0 million (53%); Sindh 48.0 million (23%); Khyber Pakhtunkhwa (KPK) 30.5 million & Federally Administered Tribal Areas (FATA) 5 million = 35.5 million (17%); Baluchistan 12.3 million (6%) and Islamabad 2 million (1.4%) (Ministry of Finance, 2018) Of total population of Pakistan in 2015-2016, 58% (120.6 million) were literate (of

them, 70% males and 48% females) leaving 42% (87.4 million) of the population as illiterate (of them 30% males & 52% females). (Ministry of Finance, 2018)

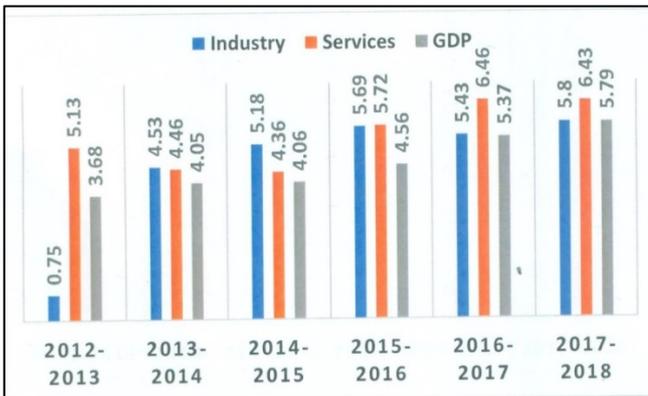
Table 1 and Figure 1 Source: (Ministry of Finance, 2018) shows the Growth rate of Pakistan's Agricultural Sector, Industrial Sector, Services Sector and Total GDP in Percentages 2012-2018. The table shows that from 2012-2013 to 2017-2018 the growth rate of Pakistan's Agriculture increased from 2.68% to 3.81% (an average growth rate of 2.22%). The growth rate of Industrial sector rose from 4.53% to 5.8% (an average growth rate of 4.56%) and the growth rate of Services sector rose from 4.46% to 6.43% (an average growth rate of 5.42%). Total GDP of the country grew from 3.68 to 5.79 in the same period (an average growth rate of 4.59%)

**Table 1 Pakistan's GDP Growth Rates in Percentages 2012-2018**

<b>Years</b>	<b>Agriculture</b>	<b>Industry</b>	<b>Services</b>	<b>GDP</b>
2012-2013	2.68%	0.75%	5.13%	3.68%
2013-2014	2.50%	4.53%	4.46%	4.05%
2014-2015	2.13%	5.18%	4.36%	4.06%
2015-2016	0.15%	5.69%	5.72%	4.56%
2016-2017	2.07%	5.43%	6.46%	5.37%
2017-2018	3.81%	5.8%	6.43%	5.79%
<b>Average Growth</b>	<b>2.22%</b>	<b>4.56%</b>	<b>5.42%</b>	<b>4.59%</b>

Source: (Ministry of Finance, 2018)

Figure 1 Growth Rate Of Pakistan's Industrial Sector, Services Sector And Total GDP in Percentages 2012-2018



Source: Ministry of Finance, 2018

In 2017-2018, there are 268 thousand mainstream educational institutions in Pakistan with a total enrolment of 50.4 million students (24.2 % of total population of Pakistan) and 1.8 million teachers. The breakup of these institutions, enrolment and teachers is – 174 thousand Primary schools (until class 2nd) with total enrolment of 22.5 million and 496 thousand teachers. 51.4 thousand Middle schools (classes 3rd, 4th & 5th) with total enrolment of 7.2 million and 493 thousand teachers. 32 thousand High schools (classes 6th, 7th & 8th) with total enrolment of 3.8 million and 583 thousand teachers. 5 thousand High Secondary Schools and Intermediate /Colleges (classes of 9th & 10th /11th & 12th) with total enrolment of 1.75 million and 119 thousand teachers. 1.6 thousand Degree Colleges (until 14 years education) 1.1 million enrolment and 43.6 thousand

teachers. 4.0 thousand Vocational Institutions with 358 thousand enrolment and 19 thousand teachers. There are 185 Public Sector and Private Sector Universities and professional institutions (from 16 years and above until PhD level education) in Pakistan with a total enrolment of 1.4 million (0.7% of total population of Pakistan) and 54 thousand teachers & professor of different grades and pay scales. (Ministry of Finance, 2018)

Net provincial wise enrolment rate (NER) in Pakistan in 2015-2016 was – In Punjab 59% (60% males & 58% females). In Sindh 48% (52% males & 44% females). In KPK 53% (58% Males & 47% Females). In Baluchistan 33% (38% Males & 26% Females). A Net 54% for Pakistan (56% Males & 51% Females) (Ministry of Finance, 2018).

