

Demographic Dividend: Challenge or Opportunity for Pakistan and India?

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The process of demographic transition and effects on the overall distribution of the population of a country can have far reaching repercussions for the economy. The changing population distribution may not appear to directly affect the economic growth of an economy but looking at it in a holistic manner, the transition process can work as a catalyst in making or breaking the development process of a country. The rate of change of economic growth is directly related to demographic transition in a country, which means that the future economic growth rates of an economy are dependent on the characteristics of the changing age distribution population. Investing appropriately in the transition process reap heightened benefits in the future, while negligence in considering the transition process can amplify the challenges in the economy. This paper tries to explore the demographic transitions taking place in the education sector of Pakistan in comparison to India, and how Pakistan has been unable to alter its policies in accordance to the changes in its demographics, while India has somewhat been addressing its issues pertaining to access to education.

The changing demographics call for numerous policy changes in each sphere of a country. For instance, one of the major concerns of the welfare state has been their aging population, where a larger proportion of the country's population falls in the age bracket of 55 and above. Such a scenario pushes up the old dependency ratio, which requires for various forms of policy adjustments in order to adjust to the change. The old age benefits budgets is amongst the most obvious area which requires modifications because of the aging population, however education budgets and spending on consumer goods is expected to decrease, while taxes, insurance and health care all are expected to increase. All these spheres of the economy need relevant policy adjustments today in order to cope with challenges in the future.

Furthermore in recent years, other areas where policy concerns have been raised due to demographic transitions include the need for more conducive working environment for ethnically diverse population in countries like the United States of America, where it is projected by the US Bureau of the Census that the non-Hispanic population will become a minority by the year 2050 (Clausell, 1998). Studies propose various policy considerations to close the gap amongst various groups, through culturally sensitizing the younger populations. This is to be done by targeting the educators today who will then prepare the young population in schools for the future challenges due to the demographic transition. (Alexander & Forrest, 2004)

Another scenario, usually in case of developing countries is the incident of demographic dividend or bonus. This situation occurs when the young dependency ratio of a country declines along with an increase in the proportion of the working age population. This occurrence is usually viewed as an opportunity for boasting productivity and growth of an economy by appropriately investing in its human capital formation. Declining fertility rates and increasing working age population, supported by opportune investments in primary and secondary education bring about phenomenal enhancement in the productive capacity of the population, per capita saving and the human capital development. Numerous East Asian economies including Hong Kong, China, Korea and Thailand (Arif, & Chaudhary, 2008) are examples of how decline in the dependency ratio, supported by fitting policies can multiply the development process

in the country, where according to the (World Bank, 2006) more than 30% of the “Growth Miracle’ in these economies has been due to the demographic bonus.

Evidence show that Pakistan’s demographic bonus phase is under way since 1990s and will go on till 2045. The 1980-90s in Pakistan witnessed the start of decline in fertility, which continued in the past two decades. It is expected that this trend will continue in the next two decades, eventually resulting in a decline in the young dependency ratio and decreased burden on the working age population. This is an opportunity where the saving per capita and growth rates can substantially be improved with the help of effective development policies.

Policy makers around the world are aware of the potential opportunity that the demographic dividend has for any economy. The World Bank itself termed the scenario as the demographic ‘dividend’, ‘bonus’ or the ‘window (of opportunity)’ (Hakkert, 2007). However the dilemma of the development process in Pakistan is such that despite the existence of a window of opportunity, the benefits from the demographic change have not been fully supported by appropriate social and economic policies. Education remains at a low priority of the policy makers; the budget as a percentage of the GDP not increasing more than 3% in the past two decades while the absorption of the youth in the labor market has not been a success story either in the past two decades. The youth unemployment rate in Pakistan has been more than the overall unemployment rate throughout the last decade.

Table 1: Unemployment Rates in Pakistan			
	1999-2000	2006-07	2010-11
Unemployment rate	7	5	6
Youth unemployment rate	13	8	8 ⁱ

Source: Pakistan Bureau of Statistics, Pakistan Employment Trends

The rest of the paper focuses on education demographics in Pakistan in the past two decades, in order to show the lack of focus on education, especially school education by the policy makers in Pakistan. In contrast, the paper will highlight data on Pakistan’s neighboring country; India’s policies towards primary education and their motivation towards achieving the 2nd Millennium Development Goal of Universal Education is helping them reap the benefits of the demographic bonus more than Pakistan.

