A Comparison of Infant Mortality Rates between Pakistan and Rest of the World

A. Rehman

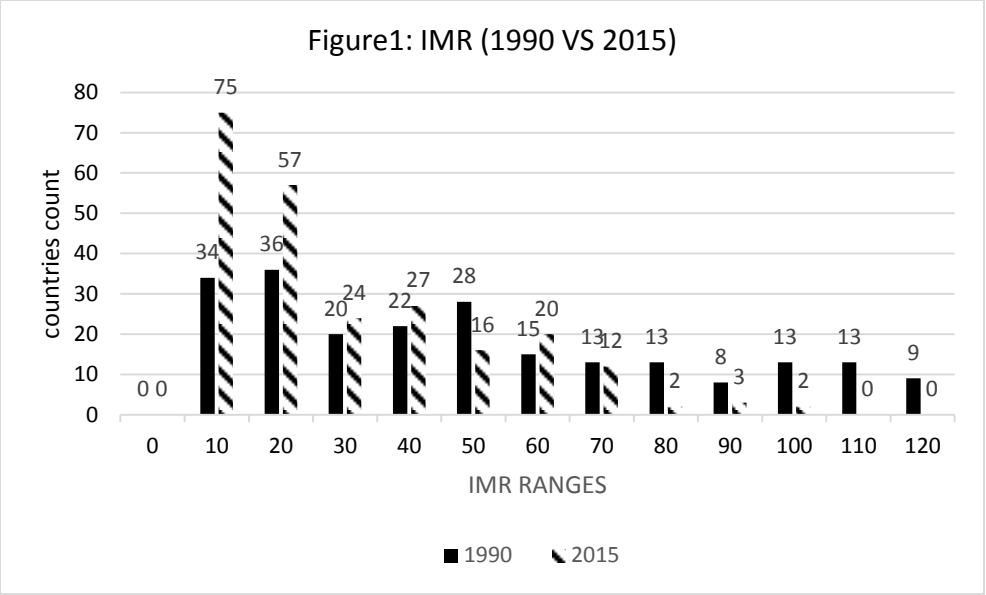
National University of Science and Technology, Islamabad, Pakistan.

Keywords: *Child Mortality; Human Capital; Health Status; Pakistan*

Introduction

Child mortality is regarded as one of the best measures of the health status of a country. It is also considered as the key factor that indicates the inclusive and sustainable development of human capital in any economy. The 1990s have seen a remarkable decrease in mortality among infants and children in most developing countries (White, 1999). After the Millennium Development Goals (*MDGS*) in the 1990s we have seen a remarkable decrease in infant mortality among children in most developing countries. In some countries, particularly in sub-Saharan Africa, these declines in mortality among children have slowed and are now increasing again (Hanmer, Lensik et al, 2003). South Asia and Sub-Saharan Africa are the poorest and the most underdeveloped parts of the developing world, with the worst absolute and relative indicators of health and poverty in the world. These two regions have some of the highest child and infant mortality rates (*IMR*) in the developing world.

Pakistan tends to perform relatively poorly. In this study I analyzed why infant mortality rates are relatively very high in the era of MDGS and point towards policy recommendations for reducation in infant mortality rates**.** The graph below makes some comparisons of Infant Mortality Rates in the 1990s and 2015 world wide.



Source: World Bank Database

We divide the world infant mortality rates into bins of size ten and compare the number of countries in 1990 and 2015 to show the progress of the world in the era given in Figure1. There were only thirty four countries whose infant mortality rates lies between zero and ten indicated by black dotted graph in 1990. In the other graph of 2015 however, this number increased to seventy five, which is more than double, showing a significant reduction in infant mortality rates during the era of MDG's in each Bin.

We know that infant mortality rates are declining in Pakistan but the rate at which IMR is decreasing is painfully slow and it will take decades to overcome the issue of high IMR at the pace we are moving. So, this study recommends policies and best practices in the region that will act a catalyst to increase the pace of reduction in IMR. There were a lot of studies done on Infant Mortality Rates but this study is unique in the context of Pakistan because it will provide provincial analysis at grassroots level, which will help the provincial government to take measures accordingly as all provinces in Pakistan are not consistent in reducing IMR.

