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Progress towards Child Survival in India
1971-2005**

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Abstract

India accounted for more than one fifth of the global deaths in children below five years of age around the year 2006. Obviously, progress towards child survival in India has a major impact on the global progress towards child survival. Using information on childhood mortality from the Sample Registration System, this paper analyses the progress towards child survival in India over a period of 30 years between 1971 and 2005. A decomposition approach has been adopted for analysing the progress towards child survival. The analysis reveals that improvement in ${}_5p_0$ in India was the maximum during the period 1976-80 through 1981-85. Since then, improvement in ${}_5p_0$ has decelerated and virtually stalled during the period 1996-2000 through 2001-05 because of the decrease in ${}_4p_1$ in the country and in all but one of the major states. Uttar Pradesh is the only state where ${}_4p_1$ improved during the period 1996-2000 through 2001-05. The decrease in ${}_4p_1$ has been associated with widening sex differentials in ${}_5p_0$ and increase in the ratio ${}_4p_1$ to ${}_1p_0$. Stalling of the improvement in ${}_4p_1$ appears to be the result of a shift in policy focus from child survival to reproductive health and neonatal care after the introduction of Child Survival and Safe Motherhood Programme in 1992 which was followed by the Reproductive and Child Health Programme. A decrease in ${}_4p_1$ also suggests a deterioration in the nutritional status of children below five years of age.

Key Words

Child survival, survival probability, India

Introduction

The history of concerted efforts towards child survival in India dates back to 1978 when the Expanded Programme of Immunisation was launched to prevent child deaths from vaccine preventable diseases (Sokhey, Kim-Farley and Bhargava, 1989; World Health Organisation, 1986). During the same year, National Programme for the Control of Diarrhoeal Diseases was also launched that focussed on the prevention of deaths to diarrhoea (Tyagi, 1983). The Expanded Programme of Immunisation subsequently graduated into Universal Immunisation Programme in 1985 and was given the status of National Technology Mission in 1986 (Government of India, 1988) followed by the National Acute Respiratory Infections Control Programme in 1989-90. In 1992, the Universal Immunisation Programme, the National Diarrhoeal Diseases Control Programme and the National Acute Respiratory Infections Control Programme were subsumed into Child Survival and Safe Motherhood Programme along with other activities related to child survival (Government of India, 1992). Since 1997, child survival activities in the country are organised under the Reproductive and Child Health Programme (Government of India, 1997) which is also the lead programme of the National Rural Health Mission launched in the year 2005 (Government of India, 2005). The basis of child survival in India is the concept of integrated management of neonatal and childhood illnesses which is an expanded version of the integrated management of childhood illness approach that has successfully been implemented in the world to reduce death and frequency and severity of illness and disability in children, and to contribute to their growth and development (World Health Organisation and Government of India, 2003).

In addition to these programmatic efforts, a number of other initiatives have also been taken to address child survival related issues in the country. These include pulse polio initiative launched in 1995-96; constitution of a Technical Committee on Child Health and the Immunisation in 2000 and formation of a National Technical Advisory Group on Immunisation in 2001 to facilitate development of a nation wide policy framework for vaccines and immunisation (Government of India, 2003).

How have child survival programmes and efforts launched since 1978 contributed towards preventing premature deaths and promoting child survival in India? Evidence available through the sample registration system as well as the National Family Health Survey suggests that the risk of death during infancy and early childhood is declining in the country and in its constituent states. This secular decline in the risk of death during infancy and early childhood is often cited as the evidence of success of the official efforts towards child survival. However, the observed secular decline in the risk of death during childhood appears to be slower than the expected trend with the result that the prevailing risk of death during infancy and early childhood in India remains high by international standards. It has been projected that with the current rate of decrease in the under-five mortality rate, India will not be able to achieve the Millennium Development Goal of reducing child mortality by three fourth by the year 2015 from the level that prevailed in 1990. It has been estimated that India alone accounted for more than 20 per cent (about 2.4 million) of about 10.8 million deaths of children below five years of age that occurred in the world around the year 2000 (Black, Morris and Bryce, 2003). It has also been estimated that about 57 per cent of the annual deaths among under-fives in India can be prevented through achievement of high

coverage of basic public health and nutrition interventions (Jones, Schultink and Babilie, 2006). An effective implementation of these interventions would lead to achievement of the Millennium Development Goal on child mortality. At the same time, there exists wide disparity in the risk of death during childhood across the constituent states of the country that has persisted over time and which reflects the limitations of the official efforts towards child survival.

It is in the above context that we analyse the progress towards child survival in India and in its constituent states during the period 1971-75 through 2001-05. The purpose of the analysis is two-fold. First we intend to explore, in detail, the transition in the probability of survival during childhood that has taken place in the country and in its constituent states during the 30 years under reference. The available evidence, either from the sample registration system or from the National Family Health Survey, suggests that improvement in the child survival probability was more marked in the 1980s than in the 1990s (Claeson, et. al, 2000). This slowing down of the improvement in child survival probability in India is disturbing as the risk of death during childhood in the country is still unacceptable by international standards.

The second purpose of the analysis is to explore how changes in official policies have influenced transition in the child survival probability. It may be pointed out that, although survival and health is a state subject in the Indian Constitution, yet child survival efforts in India have depended significantly on the initiatives and inputs of the union government. There have been very little state initiatives to address child survival issues specific to the state. This, probably and so obviously, is one reason why the pace of transition in child survival varies from state to state. The dominance of national policies and programmes on child survival efforts is so strong that the implementation of these efforts hardly takes into consideration the local context of child survival that is so pervasive in a country like India which is so diverse in all aspects of social and economic development as well as in terms of social and cultural environment. Because of the social, cultural and economic diversity of the country India, a decentralised, local need-based approach towards child survival has always been advocated but rarely practised.

