Chapter 6: Conclusion

In the present dissertation, the attempt has been made to locate the barriers to access immunization for the children in West Bengal, an Eastern state in India and to posit the role of the supply side interventions in this regard. At the onset, it has to be mentioned that the state has performed ahead of Indian average in terms of almost all spheres of public health, including immunization coverage.

The dissertation starts with a brief historical perspective to the entire policy of public health, in general, and immunization, in particular, in India. Since the pre-independence British period, there has been systematic under-investment in public health. The British introduced a ‘top down approach’ to almost all fields of policy making, with public health being no exception. After the independence, this approach was expected to change; but to our chagrin it is found that almost all decision on policy issues were taken at the centralized ministry level, with Indian states having nearly no role but to execute. With immunization integrated under RCH and NRHM programs under Centrally Sponsored Schemes, the states rarely had any say in policy matters, except to provide a matching grant. The local conditions and enabling environments were all neglected in the policy outlines and the states had to accept the policy matrix without any possibility of modifications and change. This, too, resulted in similar ‘top-down’ growth models, thrust from outside, which often failed to cover the children with full immunization safety net, given the inter-village, inter-household and intra-household barriers.

As a result, the immunization service was not properly utilized by people from different backgrounds and different regions, in spite of being offered absolutely free of cost by public agencies. This observation brought out the question as why don’t
households choose to utilize this service up to its full potential: is it a problem of availability or accommodation or acceptability? Was this partial failure of the policy related to barriers posed from supply side or from the demand side? In this connection, the dissertation extensively reviews the literature on definition and problems to access immunization and then test the hypothesis that many researchers have found earlier, namely, the barriers are primarily from demand side and hence the immunization services could not be utilized fully even if it was made available to all at absolutely free of cost.

In order to test this hypothesis, the present dissertation uses DLHS 3 data set consisting of 22213 sample households’ information in West Bengal in 2007-08. While the overall full immunization recorded a hopping 76 per cent of children in the age group of 12-23 months, the drop out between DPT and measles appeared substantial. The dissertation divided the essential vaccines in two broad categories: injectable vaccines and non-injectable oral vaccines. The rationale of this division was that these two groups actually needed different kinds of infrastructure and capabilities from the supply side.

The main contribution of the thesis in literature is that it went beyond just coverage of immunization and attempted to look at the quality of immunization. While some infrastructure facilities were looked in to, timely immunization has been broadly used as a proxy of immunization with quality. Shockingly, the share of children who received all vaccines at right time shrunk to a mere 16.4 per cent in the state. It therefore, becomes crucial to identify barriers to access both types immunization: month-specific and non-month specific.

In both the cases, our hypothesis appeared to be correct as mostly household characteristics appeared to be the strongest correlates of immunization uptake. This also
is in tune of the literature available in the public domain. Sadly enough the religion appeared to pose a crucial barrier in all types and cases of immunization: it became clear that in West Bengal, being a child from a Muslim family would bear far higher risk of drop out and absolute no coverage than other religions. This essentially brings in the debate of report of the WHO (2010) about socio-economic gradient of health, where ethnicity has been identified as a major barrier in most of the countries in certain indicators. It was hotly debated that ethnicity sometimes appear to be a barrier because the backward social and religion classes suffer more from poverty, lack of education and employment. So these are the actual barriers and not ethnicity. But this dissertation uses those above mentioned issues in control and what comes out is the pure religion effect in the multi-variable regression analysis. Probably the traditional beliefs, customs, practices etc are predominantly 'community issues', rather than individual and hence ethnicity does appear to play an important role to hold back children from full and timely immunization. Birth order and the gender of the child appear to create similar barriers only for non-month specific cases. Those parents, who take all the care to bring their children to timely immunization, probably do not differentiate the children according to their gender or order. Mother’s education appears to be more crucial in month-specific coverage, though lack of it does also appear to be important in case of non-month-specific simple coverage. But there is a clear threshold of mother’s education (at least primary completed) which helps the mothers to be more aware of the need of immunization. Mother’s employment, in most cases in informal sector, presents problems for the women to bring the children to the health care windows. This probably hints towards the opportunity cost of loss of wages that mothers suffer to bring the child. Place of delivery is an important correlate too. Once the child is born at an institution, the baby gets the opportunity to be included
in the immunization process immediately and parents also get used to this formal health care window.

The supply side characteristics on the other hand, appear to have lower controlling power in access to immunization. Village electrification has played some role in raising awareness among the villagers through electronic media. MHW is the single most crucial correlate among the supply side factors. Their presence has made the public health functions more effective and also improves the awareness among the men, who often are decision maker at home. Availability of equipments, drugs, supervision do not appear to be decisive determinants. The dissertation also tried other supply side factors available in DLHS data, but all of them came out to have insignificant impact and they were dropped. This limited impact of supply side factors might raise two possible questions:

1. Was the infrastructure creation not enough to give the much needed 'big push' in health care utilization?

    or

2. Was the created infrastructure not properly utilized to the maximum to create a strong impact?

The already existing framework of HSDI and NRHM does away with the first case as there was enough money available and the infrastructure too was created on a massive scale across the districts. This issue then boils down to the theory of insufficient utilization of the available infrastructure and to gauge the situation, the present dissertation attempts to calculate the technical efficiency of the sub centers using the methodology of Data Envelope Analysis (DEA). This is again a seminal contribution of
the thesis to literature as this type of analysis has never been attempted before at the primary health care level in India. It used multi-inputs (infrastructure and workforce related) and multi-output (related to child and maternal care) framework which is non-parametric in nature.