The state of education and school enrollment in Pakistan can be understood through the following table, which shows the country’s primary, elementary and matriculation net enrollment rates, in the past two decades, where net enrollment rate or NER is the ratio of the pupils in the respective category (i.e. primary for example) with respect to the total number of children in the theoretical age group.

Table 2: Net Enrollment Rates in Pakistan: Primary, Middle and Matriculation Levels, 1990-2011			
	Primary Level	Middle Level	Matriculation Level
1990-91	46	-	-
2004-05	53	18	10
2010-11	56	20	12

Source: Federal Bureau of Statistics (PIHS, PSLM)

The figures in the table show a gradual increase in the enrollment levels in all the three levels of schooling. However still in absolute terms the figures are quite worrying. At the primary level, a NER of 56% means that around half of the total young population is still out of school, which in effect means that

approximately half of the working age population in the next 15-20 years will be illiterate and thus be categorized as unskilled labor.

On the other hand, the net enrollment rates in India increased tremendously. From being 85% in 2005-06, they rose to 98% in 2009-10. The rate of return increases on each year of schooling, thus the prospective income of the enrolled children will be higher than the prospective income of the out of school children. Benefits or externalities of completing school include numerous other socio-cultural advantages, other than the economic benefits. These include a better sense of citizenship, rule of law, political stability, dissemination of new & innovative technology, slower population growth and better health care (McMahon, 2004)

Further on, the following table shows gender disaggregated information on the enrollment and literacy trends in both the urban and rural areas of Pakistan. The gender gap even though has decreased since 1990s but still remains substantial, especially in the rural areas of the country.

Table 3: Literacy and Net Enrollment Rates: Pakistan and Urban-Rural Areas, 1990-2011						
	Literacy (10 years + Population)			NER (Primary, 5-9 years)		
	Male	Female	Gender Gap	Male	Female	Gender Gap
Total						
1990-91	43	22	21	53	39	14
2000-01	58	32	26	46	38	8
2010-11	69	46	23	60	53	7
Urban						
1990-91	61	40	21	61	57	4
2000-01	72	56	16	57	54	3
2010-11	81	67	14	67	65	2
Rural						
1990-91	43	12	31	50	31	19
2000-01	51	21	30	43	33	10
2010-11	63	35	28	57	48	9

Source: Federal Bureau of Statistics (PIHS, PSLM)

The increase in enrollment in the past 2 decades is commendable, considering the minute expenditure on the sector. However the rate of this increase with respect to time is slow and if taken in comparison to other developing countries, it is amongst the lowest. This essentially means that Pakistan has been one of the slowest countries in achieving the Millennium Development Goals. There needs to be a precise and effective education reform program introduced in the country in order to improve the net enrollment rates.

The education sector has not been without its successes in Pakistan. Education has been made a fundamental and juridical right of the children aged 5 to 16 by the government of Pakistan, according to its 18th Amendment to the Constitution of Pakistan in 2010. The article which made education a free and compulsory right is the article 25A, according to which “The State shall provide free and compulsory education to all children of the age of five to sixteen years in such manner as may be determined by law.” This amendment in the constitution recognizes education as a basic human right and the Right to Education (RTE) campaign strives to create awareness of the very same right. Even though formal legislation or bills in the assemblies are yet to be passed but still the advent of the article 25A is a first step towards positive change in the country. Another positive step forward can be in the form of rules and

norms under the RTE legislation, which can develop minimum standards for schools in terms of school facilities and teacher allocation. The RTE Act passed in 2009 in India is a very good example for Pakistan to learn from. Currently according to The Right of Children to Free and Compulsory Education Act 2009 Norms and Standards for a School (Section 19 and 25), there are set norms for pupil-teacher ratio, and various other rules for school facilities. The school facilities rules include one classroom for every teacher, separate toilets for boys and girls, presence of safe drinking water facility in the school premises, availability of kitchens where the mid-day meals are cooked in schools, and availability of a library and playground in each school. These rules help retain students in schools, which improves enrollment rates and decreases dropout rates, amongst both girls and boys.