Methodology and Data Source

The key variable used in the present analysis is the probability of survival during the childhood period or, more specifically, the probability of survival from birth to the 15th birthday (${}_{14}p_0$). It is well known that

$${}_{14}p_0 = \prod_{i=0}^{14} {}_i p_{i-1} \quad (1)$$

where $p=1-q$, q denotes the probability of death. The change in ${}_{14}p_0$ can now be decomposed as

$$\nabla {}_{14}p_0 = \sum_{i=1}^{14} \nabla {}_i p_{i-1} \quad (2)$$

where

$$\nabla {}_i p_{i-1} = \ln(p_{2i-1} / p_{i-1})$$

p_2 and p_1 denote the probabilities of survival at two points in time. Equation (2) can be further condensed as

$$\nabla_{14}p_0 = \nabla_1p_0 + \nabla_4p_1 + \nabla_4p_5 + \nabla_4p_{10} \quad (3)$$

Equation (4) permits to analyse the contribution of the change in ${}_1p_0$, etc. to the change in ${}_{14}p_0$.

The above formulation may also be used in analysing the sex differentials in child survival probability. Let p_M and p_F denote the survival probabilities of male and female children. Then, defining

$$\Psi_i p_{i-1} = \ln({}_i p_{M_{i-1}} / {}_i p_{F_{i-1}})$$

the sex differentials in ${}_{14}p_0$, $\Psi_{14}p_0$, can be decomposed as

$$\Psi_{14}p_0 = \sum_{i=1}^{14} \Psi_i p_{i-1} \quad (4)$$

or

$$\Psi_{14}p_0 = \Psi_1p_0 + \Psi_4p_1 + \Psi_4p_5 + \Psi_4p_{10} \quad (5)$$

Similarly, if p_R and p_U denote the survival probabilities of children in rural and urban areas, then, defining

$$P_i p_{i-1} = \ln({}_i p_{R_{i-1}} / {}_i p_{U_{i-1}})$$

the rural-urban differentials in ${}_{14}p_0$, $P_{14}p_0$ can be decomposed as

$$P_{14}p_0 = \sum_{i=1}^{14} P_i p_{i-1} \quad (6)$$

or, equivalently

$$P_{14}p_0 = P_1p_0 + P_4p_1 + P_4p_5 + P_4p_{10} \quad (7)$$

Finally, if p_S and p_N denote the survival probabilities of children at the state level and at the national level, then defining

$$N_i p_{i-1} = \ln({}_i p_{S_{i-1}} / {}_i p_{N_{i-1}})$$

the difference in state ${}_{14}p_0$ and national ${}_{14}p_0$, $N_{14}p_0$ can be decomposed as

$$N_{14}p_0 = \sum_{i=1}^{14} N_i p_{i-1} \quad (8)$$

or

$$N_{14}p_0 = N_1p_0 + N_4p_1 + N_4p_5 + N_4p_{10} \quad (9)$$

Life tables based on the sample registration system provide probabilities of death for conventional 5-year age groups only. Transition in child survival based on these probabilities may hide important variations in the survival probability within the age group. We have generated single year survival probabilities from the abridged life tables based on the sample registration system through the application of the Heligman/Pollard model mortality schedule (Heligman and Pollard, 1980) by applying the UNABR routine of the MORTPAK-Lite software package (United Nations, 1988). Rogers and Gard (1981) have observed that UNABR gives 'correct' estimates of the parameters of the model and that the aggregation bias that arises from using five-year instead of single-year age groups in fitting the model is probably acceptably small in most instances, with the exception of the parameter E which measures the spread of 'accident' hump. An examination of the trend in the first three parameters of the Heligman/Pollard model mortality schedule provides yet another way of analysing the transition in child survival probability.