Objective

The objectives of this study are as follows:

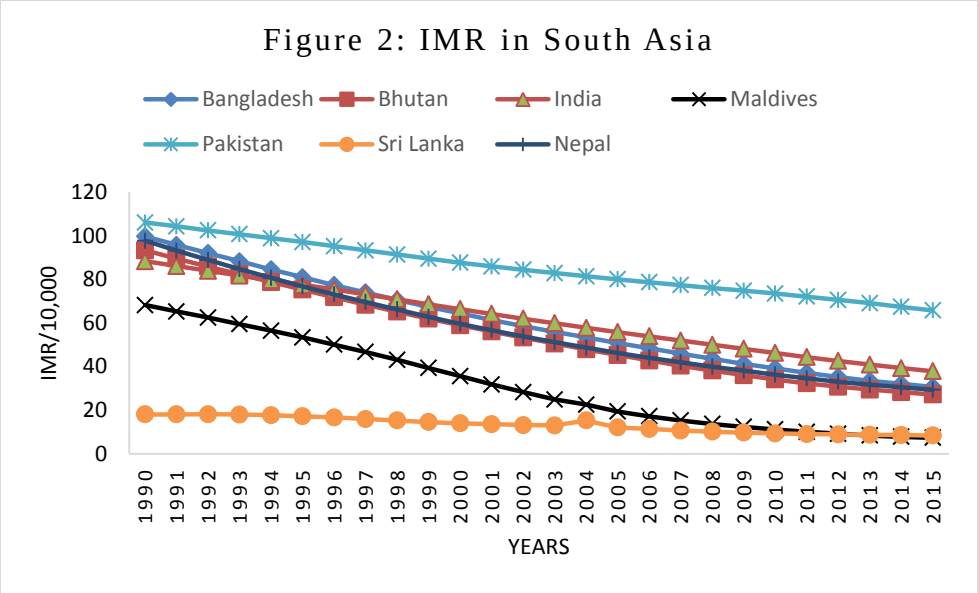
- To investigate the progress of Pakistan regarding reduction in infant mortality rates during the era of MDG as compared to the world and the South Asian Region.
- To recommend strategies for reduction in infant mortality rates at provincial and national level in Pakistan.

Methodology

The data on infant mortality rates at regional, country and provincial level used for this study is secondary, and is collected from the World Development Indicator, Pakistan Health Demographic Survey. For Pakistan data is taken for the 25 years ranging from 1990 to 2015. The last Pakistan Health Demographic survey was conducted in 2013 and thus has data on provincial level up to 2013, while regional and country level data are taken upto 2015 because our research only focuses on the MDG era. The study uses quantitative analysis by using the tools of exploratory data analysis for finding the summary stats, histograms, line graphs and the radar graphs to examine the infant mortality rates among the regions, countries and within country provincial level.

Results and Discussion

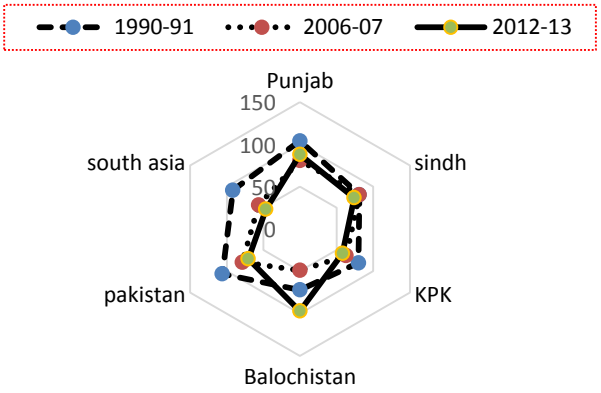
In the regional level analysis we can see that Pakistan started with the worst and graph shows that our progress is not matching the rate at which other countries in the region are progressing as India and Bangladesh were almost on par with Pakistan in 1990 (World Bank Database, 2015).