The analysis shows that sub centers operate at very poor efficiency level. Have they all using their existing inputs as efficiently as 67 peer centers, the output of these centers would have increased at least by 63 percent. Here it must be added that the outputs considered were in a multi-variable matrix format and immunization alone was not attempted (because immunization is not the only duty to be performed from sub centers). There appears to have large input slacks, hinting towards poor utilization of the resources. The group-frontier analysis also shows that the sub centers from districts with poor HDI score behaved more poorly than the rest and hence more attention needs to be provided in the former districts. Hence, it becomes clear that the limited impact of supply side variables in utilization of immunization services emanates primarily from meager utilization of these inputs to its fullest forms, rather than the inability of the health sector to penetrate the general population. Though demand side factors are crucial for gaining access to immunization, the sub-optimal utilization of supply side inputs is expected also to become decisive for having access. We test this hypothesis in Chapter 5.

The last interesting twist in the story came up in the Chapter 5 of the thesis. Analysis of barriers to access in two sets of districts is done with the technical efficiency score of the respective sub centers in control. It was expected that the sub centers with higher technical efficiency would mean more immunization coverage for the children. However, that hypothesis was proved to be wrong. Higher efficiency score in month-
specific case results in deterioration of immunization coverage. For all month-specific models, their importance is insignificant. This may have resulted from multiple job responsibilities of ANM and MHW under the present policy format. Providing immunization services is one of many services that she is expected to offer at the very decentralized village levels. The importance of services related to maternal care (antenatal and delivery services) appears to take the central stage due to the existing incentive schemes offered to the women. In *Janani Suraksha Yojna* mother and her family receives grants for taking ANC care and delivery at institution. It is the JSY which has succeeded to bring poor women to the service delivery window because this incentive has been able to offset the loss of wages for the day/s. Similarly the ASHAs receive payment for each mother completing ANC and delivery at public hospitals. Hence there are more tendencies of both the community and the supply providers to focus on the maternal care.

At this juncture, it needs to be mentioned that exclusive child care-related programs are absent in NRHM. It is observed that most of the ANMs *do not* receive the training of Integrated Management of Neonatal and childhood Illness (IMNCI). Mothers have significant opportunity costs to bring their children for immunization, which are never attempted to bridge through any incentive schemes. Though for admission in primary schools immunization cards are prerequisites, its usage is far from universal. Hence, apart from awareness, there is hardly any incentive of the parents to take their children to the sub centers at right date and time. Therefore, the higher technical efficiency scores in the poorer districts might have resulted in better coverage for maternal care through a substitution away from the immunization and child care.
A few final words on Policy

The behaviors of the correlates, both at household and infrastructure levels, clearly bring out the need of policy intervention at the ground:

- The Muslim households are to be specially targeted during awareness drives. If necessary, the support of Minority Development Boards of respective districts and religious leaders should be sought.
- Special crèche facilities to be offered for employed mothers with some incentive schemes for the children immunization.
- Specific drive to reduce drop outs among girl child and spread of more non-formal education among women can help the mothers to understand the significance of immunization for their children, that also following the prescribed time frame.
- The home-visits of the ANM and ASHA for the home delivery cases should be improved to bring the children delivered at home to be under immunization net more.
- At the micro levels of sub centers, care should be taken by proper monitoring and supervision, that managerial efficiency is practiced and the available resources, both infrastructure and manpower, are utilized at the fullest. This would help increase the coverage of all mother and child related care coverage.
- A strong orientation towards child care practices and immunization among the front-line health workers are crucially needed to overcome the partial neglect of immunization drive, particularly in poorer districts.
The present thesis thus ends with a note that on the surface most of the barriers to access immunization allude to be from demand side, meaning limited impact of supply side parameters even after the launch of NRHM, the largest ever primary health care program in the world. However, with a deeper understanding, it becomes evident that programmatic success often remains narrow mainly because of their insufficient utilization at the decision making unit. Finally, an improvement in aggregate output at each decision making unit level perhaps results in partial substitution away from child care outputs towards more maternal care outputs, as the latter commands incentives for both community and front line health workers. Therefore, the government intervention is necessary to correct this tilt in policy and to make immunization more accessible for households coming from different regions and socio-economic characteristics in west Bengal.

Thus in terms of economic theory, it is clear that a big push alone is always not enough to results in systematic improvement of development indicators. Market theory may also fail in this kind of public good case. A balance in policy with right incentive scheme development and a ‘biological growth model’ (Taylor 2010) process emanating from the very local conditions and community participation can only garner the desired results.