### Budgetary Issues of Educational System

Pakistan being a Federation distributes its budgetary spending in the federal well as four provincial budgets (The Provinces of Punjab, Sindh, Khyber Pakhtunkhwa or KPK and Baluchistan). After the 18th Constitutional amendments the allocations on education are provincial subjects, therefore it is pertinent to calculate the budgetary expenditures of all four provinces as well as the federal allocations on

education to get a better picture of the government’s expenditures on education.

Table 2 and Figure 2 (derived from table 2) shows the province wise expenditure on education in Pakistan from 2013 until 2018 (all Tables) calculated at Exchange Rate Pakistan Rupee (PRS) 142.5 = 1 (€) Euro (Hamari Web, 2018). Total expenditure on Education in the country in 2013-2014 was € 2.78 billion. In 2014-2015 € 3.21 billion. In 2015-2016 € 2.86 billion. In 2016-2017 was € 3.22 billion, and in 2017-2018 € 3.73 billion. Although the budgetary outlay in money terms are increasing every year, but in percentage terms this expenditure on education remains relevantly constant and comes to an average of 2.2 per cent of Pakistan’s annual GDP.

Figure 2 Provenge wise Expenditure on Education in Pakistan 2013-2018 in Billion Euros



Source: Ministry of Finance, 2018

Table 3 and Figure 3 shows that Pakistan spent Education (Current & Development) Euros 2.78 billion in 2013-2014; Euros 3.21 billion in 2014-2015; Euros 2.86 Billion in 2015-2016; Euros 3.22 billion in 2016-2017 and Euros 3.73 billion in 2017-2018. An average of Euros 3.16 billion yearly over these five years – the lowest in 2013-2014 and the highest in 2017-2018.

Table 2. Provenge wise Expenditure on Education in Pakistan 2013-2018 in Billion Euros

In Billion Euros	Federal	Punjab	Sindh	KPK	Baluchistan	Total	As percentage of GDP
2013-2014	0.62	0.4	0.89	0.64	0.23	<b>2.78</b>	2.1%
2014-2015	0.61	0.38	1.18	0.75	0.29	<b>3.21</b>	2.2%
2015-2016	0.7	0.44	1.09	0.32	0.31	<b>2.86</b>	2.3%
2016-2017	0.8	0.66	1.18	0.22	0.36	<b>3.22</b>	2.2%
2017-2018	0.93	0.74	1.4	0.27	0.39	<b>3.73</b>	2.2%

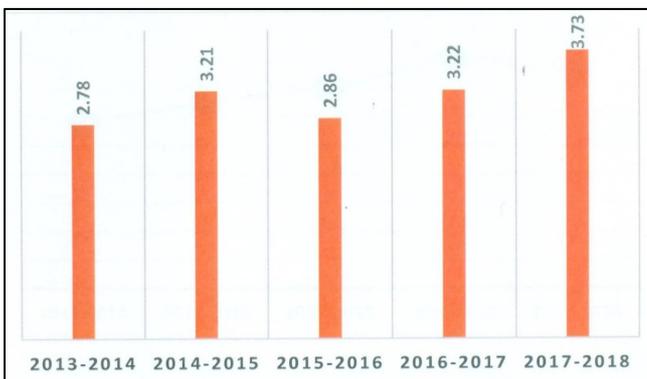
Source: (Ministry of Finance, 2018) (Government of Pakistan, 2017-2018; 2015-2016) (Government of Punjab, Pakistan, 2017-2018; 2015-2016) (Government of Sindh, Pakistan, 2017-2018; 2015-2016) (Government of KPK, Pakistan, 2017-2018; 2015-2016) (Government of Baluchistan, Pakistan, 2017-2018; 2015-2016.)