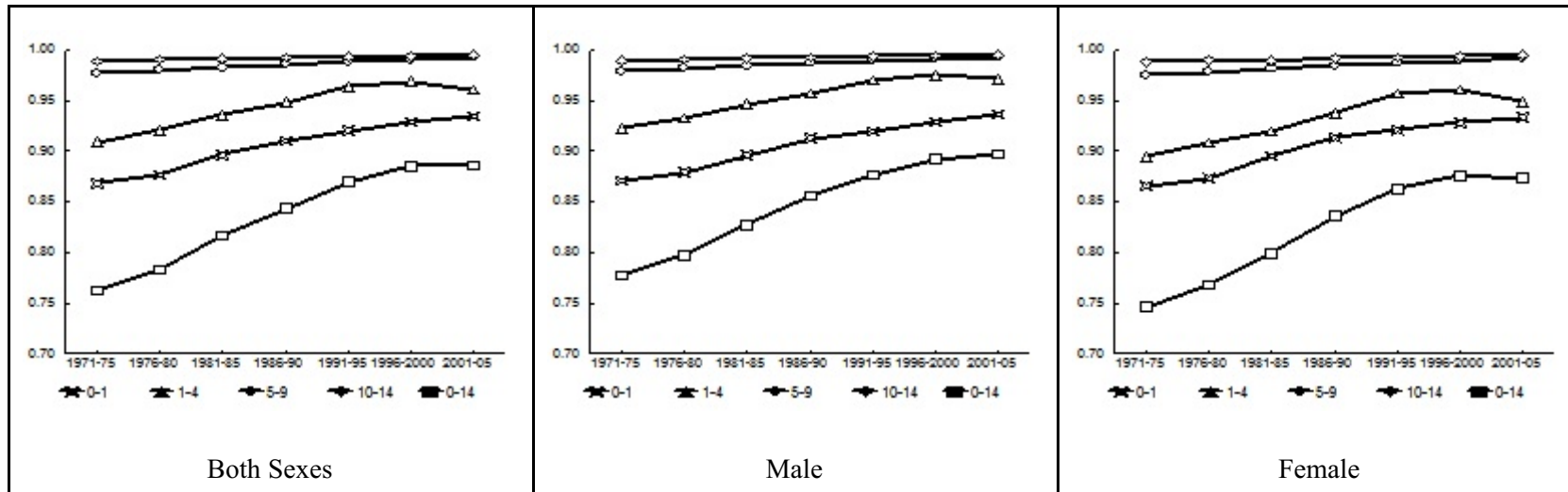
Data Source

The data set for the analysis comprises of abridged life tables for India and for its selected constituent states based on the sample registration system. These abridged life tables are available for the period beginning from 1971-75 through 2001-05 separately for each sex and for rural and urban population (Government of India, 1984; 1985; 1989; 1994; 2004; 2008). The sample registration system is the only source which provides information related to mortality in India and states on an annual basis. The sample registration system is a large-scale demographic survey designed and implemented for providing reliable annual estimates of birth rate, death rate and other fertility and mortality indicators at the national and sub-national levels (Lal and Swamy, 1977). Initiated on a pilot basis in a few selected states of the country in 1964-65, it became fully operational during 1969-70 with about 3700 sample units. The field investigation consists of continuous enumeration of births and deaths in selected sample units by resident part time enumerators and an independent survey every six months. The data obtained by these two independent sources are matched. The unmatched and partially matched events are re-verified and an unduplicated count of births and deaths is obtained for the estimation purpose. The sample, under the system, is replaced every ten years based on the latest census frame. In the past the replacement process used to be staggered over a period of 2-3 years. However, the latest replacement has been carried out in one go using the 2001 census frame. At present, the sample registration is operational in 7,597 sample units (4,433 rural and 3,164 urban) distributed across all States and Union territories of the country and covers about 1.4 million households and 7.01 million population (Government of India, 2008).

Child Survival Probability in India

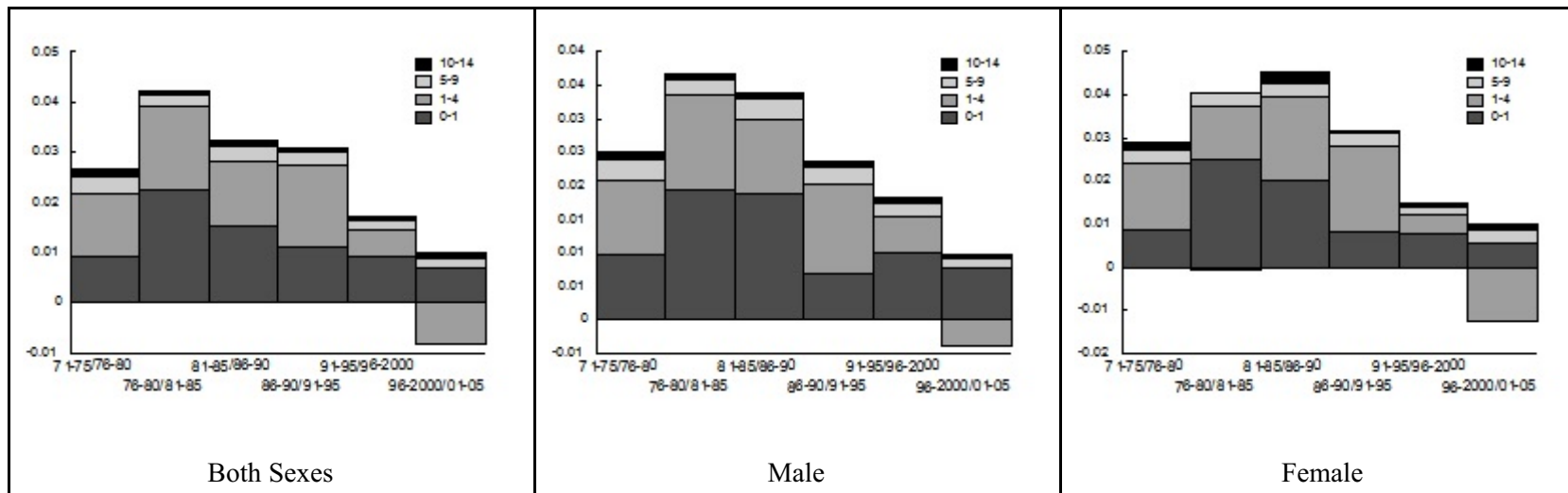
Trends in Child Survival Probability. Information available through the sample registration system suggests that the probability of survival during the childhood (${}_{14}p_0$) was quite low before the launch of concerted child survival efforts such as Expanded Programme on Immunisation and National Diarrhoeal Diseases Control Programme in 1978. During the period 1971-75 only about three-fourth of the new born were expected to reach their fifteenth birth day according to the sample registration system. This situation improved significantly during the period 2001-05 when very close to 90 per cent of the new born were expected to survive to fifteen years of age under the prevailing levels of mortality in children. Improvement in ${}_{14}p_0$ however slowed down after 1991-95 and almost stagnated after 1996-2000 in children of both sexes combined and in male children but decreased marginally in case of female children. The stagnation and the decrease in ${}_{14}p_0$ after 1996-2000 has largely been due to the decrease in ${}_4p_1$ which was marginal in male children but quite substantial in female children and a deceleration in the improvement in ${}_1p_0$. More specifically, there has been a decrease in ${}_1p_1$, ${}_1p_2$ and ${}_1p_3$ after 1996-2000 which appeared to have accounted for the observed decrease in ${}_4p_1$ whereas improvement in ${}_1p_0$ decelerated after attaining the maximum between 1976-80 and 1981-85. The absolute increase in ${}_1p_0$ between 1996-2000 and 2001-05 was less than the absolute increase in this probability between 1971-75 and 1976-80. As the result, most of the increase in ${}_1p_0$ was compensated by the decrease in ${}_4p_1$ so that the improvement in ${}_{14}p_0$ stagnated. Moreover, there has been little improvement in ${}_4p_5$ and ${}_4p_{10}$.