The percentage of out of school children in the age band of 6 to 14 years of age, only 3% children were found to be out of school in India, according to the Annual Status of Education Report (ASER) India 2011 chapter. The total number of out of school children in India has dropped from 25 million in 2003 to 8.1 million in 2009. The SSA grants by the government help bridge the gap in missing facilities in the country, which help in retaining and improving enrollment in schools. According to SSA, new schools are there are different grants for rural primary and upper primary government schools for financing various types of school equipment and facilities. Three forms of grants under the SSA are called the school maintenance grant, school development grant and a teacher learning material (TLM) grant. According to ASER India, 2011 more than 75% of the schools surveyed reported receiving SSA grants in the full financial year. Such forms of financing create accountability and helps improve the conditions in schools.

On the other hand, according to ASER 2011 Pakistan, the percentage of children out of school in the age band of 6 to 16 years is 20.1% of the total children in the age bracket. The age bracket of 6 to 16 years is the age group which has been given a fundamental and judicial right to education by the Pakistan government, according to the country's constitution, however still every 5th child in Pakistan, amongst which a majority of the children belong to the provinces of Balochistan and Sindh, are out of school, either never enrolled in any form of school or dropped out from schools.

When looking into the gender disaggregated information in ASER 2011 Pakistan, more girls than boys are out of school in the younger age band of 6 to 13 years (7.8% girls and 6.4% boys) whereas more boys as compared to girls were found to be out of school in the higher age band of 14 to 16 years (3.1% boys and 2.9% girls). This shows an encouraging level motivation of parents' sending their daughters to schools. It can be said that the parents are willing and highly motivated to send their daughters to school, provided the conditions of schools are favorable, which include boundary walls, toilet facility, water facility etc.

According to the ASER 2011 Pakistan, 20% of children out of the total population of children in the age group 6-16 were found to be out of school. Out of which the trend showed that every 2 out of 3 children drop out from school during the primary schooling, and lower retention levels prevail for higher level grades. On the other hand, the percentage of children out of school in India in the age band of 7-16 years was 5% according to ASER 2011 India. Furthermore, in India the survival rate at primary level up to grade 5 improved from being 67% in 2004-05 to 76% in 2009-10 (SAARC, 2011). However for Pakistan, following were the completion or survival rates of children till grade 5, the difference being substantial.

Table 4: Retention Rates of Children in Primary Schools in Pakistan, 1990-2009			
	1990-91	2000-01	2008-09

Survival rate to grade 5	50	68	55
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Source: UNDP, MDG 2

Failure to retain children in schools indicates a lack of attention by the policy makers on problems related to education. High dropout rates can mainly be associated to the missing facilities and resources in public and private schools. The available facilities in government schools in Pakistan is astounding, while the state of private schools may be better than the public schools, but still a lot remains desired off even in their case. According to the ASER 2011 Pakistan survey, more than half of the primary public schools (57% schools) do not have useable toilet facility in the school premises, while every fourth private primary school surveyed did not have the facility in rural areas of the country. Very similar is the case of drinking water facility in public and private schools, where approximately 45% public and 20% private primary schools do not have drinking water facilities in the school premises. Other than water and toilet facilities, often a lack of boundary wall in the schools or distance from home plays a major role in the female dropouts.

Table 5: Percentage of Public Schools with water and toilet facilities		
	Water Facility	Toilet Facility
1993 ⁱⁱ	40	23
2010 ⁱⁱⁱ	62	58

Source: Ministry of Education

In case of India, due to the existence of the RTE norms, ASER India 2011 calculates the percentage of schools surveyed that meet the said norms. According to the data, 74% schools met the safe drinking water facility for all children standard in the rural India, while 49% schools had useable toilets, and 77% schools had separate provision of toilets for girls.

Providing schools and missing facilities are typically seen as the responsibility of the government. Providing access to education in Pakistan by law resides with the government however still the enormity of the task is such that the government alone cannot attain 100% enrollment. The lack of resources that are available and the budgets that are allocated to the education sector are insufficient for such a goal. The private sector needs to be encouraged, and various other civil society initiatives need to be made in order to come closer to the said objective. Public Private Partnerships (PPP) are also a viable option for the government to take. The PPP model adopted by the Punjab Education Foundation (PEF) and the government is a success story in Pakistan which can be multiplied and duplicated in other regions of the country.