Source: World Bank Database

The Maldives and Sri Lanka provide useful lessons. The main reason for Sri Lanka's low Infant Mortality Rate is the anti-malaria program started by the government which reduced infant mortality significantly during 1980 and this was maintained with up to 2015 (Lucas, 2010). Looking at the Maldives, their Social Sector expenditures have averaged nearly 50 per cent of the budget in recent years. Maldives has also maintained almost universal coverage of all vaccines for preventable childhood diseases for nearly two decades. Data shows that, 89 percent of children aged 12-23 months were fully vaccinated by 12 months of age (WHO, 2008). The per capita expenditure on the health sector in the Maldives is the highest in the South Asian region. In the period 2005-2011, per capita health expenditure increased from US$ 136 to US$ 247. Notable achievements have been made in the control of communicable diseases as a result. Per capita expenditure on health has risen steadily from about $60 in 1995 to an estimated $200 in 2007 (UN, 2014).

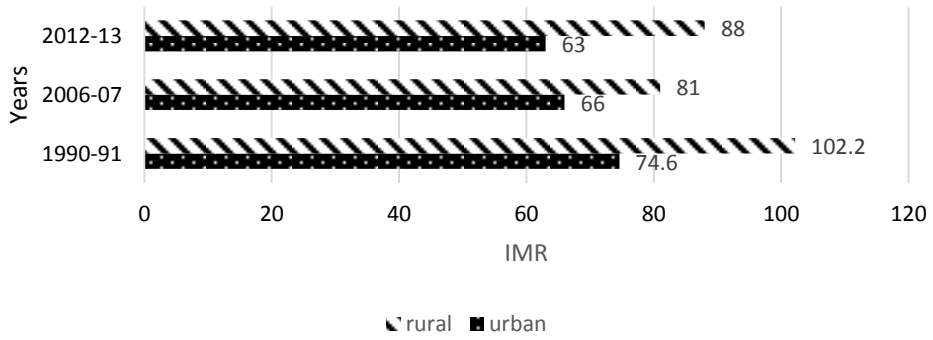
Figure 3: IMR of Provinces



Source: Pakistan Health Demographic Surveys 1990, 2007 & 2013 & Graph constructed by Author

From Figure 3, we can see the progress of all provinces from 1990 to 2015 regarding a reduction in the infant mortality rates. The progress of Punjab and KPK is relatively good in the 2006-07 and 2012-13 survey. The, situation in Baluchistan has worsened during 2012-13. According to the report of Evidence Project by the Population Council the reasons for higher infant mortality rate are lack of facilities of health care and poverty, illiteracy and teen aged mothers.

Figure 4: IMR Rural VS Urban



Source: Pakistan Health Demographic Surveys 1990, 2007, 2013 & Graph constructed by Author.

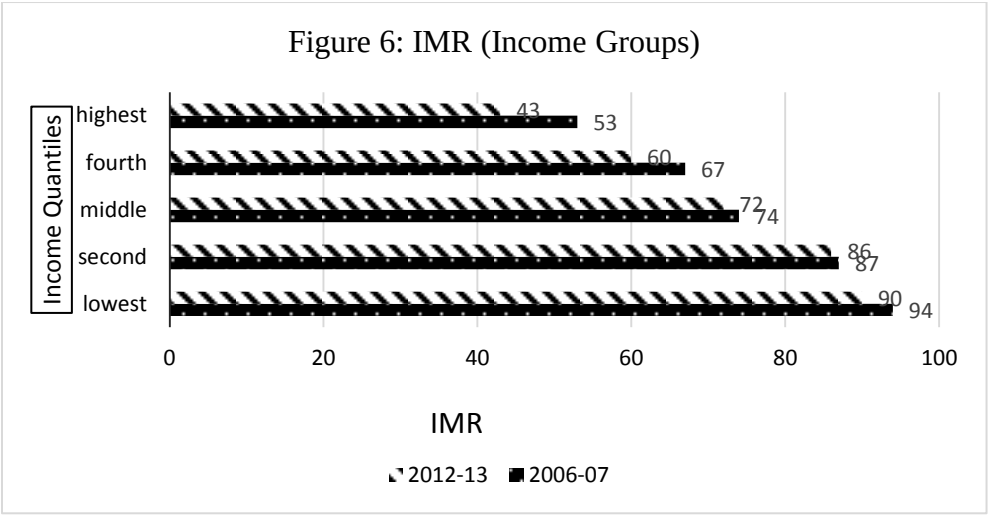
From the bar graph in Figure 4, it is shown that from 1990-2015 infant mortality rates are low in urban areas and high in rural areas due to lack of facilities of health care, no proper vaccination and poverty, uneducated mothers, illiteracy and no awareness about the family planning and health care of child.