Figure 1
Trends in ${}_{14}p_0$, ${}_1p_0$, ${}_4p_1$, ${}_4p_5$ and ${}_4p_{10}$ in India: 1971-75 through 2001-05



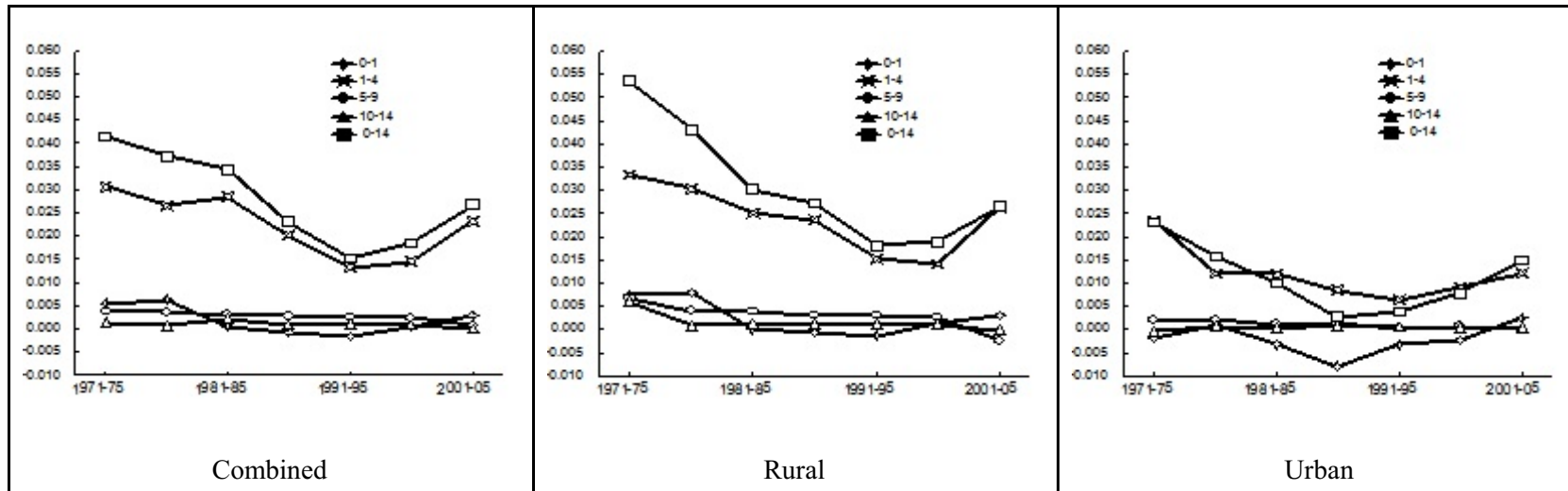
Source: Sample Registration System

Figure 2
 Decomposition of the improvement in ${}_{14}p_0$ to the improvement in ${}_1p_0$, ${}_4p_1$, ${}_4p_5$ and ${}_4p_{10}$ in India: 1971-75 through 2001-05
 Combined Population



