

High Fertility Rates for the Education Infrastructure Crisis in Developing Countries: The Case of Malawi

Manfred Ndovi

*School of Economy and Management
Harbin Institute of Technology (HIT)
11 Siling Street, Harbin 150001, China
mndovi@yahoo.co.uk*

Xin Miao

*School of Economy and Management
Harbin Institute of Technology (HIT)
11 Siling Street, Harbin 150001, China
xin.miao@aliyun.com*

Abstract— School infrastructure is one of the important factors that contribute to quality education. However, school infrastructure continues to be a serious challenge for most developing countries in the World. The ever-growing population coupled with high fertility levels has given most developing countries tough time with regard to moving targets in their infrastructure development plans. The medium-term as well as long-term plans have not been achieved in the education sector of most developing countries in terms of infrastructure development. This study analyses the enrollment levels and the school's infrastructure in Malawi. The study will use data from Education Management Information Systems reports in Malawi. It will also use data from scholarly articles. The results will highlight the impact of high fertility levels on infrastructure planning. It will also reveal important issues with regard to policy formulation to address the infrastructure crisis. It will further suggest options for fast-tracking infrastructure development in order to improve the quality of education in developing countries and Malawi in Particular. It will finally provide policy options to curb the fertility levels.

Keywords—fertility, infrastructure, quality education, enrollment

I. INTRODUCTION

Education is a catalyst for economic development. Every country needs literate citizens to spur development in veracious sectors of the economy. However, for this to be achieved there is a need for improved and quality education.

Infrastructure is the basic physical and organizational structures that provides support for the economy and society to function. It is one of the important public policy issues that are fundamental to public investment [1], [2]. There is a need for public infrastructure investment for necessary economic growth but it is inadequate for most developing countries [3]. School infrastructure in particular, is one of the factors that determine the quality of education [4]. Raising education standards is paramount to the delivery of social justice and economic growth [5]. Better and enough Classroom blocks, laboratories, teacher's houses, libraries, staff offices, latrines and other important structures are essential in the quest to provide quality education. Nevertheless, most developing countries are facing serious challenges with regard to education infrastructure. Either in most developing countries, schools are far apart or they have inadequate infrastructure. The

governments lack sufficient resources to provide sufficient school places for quality education [6]. The governments in these countries have tried to make good plans as well as partnerships with donors but the situation remains the same. One of the causes of such a phenomenon is the issue of high fertility levels. High fertility levels trigger rapid population growth and it has an impact on resource allocation.

Fertility levels in sub Saharan countries continue to be the highest in major regions across the globe [7]. This trend is true to most of the developing countries including Malawi. The fertility levels of the country continue to rise triggering the enrollment to constantly increase over the years making it more difficult for the government to improve the Education Sector. The illiteracy levels among women contribute to the problem of fertility levels [8]. Malawi is one of the developing countries in the Sub Saharan Africa. It is a landlocked country located in the southern part of Africa and it shares boundaries with Mozambique, Zambia and Tanzania. It has an estimated population of 18 million [9]. The population of Malawi grown rapidly in the past decade. In 2008 the population was 13, 029, 498 and in 2018 it was 17, 563,749 representing a 35% increase [10]. The growing youth population is good for national production but has to be checked as it has an impact on unemployment as well [11]. The fertility rate in Malawi is 4.4 children per woman [12]. This creates pressure on the resources especially in the education sector. The Malawi Government's budget until 2013 was funded by 60% government and 40% donor partners. In 2013, there was a corruption scandal called "cash-gate" that saw donors withdrawing their aid from the budget. The Education sector in Malawi receives about 18% of the total government budget [13]. The sector mostly funded by a government whose income comes mostly from Tax Revenue hence there is inadequate funding to meet its objectives.

II. DISCUSSION

Infrastructure development in the education sector remains one of the paramount strategic goals for most developing countries. It improves equitable access to education [14]. Malawi was the first sub Saharan African country to embark on the ambitious free primary education in 1994 for following the Jomtien Conference in 1990 [15]. The decision to embark on this ambitious mission was made politically without considering the

available resources as well as how to go about it. This decision made the enrollment in primary schools to double thereby creating a pressure of the then available resources [13]. The number of learners continued to increase despite making necessary plans to curb the ever-growing challenges. The classroom construction had not increased in line with the enrolments. The lack of teaching and learning especially infrastructure still gives the government and development Partners unsolved puzzle. In recent years, efforts to address the challenges have been made, yet the targets seem to be moving with time. The Figure 1 below shows the projections of enrollment by the National Education Sector Plan.