Furthermore, the budgets allocated to the education sector need to be increased further from 2% of the GDP, and the portion of development budget in the total budget also needs to be increase. Currently, 90% of the allocated budget amount is expended on recurring costs or salaries, whilst only 10% of the budget is available for development purposes. In case this does not increase, the state of facilities and capacity of the educators will remain ordinary. There is an urgency to rethink education financing in Pakistan to address the challenges of Right to Education (RTE), MDGs and EFA goals. Innovative approaches need to be designed to generate additional resources for early childhood education, schooling and second chance education programs, along with encouraging the civil society to participate in achieving the objective of improving access to education.

Examples from India can be learnt from for improving access to education. India has a number of innovative schemes aimed to universalize elementary education which have been successfully implemented. One of the major schemes to increase enrollment in a time restricted manner is the Sarva Shiksha Abhiyan (SSA) by the government since 2001. SSA's main objective is to strengthen existing schools' infrastructure and resources along with opening new schools in those areas which do not have any schooling facilities at all. Under the SSA specific schemes for girls and minority enrollment are implemented, like the Kasturba Gandhi Balika Vidyalaya (KGBV) scheme since 2004 and the 2% education cess levied on all major central taxes through the Finance Act 2004 also finances the expeditions under the SSA and the National Program for Nutritional Support of Primary Education. The mid-day meal scheme has also been underway since 1995 and has expanded its outreach since then. All these schemes along with numerous others have phenomenally improved the enrollment and retention levels in India.

Another major reason in Pakistan for a high dropout ratio, especially in public schools is the quality of teachings that prevails in the schools. The system of rote learning and a complete absence of analytical and interactive teaching methods results in low motivation levels of the students. The learning that takes place in both public and private schools remain seriously deficient in some way or the other. This can be very confidently said when one looks into some of the quality surveys or assessments that take place in the country at present. A decade ago, quality assessment was something unheard of in Pakistan. The enrollment and adult literacy were the only instruments used to gauge the state of education in the country. However, currently numerous quality assessments are under way in Pakistan. Some of these systems check for basic numeracy & literacy skills, while others gauge skills according to the national curriculum. The school based assessment systems under the National Examination and Assessment System (NEAS) and Punjab Examination Commission (PEC) check for student outcomes according to grade, while the Annual Status of Education Report (ASER), which is a household based assessment, checks for numeracy and literacy, based on the national curriculum for grade 1 and above. All three of the assessments show abysmal children learning outcomes in their reports. PEC gauges grade 5 and 8 learning outcomes, while NEAS evaluates learning achievements for grade 4 and 8 students and their relationship with numerous other learning instruments, such as teaching quality, text book availability, distance from home, parents' educational achievements etc. ASER checks for basic literacy and numeracy student achievement for the age band of 5 to 16 years.

According to the ASER Pakistan rural results, out of the total pool of children in the age band of 6 to 16 years, who should be able to read the simple language grade 1 text, only 30% were able to actually complete the said task. When categorizing these children according to the classes they belonged to, only 47% of the grade 5 children were able to read the grade 1 language text, which means that more than half of the children enrolled in some institution were found to be at least 3 grade levels behind.

In case of private & public schools, a very slight percentage difference persisted, where taking again the grade 5 children, only 45% children in public schools and 57% children in private schools were able to read the same grade 1 language text. On a relative scale the children from private schools may appear to be winning the race, however at an absolute scale, 43% children who are unable to read a basic text is a very large ratio.

The learning outcome of children has been found to be even worse in case of arithmetic as compared to language according to the ASER Pakistan assessment. Approximately 60% of the children in the age category of 6 to 16 years were unable to solve simple grade 2 addition & subtraction problems. Only 37% of the children in grade 5 were able to solve the grade 2 arithmetic problems, which meant that more than 60% of the children enrolled, were two grade levels behind, whereas out of the same pool of children, 53% children lagged behind in case of language. These results show that arithmetic poses more of a problem than language in Pakistan.