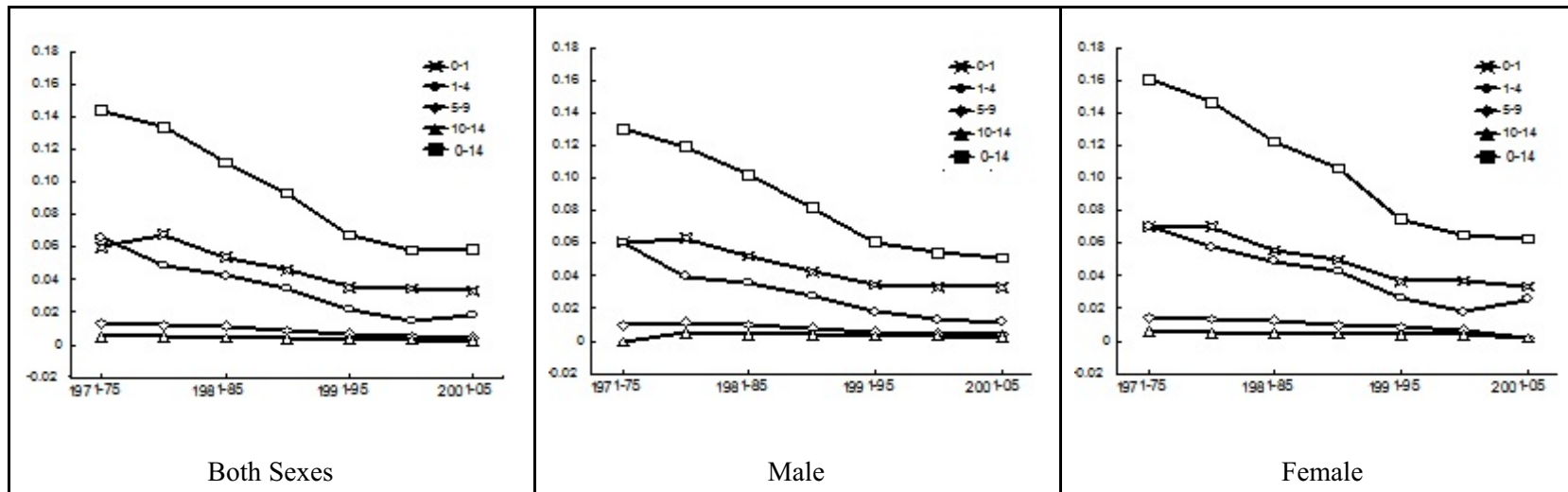
Source: Sample Registration System

Figure 3
Sex differentials in ${}_{14}P_0$, ${}_1P_0$, ${}_4P_1$, ${}_4P_5$ and ${}_4P_{10}$ in India: 1971-75 through 2001-05



Source; Sample Registration System

Figure 4
 Rural-urban differentials in ${}_{14}P_0$, ${}_1P_0$, ${}_4P_1$, ${}_4P_5$ and ${}_4P_{10}$ in India: 1971-75 through 2001-05



Source; Sample Registration System

The decomposition of the improvement in ${}_{14}p_0$ in different five-year periods into improvements in ${}_1p_0$, ${}_4p_1$, ${}_4p_5$ and ${}_4p_{10}$ is presented in figure 2 for both sexes combined as well as separately for male and female children. Nearly all the improvement in ${}_{14}p_0$ has been the result of improvements in ${}_1p_0$ and ${}_4p_1$. Improvements in ${}_4p_5$ and ${}_4p_{10}$ have contributed to the improvement in ${}_{14}p_0$ only marginally primarily because there has been very little improvement in the survival probability in the age group 5-14 years during the period under reference. This is expected as child survival efforts and interventions in India have primarily been focussed on the reduction of the risk of death in the first five years of life. Moreover, the risk of death in the age group 5-14 years is at best marginal as compared to the risk of death in the age group 0-1 year and 1-4 years. However, the prevailing risk of death in the age group 5-14 years is high by international standards and there is substantial scope of reduction in this risk.

Figure 2 also confirms the observation that the improvement in ${}_{14}p_0$ stagnated after 1996-2000 because of a significant slowdown in the improvement in ${}_1p_0$ and an increase in ${}_4p_1$. Improvement in ${}_1p_0$ was maximum during the period 1976-80 through 1981-85 when the Expanded Programme of Immunisation and National Diarrhoeal Diseases Control Programme was launched. Since then, improvement in ${}_1p_0$ has decelerated continuously reaching very low level during the period 1996-2000 through 2001-05 whereas ${}_4p_1$ decreased during this period.

Sex Differentials. Sex differentials in child survival probability and changes in these differentials over time are presented in figure 3. The male survival probability in India has always been higher than the female survival probability in all ages of the childhood period except in case of ${}_1p_0$ during 1986-95 and in case of ${}_4p_{10}$ during 2001-05. Moreover, the male-female gap in ${}_{14}p_0$ narrowed down rather rapidly till 1991-95 but increased thereafter. A similar pattern could be observed in ${}_1p_0$ and ${}_4p_1$ but in case of ${}_4p_5$ and ${}_4p_{10}$, the male-female gap has narrowed down, albeit marginally, throughout the period under reference.

It may also be seen from figure 3 that the sex differentials in ${}_4p_1$ are substantially wider than the sex differentials in ${}_1p_0$, ${}_4p_5$ and ${}_4p_{10}$ for the combined population as well as in the rural population and the level and trend in sex differentials in ${}_{14}p_0$ are largely determined by the level and trend in ${}_4p_1$. In the urban areas, however, the pattern has been different. First, the sex differentials even in ${}_4p_1$ have not been as large as they have been in the rural areas so that change in sex differentials in ${}_{14}p_0$ are not determined primarily by changes in sex differentials in ${}_4p_1$ as has been the case in the rural population. Second, sex differentials in ${}_1p_0$ have generally been favourable to females as compared to males for most of the period under reference, although they have been increasing since 1986-90 and turning favourable to male in 2001-05. However, in the urban areas also, sex differentials in ${}_{14}p_0$ as well as in ${}_1p_0$ and ${}_4p_1$ increased substantially after 1991-95 resulting in the widening of the gap between male and female survival probability in the first five years of life. Clearly, child survival efforts and interventions have been able to reduce the male-female gap in the child survival probability before 1991-95 only. After 1991-95, the sex differentials in ${}_{14}p_0$ as well as in ${}_1p_0$ and ${}_4p_1$ have increased rather substantially raising concerns about the approach to child survival.