**Table 3 Total Budgetary Expenditure (Federal & provincial) on Education in Pakistan 2013-2018**

Years	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
In Billion Euros.	2.78	3.21	2.86	3.22	3.73

Source: (Ministry of Finance, 2018) (Government of Pakistan, 2017-2018; 2015-2016) (Government of Punjab, Pakistan, 2017-2018; 2015-2016) (Government of Sindh, Pakistan, 2017-2018; 2015-2016) (Government of KPK, Pakistan, 2017-2018; 2015-2016) (Government of Baluchistan, Pakistan, 2017-2018; 2015-2016).

**Figure 3 Total Budgetary Expenditure (Federal & provincial) on Education in Pakistan 2013-2018 in Billion Euros**



Source: (Ministry of Finance, 2018)

### TO ANALYSIS THE IMPACT OF PUBLIC SECTOR INVESTMENTS ON SCHOOL & PRIMARY EDUCATION IN PAKISTAN

Table 4 and Figure 4 (derived from table 4) shows that the Pakistan's total (Federal & Provincial expenditure (Current & Development) on School (Primary & secondary) Education 2013-2018 were in 2013-2014 Euro 1.45 billion (41% of the entire budgetary allocations on education in

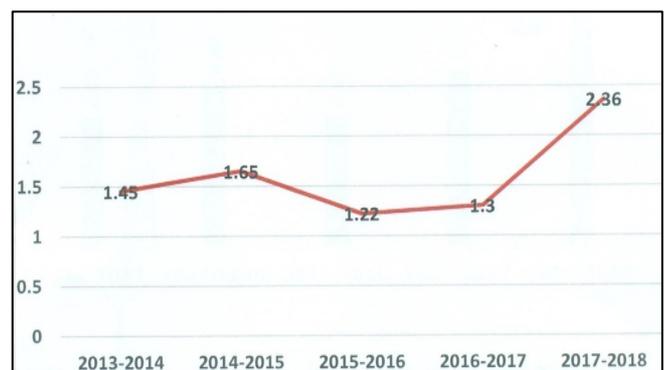
the country). In 2014-2015 was Euro 1.65 billion (44%), came down to Euro 1.22 billion (37.4%) in 2015-2016 and increased to Euro 1.3 billion (35.7%) in 2016-2017. In 2017-2018, it was Euro 2.36 billion (55% of the entire budgetary allocations on education in the country).

**Table 4 Pakistan's total (Federal & Provincial expenditure (Current & Development) on School (Primary & secondary) Education 2013-2018**

Years	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
In Billion Euros.	1.45	1.65	1.22	1.3	2.36

Source: (Ministry of Finance, 2018) (Government of Pakistan, 2017-2018; 2015-2016) (Government of Punjab, Pakistan, 2017-2018; 2015-2016) (Government of Sindh, Pakistan, 2017-2018; 2015-2016) (Government of KPK, Pakistan, 2017-2018; 2015-2016) (Government of Baluchistan, Pakistan, 2017-2018; 2015-2016).

**Figure 4 Pakistan's total (Federal & Provincial expenditure (Current & Development) on School (Primary & secondary) Education 2013-2018 in Billion Euros.**



Source: (Ministry of Finance, 2018)

In 2013-2014, there were 159.7 Thousand Primary schools in Pakistan (60.3 thousand for girls and 99.4 thousand for boys). While there were 42.9 thousand middle schools

(21.1 thousand for girls and 21.8 thousand for boys) and 30.6 thousand high schools (12.6 thousand for girls and 18 thousand for boys) in Pakistan. In 2017-2018 primary schools increased to 173.7 thousand (58.7 thousand for girls and 115 for boys) – a decrease of 6.6 thousand schools for girls and an increase of 15.6 thousand primary schools for boys. Middle schools increased to 51.4 thousand (31 thousand for girls and 20.4 thousand for boys) – an increase of girls school by almost 10 thousand and a decrease of boys schools by 1.4 thousand. High schools increased to 31.9 thousand (15.5 thousand for girls and 16.4 thousand for boys) in 2017-2018 – an increase of girls schools by almost 4 thousand and a decrease of boys schools by 1.6 thousand schools (Ministry of Finance, Government of Pakistan, 2017-2018).

#### *Enrolment in Primary, Middle and High schools in Pakistan 2013-2018*

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In 2013-2014, there were 19.44 million students enrolled in the primary classes (I to V) out of which 8.6 million were girls and 10.84 million were boys. In 2017-2018 the enrolment in Primary classes went up to 22.5 million (10.1 million were girls and 12.4 million were boys). An increase of 1.5 million girls and 1.56 million boys enrolled

in the primary classes all over Pakistan during 2013-2018 period.