Similarly in India quality still remains a major concern, despite the fact that India has been able to achieve impressive enrollment levels. The state of learning outcomes in India, according to ASER India 2011, is not very different from its Pakistan counterpart. Approximately 52% of the children in standard 5 were unable to read standard 2 language text, and 73% of these children were unable to do division problems

Arithmetic achievements in schools are quintessentially known to help make future engineers, scientists and doctors of a country. Thus poor learning outcome in arithmetic in early years of education means much less number of engineers, scientists and doctors for Pakistan in the future. Along with this, it is also said that innovation and research are also related to learning outcomes in arithmetic, and if more than 70% of a country's children aged 16 and below are unable to solve basic grade 2 level problems, then it definitely is a cause of concern for the future research and development in a country. Research and innovation can only occur in an environment conducive to analytical thinking and not an environment where rote learning is encouraged rather than problem solving techniques in schools. The working labor, with such skill sets may not very well compete in the globalized world of today and tomorrow.

Need for better learning outcomes of children, especially for arithmetic require a higher quality educators than the existing pool available in Pakistan. The 1.4 million teachers across the public and private education system constitute a central part of the education system of the country. However considering the children who require schooling from these teachers, the number seems to be a smaller amount. The population under 18 years of age in Pakistan is around 73 million, and under 5 years the number of children is approximately 21 million (UNICEF, 2010), which eventually means that the target group for the education policy in Pakistan is less than 52 million.

According to the ASER Pakistan survey, nationally 12% of the teaching positions that have been sanctioned in the government schools still remain vacant. These are just the figures for the teaching positions that have been sanctioned, plentiful cases are exist in the country where the number of teachers sanctioned remain less than the desired figure, along with this, there are also countless instances where multi-grade teaching is taking place in the country. Even though multi-grade teaching system in the developed countries is adopted due to choice, but in the developing countries like Pakistan, multi-grade teaching is a necessity. Multi-grade teaching occurs due to high teacher or student absenteeism, less number of teachers deployed in schools as compared to the sanctioned positions, lack of resources in the face of classroom space, or in situation where enrollment is generally low in schools, or the schools are located at a distance from the centre of the village. For example the highest incidence of multi-grade teaching was found to be in the province of Sindh in Pakistan. Grade 2 shared a classroom space with some other grade in 65% schools out of all the schools that were surveyed in the ASER Pakistan 2011 survey. The student attendance on the day of the survey according to ASER Pakistan was also found to be the lowest amongst all other provinces in Sindh (62% attendance as per headcount on the day of survey),

thus a correlation may exist between the student absenteeism and multi-grade teaching in that region. Multi-grade teaching require special training for educators before the system of multi-grade teachings starts to be beneficial rather than becoming a hurdle. In the developed countries such as UK, France and Sweden, educators are especially trained for the setup. However, in case of a developing country like Pakistan, teachers trained for a mono-grade teaching continue to teach in the multi-grade setup, which causes problems rather than benefiting the children. Therefore, in places with high incidence of multi-grade teachers, a larger number of sanctioned teachers are required, or the existing pool of teachings teaching in the multi-grade setup need to be trained especially for the respective setup.

Teacher training and grooming continues to be of substantial value for improving learning outcomes of the children. A recent study was conducted in 120 rural schools in 3 districts of Pakistani Punjab, where both teachers and students from class 3 and 5 were given the same test to solve, in order to gauge the ability of both the students and teachers according to the respective curriculums. The objective of the same test for teachers and students was to evaluate the degree to which the teachers were able to translate their learning into their students. The results of the study showed 56% teachers and only 6% students being able to solve arithmetic problems, whereas, 64% teachers and 11% students were able to explain the meaning of difficult language words. (Aslam, Jamil & Rawal, 2011). This study concluded that despite having reasonable capacity to teach their students, the teachers are unable to translate their competencies to their pupils. The reason behind this may be numerous and varied. However, undoubtedly one of the methods through which this may be improved remains teacher training. The grooming of the teacher along with the method of effective teaching are crucial aspects of teacher training rather than the subject matter the teachers have to teach their pupils eventually.

Teacher training can also play a major role in building social and intellectual capital amongst the students. This can be done through developing capacity of the educators in such a manner that the teachers are aware of the social values and developments in societies. “Each and every school should be seen as a source of intellectual strength” (Marx, 2000). The development process should be such that it should be future oriented as well as sensitive towards ethical, moral and cultural dimension in the society. An awareness of the norms of society, rights and responsibilities should also be ingrained in the teachers, so that they can be transferred into the students; the future of the country. Teachers can become learning entrepreneurs who challenge existing mindsets and habits to bring about the change, if suitable and effective changed are made to the teacher training processes and methods.