Rural-urban Differentials. The rural-urban differentials in ${}_{14}p_0$ also narrowed down quite rapidly till 1991-95 but the decrease in the rural-urban gap in child survival probability slowed down significantly, almost stagnated, after 1991-95 because of

virtually little change in rural-urban differentials in ${}_1p_0$ and an increase in ${}_4p_1$, particularly in female children (Figure 4). Moreover, rural-urban differentials in ${}_1p_0$ have generally been wider than the rural-urban differentials in ${}_4p_1$ and the decrease in the rural-urban differentials in ${}_4p_1$ has been relatively faster than that in ${}_1p_0$ up to the period 1996-2000. On the other hand, rural-urban differentials in ${}_4p_5$ and in ${}_4p_{10}$ have been very narrow as compared to rural-urban differentials in ${}_1p_0$ and ${}_4p_1$ and they appear to have narrowed down further over time albeit marginally. Figure 4 also suggests that child survival efforts after 1991-95 appear to have contributed little in narrowing down the rural-urban gap in the probability of survival during childhood period, especially during the first year of life and 1-4 years of life. This is in quite contrast to the situation prior to 1991-95 when the child survival efforts appear to have definitely contributed towards lowering the rural-urban differentials in the child survival probability.

Single-year Child Survival Probabilities. Average child survival probabilities for five-year age groups do not reflect the within group variation in the risk of death or the probability of survival. We have fitted the Heligman/Pollard model mortality schedule to graduate the five-year age-specific probabilities of death into a smooth set of single-year probabilities of death by using the UNABR routine of the MORTPAK-Lite software package. The exercise was carried out for the country as a whole as well as for its constituent states for which unabridged life tables are available from the sample registration system for the period under reference. Figure 5 presents the transition in the survival probability with age during the childhood period for the country as a whole for both sexes combined as well as separately for male and female children. The stagnation in the improvement in survival probabilities beyond the first year of life is very much evident from the figure. More specifically, there has been virtually no improvement in ${}_1p_1$ between 1996-2000 and 2001-05 whereas ${}_1p_2$, ${}_1p_3$ and ${}_1p_4$ actual decreased instead of increasing during this period. The situation appears to be alarming for female children as the survival probability decreased at all ages of the childhood period beyond the first year. By contrast, there had been a marginal improvement in the survival probability of male children at all ages of the childhood period.

The analysis of the trend in the single-year survival probabilities also confirm the earlier observation that there has been a deceleration in the improvement in survival probability during 1991-95 through 1996-2000 and stagnation and even decrease after 1996-2000 in the country. The progress towards survival appears to be alarming for the female children as the survival probability appeared to have decreased at all ages of the childhood period except the first year of life in recent years. In case of male children, there has been an increase in the survival probability but the improvement has decelerated considerably during 1996-2000 through 2001-05 as compared to earlier periods. In fact, the largest improvement in the child survival probability occurred during the period 1976-80 through 1981-85. Improvement had also been quite significant during the period 1981-85 through 1986-90 but after 1986-90, the deceleration in the improvement in the survival probability at all ages of the childhood period is very much evident from the information available through the sample registration system. It is also clear from the forgoing analysis that virtually all improvement in child survival probability in the country has been confined to either the first year of life or to the 1-4 years of life. Beyond the age of five years, there has been very little improvement in the

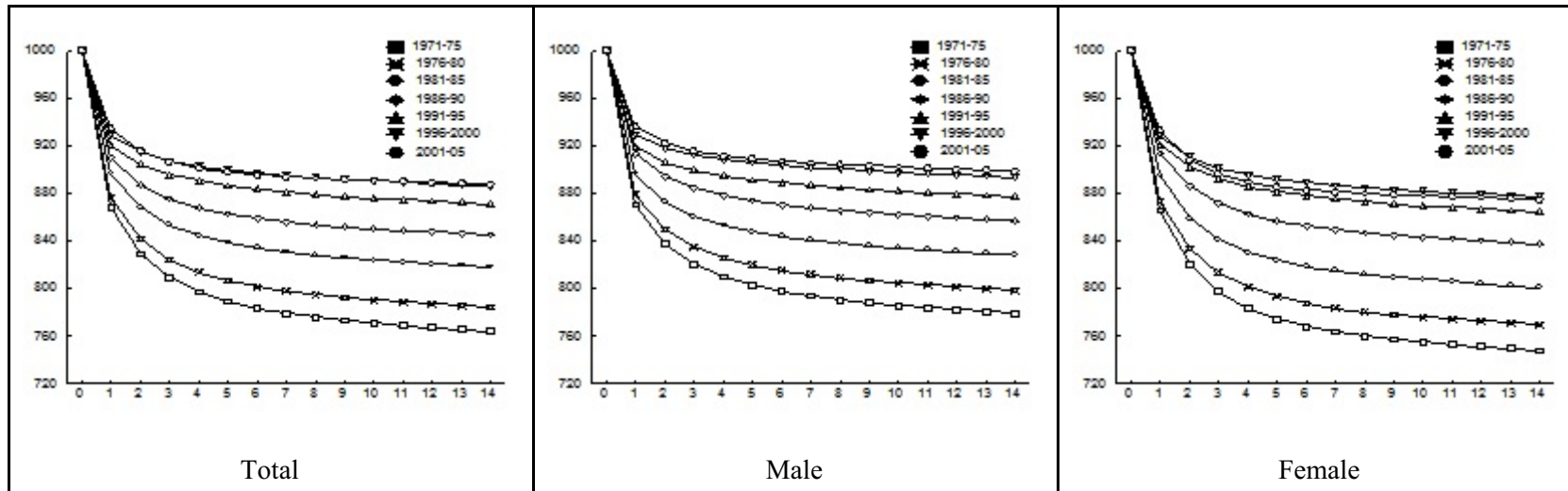
survival probability despite the fact that the survival probability in the age group 5-14 years still remains low by international standards and there is sufficient scope for improvement that would have contributed towards improvement in the probability of survival in the age group 0-14 years. Even in case of the probability of survival in the first year of life, ${}_1p_0$, there is every indication to suggest a considerable deceleration in the improvement after 1991-95.