In 2013-2014, there were 6.5 million students enrolled in secondary classes (VI-VIII) out of which 2.8 million were girls and 3.7 million were boys. In 2017-2018, the enrolment 7.2 million students enrolled in secondary classes, out of which 3.2 million were girls and 4.0 million were boys. An increase of 0.4 million girls and 0.3 million boys enrollment in middle schools between 2013-2018 period.

In 2013-2014, there were 4.3 million students enrolled in High schools (IX-XII) out of which 1.8 million were females and 2.5 million were males. In 2017-2018, there were 5.5 million students enrolled in High schools (IX-XII) out of which 2.3 million were females and 3.2 million were males. An increase of 0.5 million females and 0.7 million males enrollment in high schools over these five years period (Ministry of Finance, Government of Pakistan, 2017-2018).

#### **TO ANALYSIS THE IMPACT OF PUBLIC SECTOR INVESTMENTS ON HIGHER & UNIVERSITY EDUCATION IN PAKISTAN**

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Table 5 and Figure 5 (derived from table 5) shows that the total expenditure on Higher Education – Colleges, Universities & Professional (Tertiary) in 2013-2014 was

Euros 1.16 billion (33.0% of total spending on education in the country). In 2014-2015 was Euros 1.3 billion (35.0%). In 2015-2016 was Euros 1.4 billion (43.0%). In 2016-2017 was Euros 1.6 billion (44.0%). In addition, in 2017-2018 is Euros 1.5 billion (35.0% of total spending on education in the country). An average spending of Euros 1.4 billion per year in the last 5 years, when industrial sector grew from 4.5% to 5.8% and services sector grew from 4.46% to 6.43% in the same 5-year period.

**Table 5 The Pakistan’s total (Federal & Provincial expenditure (Current & Development) on Higher (Tertiary) Education 2013-2018**

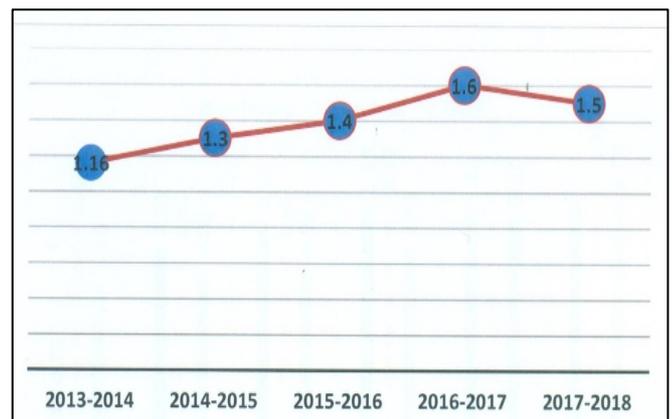
Years	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
In Billion Euros.	1.16	1.3	1.4	1.6	1.5

Source: (Ministry of Finance, 2018) (Government of Pakistan, 2017-2018; 2015-2016) (Government of Punjab, Pakistan, 2017-2018; 2015-2016) (Government of Sindh, Pakistan, 2017-2018; 2015-2016) (Government of KPK, Pakistan, 2017-2018; 2015-2016) (Government of Baluchistan, Pakistan, 2017-2018; 2015-2016).

It should be noted that the number of Higher Educational Institutions in Pakistan in 2013-2014 were 161 Universities and 1,086 Degree Colleges (518 for females & 568 for males). In 2014-2015, there were 163 Universities and 1,410-Degree Colleges (308 for females & 1102 for males). In 2015-2016, there were 163 Universities and 1,418-Degree Colleges (260 for females & 1158 for males). In 2016-2017, there were

185 Universities and 1,431-Degree Colleges (344 for females & 1087 for males). In 2017-2018, there are 185 Universities and 1583-Degree Colleges in Pakistan (305 for females & 1278 for males). The above data shows that although Public and Private Universities in the country increased from 161 to 185 during these five years (Ministry of Finance, Government of Pakistan, 2017-2018).

**Figure 5 Pakistan’s total (Federal & Provincial expenditure (Current & Development) on Higher (Tertiary) Education 2013-2018 in Billion Euros**



Source: (Ministry of Finance, 2018)

Also, note that the female degree colleges are constantly decreasing from 518 in 2013-2014 to 305 in 2017-2018. While the male degree colleges in the country increased from 1102 in 2013-2014 to 1217 in 2017-2018 showing that, the focus on Degree level (up to 14 years) education is on males of the country rather than the females of the same level and age.