Conclusion

With the increase in the young age population in the country, effective policies for bringing children to school and enhancing their human capacity is the need of the hour. The focus on education needs to be increased in order to benefit from the one time opportunity presented by the demographic transition taking place currently in Pakistan.

Younger population means more schools required better facilities to retain the enrollment levels, younger teachers, better quality and interactive teaching and numerous initiatives to improve access and quality of education in the country. It can learn from its neighboring country, India in order to work on issues of access to education. However, despite India being able to achieve commendable enrollment rates, quality remains lacking in the country. Both Pakistan and India should work on teacher training and innovative methods of teaching in order to revolutionize the learning outcomes of the children.

References

Annual Status of Education Report (ASER), India 2011, Pratham.

Annual Status of Education Report (ASER), Pakistan 2011, South Asian Forum for Education Development.

Alexander, Karen L. & Forrest, Monica. 2004. *The Influence of Population Demographics: What Does It Mean for Teachers and Teacher Education?* Journal of Family and Consumer Sciences Education, 22(2)

Arif, G.M. & Chaudhary, Nusrat. 2008. *Demographic Transition and Youth Employment in Pakistan*. The Pakistan Development Review 47 (1), 27–70

Civil Services Online. 2010. *Education: Elementary: Prarambhik Shiksha Kosh*, http://civilservicesonline.org/index.php?option=com_content&view=article&id=415:joomla-overview&catid=72:demo-category&Itemid=75

Clausell, M. 1998. *Challenges and opportunities for family and consumer sciences professionals in the new America*. Journal of Family and Consumer Sciences, 90(1), 3-7

Federal Bureau of Statistics. 2002. *Pakistan Integrated Household Survey (PIHS): (2001-02)*

Federal Bureau of Statistics. 2007. *Pakistan Social and Living Standards Measurement Survey (PSLM): (2005-06)*

Federal Bureau of Statistics. 2011. *Pakistan Social and Living Standards Measurement Survey(PSLM): (2010-11)*

Hakkert, Ralph. 2007. *The Demographic Bonus and Population in Active Ages*. IPEA/UNFPA Project RLA5P201: Regional support to Population and Development in the implementation of the MDGs in the LAC Region

Marx, Gary. 2000. *Ten Trends: Educating Children for Tomorrow's World*

McMahon, Walter W. 2004. *The social and external benefits of Education*, International handbook on the economics of education

Ministry of Education. 1994. *School Education Census 1993-94 Pakistan*, Academy of Education, Planning and Management.

Ministry of Education. 2010. *Pakistan Education Atlas 2010*, NEMIS-AEPAM

Ministry of Human Resource Development. 2007. *Sarva Shiksha Abhiyan*, Department of School Education & Literacy, Government of India, <http://ssa.nic.in/>

Ministry of Statistics and Programme Implementation. 2011. *India Country Report 2010*, SAARC Development Goals, Central Statistics Office, Government of India

National Portal of India, *Mid-Day Meal Scheme*, <http://india.gov.in/sectors/education/index.php?id=7>

Pakistan Bureau of Statistics . 2008. *Pakistan Employment Trends 2008*. Government of Pakistan Statistics Division

Pakistan Bureau of Statistics . 2011. *Pakistan Employment Trends 2008*. Government of Pakistan Statistics Division

Rabab Khan, *The Unemployed Mind: Pakistan's Unemployment Problem Explained*, FutureChallenges, <http://futurechallenges.org/local/the-unemployed-mind-pakistans-unemployment-problem-explained/>

World Bank. 2006. *Development and the Next Generation, World Development Report 2007*. The World Bank, Washington, DC.

Endnotes

ⁱ This figure was taken from the article in the FutureChallenges, by Rabab Khan

ⁱⁱ The figures were derived using total number of schools with drinking water and toilet facilities from the Ministry of Education, School Education Census 1993

ⁱⁱⁱ The figures were derived using the rural and urban total number of schools with drinking water and toilet facilities from the Pakistan Education Atlas, NEMIS-AEPAM, Ministry of Education