Figure 5: IMR with Mother Education

Source: Pakistan Health Demographic Surveys 1990, 2007, 2013 & Graph constructed by Author.

Above figure shows that education of mothers plays a substantial role in the reduction of infant mortality. With no education of mother the IMR of their children is eighty five in 2013, whereas, the mothers with secondary education have IMR of forty-two. There are policy implications for female education reducing infant mortality significantly. Education of females will provide awareness of the health care, family planning and avoid the incidence of teen age pregnancy.

Figure 6: IMR (Income Groups)



Source: Pakistan Health Demographic Surveys 1990, 2007, 2013 & Graph constructed by Author.

In Figure 6, bar graphs show infant mortality rates among the different income groups of Pakistan in 2006-07 and 2012-13. We can see that infant mortality rates are very low for the highest income quantile in both surveys while infant mortality rates are very high for the bottom income quantile. One more important point emerges from here that major contributor in the reduction of infant mortality rates over the past decade is the highest income quantile, while in the lowest, second and middle quantiles there is a slight reduction. Policy should be focused on the bottom quantiles if the country wants to reduce its infant mortality rates by providing good public health facilities and targeted health programs.

Conclusion

It is evident that Pakistan can learn a lot from the world and countries of our region like Sri Lanka and Maldives to reduce their infant mortality rates significantly in the past two decades. I have looked at the policies of the developed world and then specifically at the policies and practices of the countries of our region and suggest some policy recommendations below.

- To educate females on nutrition so that mother's education reflects awareness about health care and family planning.

- To increase the health budget significantly and develop the infrastructure for health care and proper vaccination for the children of age up to 12 months all around the country.
- Focus on the rural and under developed and remote areas to provide health care facilities and resolve malnutrition issues of children.
- Government should launch targeted programs for the bottom income quantiles which are more vulnerable to infant mortalities.
- Planning at local/community level required to reduce infant mortality rates, such as lady health workers programs and NGO's role regarding health awareness among mothers.

What countries in our region did and achieved low infant mortalities are on the basis of the above mentioned policies. Sri Lanka and Bangladesh introduced targeted health programs, and they have a very high literacy rate for both males and females. Furthermore, Maldives' per capita health expenditure increased from US$ 136 to US$ 247 from 2005-2011. In conclusion, I would like to say that it is very painful for a mother to face the death of her child even before his/her first birthday. In a country like Pakistan still in age of technology and medical advancement, mothers lose their children and the number is sixty three per thousand, which are very high. We also need to think very seriously about to save these lives and reduce the pain and loss of their parents.

References

Filmer, D. and L. Pricchett. (1997). Child mortality and public spending on Health: How much does money matters? *Policy research Working Paper 1864*.

Lucas, A. M. (2010). Malaria Eradication and Educational Attainment: Evidence from Paraguay and Sri Lanka. *Applied Economics* 2: 46–71.

Preston, S. (1996). Population studies in Mortality. Population studies *Working Paper 50:* 525-536.

White, L. H. (1999). Infant and Child Mortality in Developing Countries: Analysing the data for Robust Determinants. Seminar in Stockholm.