In 2013-2014 there were 674.4 thousand students enrolled in Degree Colleges (XIII-XIV years of education) throughout Pakistan, out of which 327.0 thousand were females and 347.4 thousand were males. In 2017-2018 enrolment to degree colleges increased to 1,090.0 thousand students, out of which 68.0 thousand were females and 1,022.0 thousand were males – the enrolment of females in degree colleges decreased with 259 thousand while the enrolment of male students in degree colleges of Pakistan increased with 674.6 thousand between 2013-2018 period.

In 2013-2014 there were 1,600 thousand students enrolled in 161 Universities of Pakistan out of which 805 thousand were females and 795 thousand were males. In 2017-2018 there were 1423 thousand students were enrolled in 185 Universities of the country, out of which 630 thousand were females and 793 thousand were males. Although from 2013-2014 to 2017-2018, the number of universities in the country increased from 161 to 185, the number of students enrolled at different levels in these universities and professional institutions decreased by 165 thousand females and 2 thousand males (Ministry of Finance, Government of Pakistan, 2017-2018).

### **THE IMPACT OF EDUCATION ON INDUSTRIAL SECTOR AND SERVICES SECTORAL GROWTH IN THE COUNTRY AND THE JOB MARKET OF PAKISTAN**

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As seen from tables 1 and 3, in 2013-2014 with budgetary spending of Euros 2.78 billion on education, the industrial sector grew by 4.5% and services sector grew by 4.46%. In 2014-2015 with budgetary spending of Euros 3.21 billion on education, the industrial sector grew by 5.18% and services sector grew by 4.36%. In 2015-2016 with budgetary spending of Euros 2.86 billion on education, the industrial sector grew by 5.7% and services sector grew by 5.72%. In 2016-2017 with budgetary spending of Euros 3.22 billion on education, the industrial sector grew by 5.43% and services sector grew by 6.46%. In addition, in 2017-2018 with budgetary spending of Euros 3.73 billion on education, the industrial sector grew by 5.8% and services sector grew by 6.43%.

### **DEVELOPMENT BUDGET & ALLOCATION ON EDUCATION 2013-2018**

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Table 6 and Figure 6 (derived from table 6) shows that Pakistan's Development Expenditure on Education in 2013-2014 was Euro 0.54 billion (15.25% of entire budgetary allocation for education in Pakistan (Federal & Provincial). In 2014-2015 was Euro 0.67 billion (18.0%). In 2015-

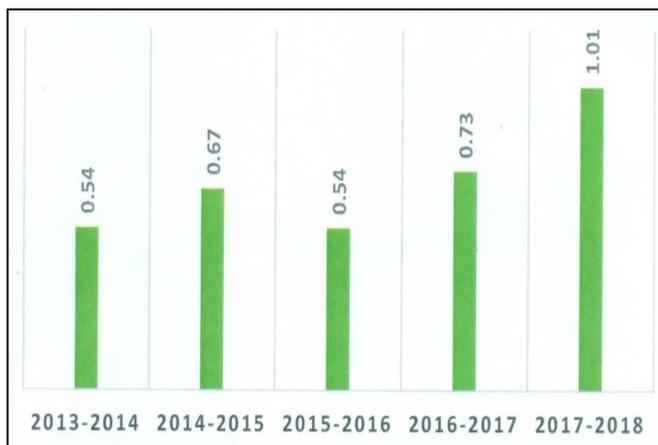
2016 was Euro 0.54 billion (16.6%). In 2016-2017 was 0.73 billion (20.0%) and in 2017-2018 is Euro 1.04 billion (24.2% of entire budgetary allocation for education in Pakistan (Federal & Provincial).

Table 6 Pakistan’s Development Expenditure on Education 2013-2018 in Billion Euros

Years	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
In Billion Euros.	0.54	0.67	0.54	0.73	1.01

Source: (Ministry of Finance, 2018) (Government of Pakistan, 2017-2018; 2015-2016) (Government of Punjab, Pakistan, 2017-2018; 2015-2016) (Government of Sindh, Pakistan, 2017-2018; 2015-2016) (Government of KPK, Pakistan, 2017-2018; 2015-2016) (Government of Baluchistan, Pakistan, 2017-2018; 2015-2016).