Inter-state Variations. The improvement in ${}_{14}p_0$ varied widely across Indian states which information is available through the sample registration system. The improvement in the child survival probability has been the fastest in Uttar Pradesh but the slowest in Haryana during the 30 years period under reference. More importantly, improvement in ${}_{14}p_0$ decelerated after 1991-95 and ${}_{14}p_0$ decreased during the period 1996-2000 through 2001-05 in all but three states of the country. This deceleration in the improvement and decrease in ${}_{14}p_0$ has largely been due to the decrease in ${}_4p_1$ which increased in all but one state during the period 1996-2000 through 2001-05. Uttar Pradesh was the only state where ${}_4p_1$ improved even during the period 1991-2000 through 2001-05. On the other hand, Haryana and Orissa are the only two states in India where ${}_{14}p_0$ improved during 1996-2000 through 2001-05 despite a decrease in ${}_4p_0$.

Improvement in the child survival probability in a given state can also be analysed in the context of improvement at the national level. If child survival probability improves at a faster rate than the improvement at the national level then it is clear that $N_{{}_{14}p_0}$ will increase over time and vice versa. It may be seen from table 4 that $N_{{}_{14}p_0}$ increased in only five states - Andhra Pradesh, Gujarat, Tamil Nadu, Rajasthan and Uttar Pradesh - suggesting that the progress towards child survival in these states has relatively been better in these states as compared to the improvement at the national average during the period under reference. This improvement has largely been the result of the improvement in $N_{{}_4p_1}$.

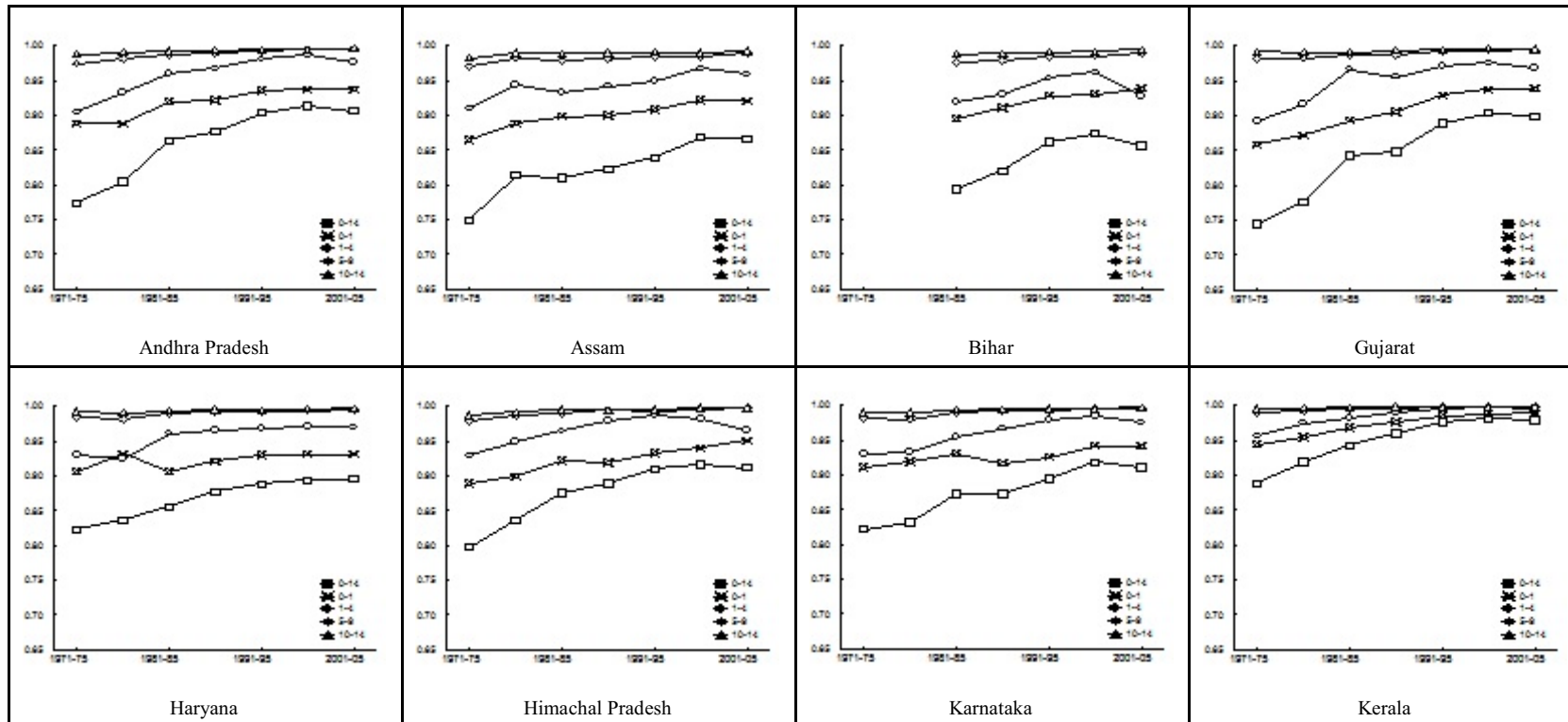
In rest of the states, on the other hand, the progress towards child survival has been relatively poorer than the national average. The situation appears to be serious in Assam, Madhya Pradesh and Orissa. In these three states, ${}_{14}p_0$ was less than the national average during 1971-75 so that $N_{{}_{14}p_0}$ was negative. At the same time, improvement in ${}_{14}p_0$ was slower in these states than the national average so that $N_{{}_{14}p_0}$ decreased further between 1971-75 and 2001-05. The progress in child survival appears to be the most unsatisfactory in Madhya Pradesh. This state was having the second lowest ${}_{14}p_0$ in the country during 1971-75. During 2001-05, the state had the lowest ${}_{14}p_0$ in the country. A similar situation prevailed in Orissa also. In both these states, improvement in ${}_1p_0$ decelerated considerably during the 30 years under reference. By contrast, progress towards child survival was the most rapid in Uttar Pradesh which was having the lowest in ${}_{14}p_0$ during 1971-75 but fourth lowest during 2001-05. Improvement in ${}_{14}p_0$ in Uttar Pradesh was largely due to accelerated improvement in both ${}_1p_0$ and ${}_4p_1$. In case of ${}_4p_1$, the value of $N_{{}_{14}p_0}$ turned positive during 2001-05 while it was negative during 1971-75 meaning that during 1971-75, ${}_4p_1$ in Uttar Pradesh was lower than the national average which became higher than the national average during 2001-05. This rapid improvement in ${}_4p_1$ in the state appears to have contributed significantly toward accelerating the improvement in ${}_{14}p_0$ in the state. Obviously, the progress toward child survival has followed different paths in different states of the country.