All Primary Schools	2006	2007	2008	2012	2017
Enrolment, Total	3,280,714	3,306,926	3,396,373	3,738,709	3,744,402
GER	117.2	115.0	115.1	115.9	106.1

Fig. 1. Projected Enrollments

Source: National Education Sector Plan 2008

However, if we look at the Fig. 2 below, the enrollment numbers actually surpassed the projected numbers, which were enshrined in the National Education Sector Plan 2007. The planners were caught off guard. For example, in 2012, the projected enrollment was 3,738,709 but the actual enrollment was 4,154,427. Almost 415,718 learners were not budgeted for. This could explain that issues of fertility and rapid population growth were overlooked because as the population grows the number of learners to be enrolled in primary schools also grows. This has a negative impact allocation of resources especially school infrastructure.

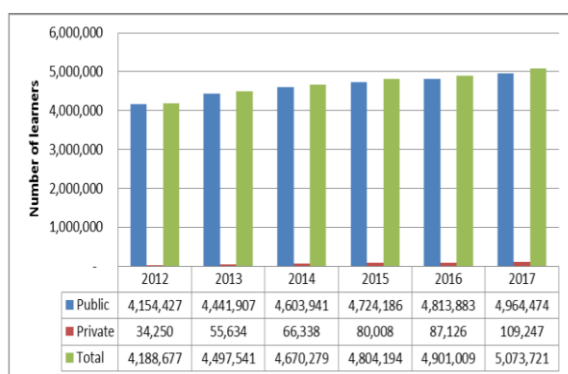


Fig. 2. Enrollment Trend Since 2012

Source: EMIS 2017

The total enrollment in the above Figure 2 keeps increasing every year. This also explains that there are some relationship between the increase in population and the number of learners registered in schools. This means the understanding of the demographic changes is very vital in infrastructure development planning. The education planners must have a deep understanding of factors that affect population growth such as fertility levels. According to the Education Sector Implementation Plan II, there is a need to construct 3400 classrooms per year in order to achieve a pupil classroom ratio of 67:1 by 2020 [13].

The figure 3 shows infrastructure distribution in terms of classrooms, general office, Head Teacher office, Kitchen, Libraries, Recreation Halls, Special Needs Resource rooms, Staff rooms, store rooms, teacher's houses and workshops. In the last column of the table on the left, it shows the required numbers of each infrastructure item. You will see that the classrooms and the teacher's houses are very inadequate. For example, the classrooms which are complete and in use are 41,765 but for them to be sufficient there is need to build 27,113 blocks.

Building	In Use Complete Permanent	In Use Complete Temporary	In Use Incomplete Permanent	In Use Incomplete Temporary	Requiring Rehabilitation	Required
Classrooms	41765	6380	1931	677	13189	27113
General Office	521	99	58	24	115	3116
Head Teacher Office	2955	601	236	81	480	2985
Kitchen	1449	402	112	62	265	2950
Libraries	1311	254	110	43	204	4460
Recreation Hall	185	15	17	8	70	3200
Special Need Resource rooms	193	33	32	6	126	3957
Staff rooms	1777	204	117	38	222	3417
Store Rooms	3027	222	98	23	353	4296
Teacher Houses	17063	6303	1172	641	7629	37256
Workshops	114	17	7	3	55	2934

Fig. 3. Infrastructure status in Malawi

Source: EMIS 2017

The number of teacher's houses are 17,063 but there is a need for additional 37,256 houses to accommodate almost every teacher. This trend explains that the high enrollment levels, which are perpetrated by rapid population growth, exerts pressure on the infrastructure. There are a few classrooms against high enrolment figures. The same applies to the number of teacher's houses. The trend shows a few teacher's houses against the required figures. This trend could also reveal that there are a few teachers in the schools. It follows that the more the learners are enrolled the more the need for infrastructure development.

III. CONCLUSION

The unchecked fertility levels have a direct impact on resources in the education sector. Governments in most developing countries where high fertility levels remains a challenge, will continue to face moving targets in their education infrastructure development plans.

Therefore, there is a need to formulate deliberate family planning policies which should curb the ever escalating fertility levels so that the rapid population growth is contained. It would also be ideal if governments can civic educate the people on the impact of rapid population growth on resource allocation especially with regard to education infrastructure. It would also be imperative if the government can engage the private sector in developing education infrastructure through the promotion of Corporate Social Responsibility (CSR). The corporations should be encouraged to embark on CSR activities by providing them with policies that would entice them to invest in education infrastructure.

CONFLICT OF INTEREST

Any organization or individual did not sponsor this work. We therefore, declare no conflict of interest.

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