Figure 6 Pakistan’s Development Expenditure on Education 2013-2018 in Billion Euros



Source: (Ministry of Finance, 2018)

It is also true that whenever there are financial cuts on the budgets in federal and provincial budgets of Pakistan, the axe falls on development budgets and over the years education and health departments are usually hit the hardest when budgetary

allocations are reduced which are clearly seen from the revised budget estimates in subsequent years.

### Conclusion

There are multiple education systems, teaching methods and examination systems prevailing in the country from A or O levels in elite private schools, to Metric and Intermediate levels in public sector for general public to Mosque-based Religious Schools (Madrasas) for the very poor as well as Vocational and Training Institutions. Medium of instructions in the ‘elitist’ schools, colleges and at University levels is in English while for Public sector schools is the national or regional languages with practically no research base or any significant translations of world knowledge in Urdu or the regional languages. There are few facilities for teacher training. Most of Public schools in Pakistan lack scientific teaching methodology and compassion. There are also massive issues of bad governance, corruption mismanagement and nepotism in the education Departments, Text Book Boards etc. There is a ‘textbook racket’ in the country that provide substandard books to students. Most of the youth coming out of public sector and Madrassa based institutions are not employable due to lack of jobs or due to

lack of proper productive (motor or analytical) skills needed for the jobs and due to structural changes in the economy and the world towards more scientific and technological based production and innovation. The literacy rate in Pakistan is 60% of the population leaving 40% of the adult population illiterate.

In 2013-2018 period in Pakistan, the Primary schools for girls decreased by 6,600 while for boys increased by 15,600. Middle schools for girls increased by 10,000 while for boys decreased by 1,400. High schools for girls increased by 4,000 while for boys decreased by 1,600. In the same period, Primary School enrolment for girls increased by 1.5 million and for boys by 1.56 million. Middle school enrolment for girls increased by 0.4 million and for boys increased by 0.3 million. High school enrolment increased for females by 0.5 million and for males by 0.7 million. Degree colleges increased from 1.4 thousand to 1.58 thousand. However, the Degree colleges for females decreased from 518 to 305 while for males increased from 568 to 1,278. The enrolment of females in degree colleges decreased with 259 thousand while the enrolment of male students in degree colleges of Pakistan increased with 674.6 thousand. In the same period, Expenditure on Tertiary education increased from € 1.16 billion to 1.5 billion,

an average of 35% of the Country's budgets on education. Universities in the country increased from 161 to 185. The number of students enrolled at different levels in these universities and professional institutions decreased by 165 thousand females and 2 thousand males. There is gender segregation of schools and colleges for male and female students. While Universities & professional institutions have co-education and in many there is state of the art research and teaching facilities.

Although the budgetary outlay in money terms are increasing every year, but in percentage terms, this expenditure on education comes to an average of 2.2 per cent of Pakistan's GDP. With budgetary allocation for education of € 2.78 billion in 2013-2014 increased to € 3.73 billion in 2017-2018, the industrial sector increased from 4.5% to 5.8% and services sector increased from 4.46% to 6.43% in the same period creating additional job opportunities in these sectors of the country. The structural transformation in Pakistan's economy during 2013-2018 period shows that the share of Agriculture in its GDP declined by 0.5%; the share of Industry declined by 0.4%; whereas the share of services sector grew by 0.9%, reducing job demand in manufacturing sector while

increasing job opportunities in the new knowledge based economy.

### **Recommendations**

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Education system of education in Pakistan (Public and Private) should be restructured on modern scientific (teaching and learning) basis for a more researched based, skill based, productivity based system that incorporates international labor and human rights standards catering for all strata and sections of the society uniformly and on equal basis without any gender or economic bias or discrimination. There should be one regulatory body for school education on lines of HEC. In order to save pilferages and costs and reduction of unnecessary administrative structures and duplication.

Budgetary allocations should built more schools at all levels with modern facilities and infrastructures even at remotest corners of the country and should concentrate on scientific upgradation of teachers at all levels. Textbooks should encourage research based gender sensitive, environment sensitive and productivity orientated scientific and technological knowledge with a more progressive worldview. Reduction of unnecessary and outdated subjects from the curriculum is need of the day for greater emphasis on the

knowledge economy to tomorrow as well as to create greater linkages between the school system and the Higher Education (University and Professional) system.

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