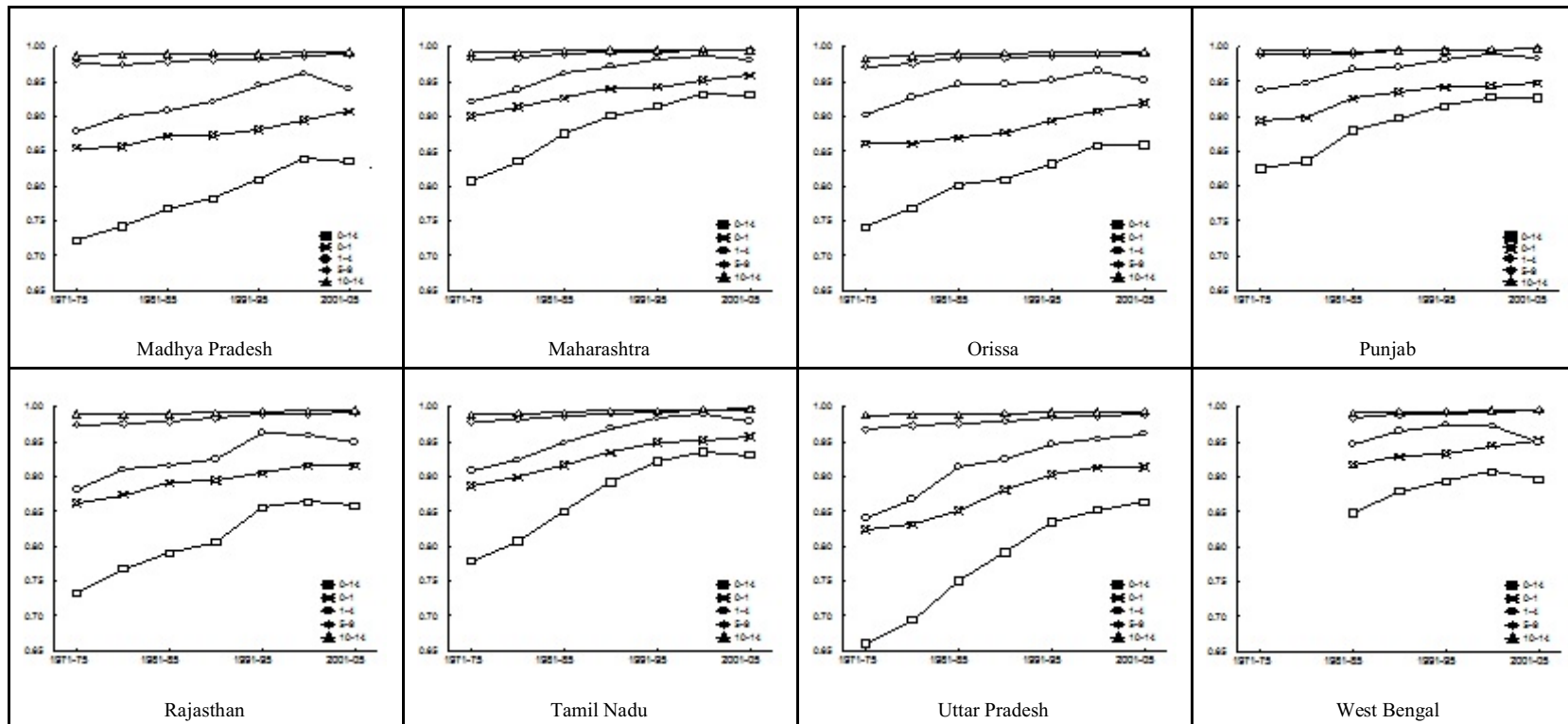
Figure 5
Single-year child survival probabilities in India: 1971-2005



Source: Sample Registration System

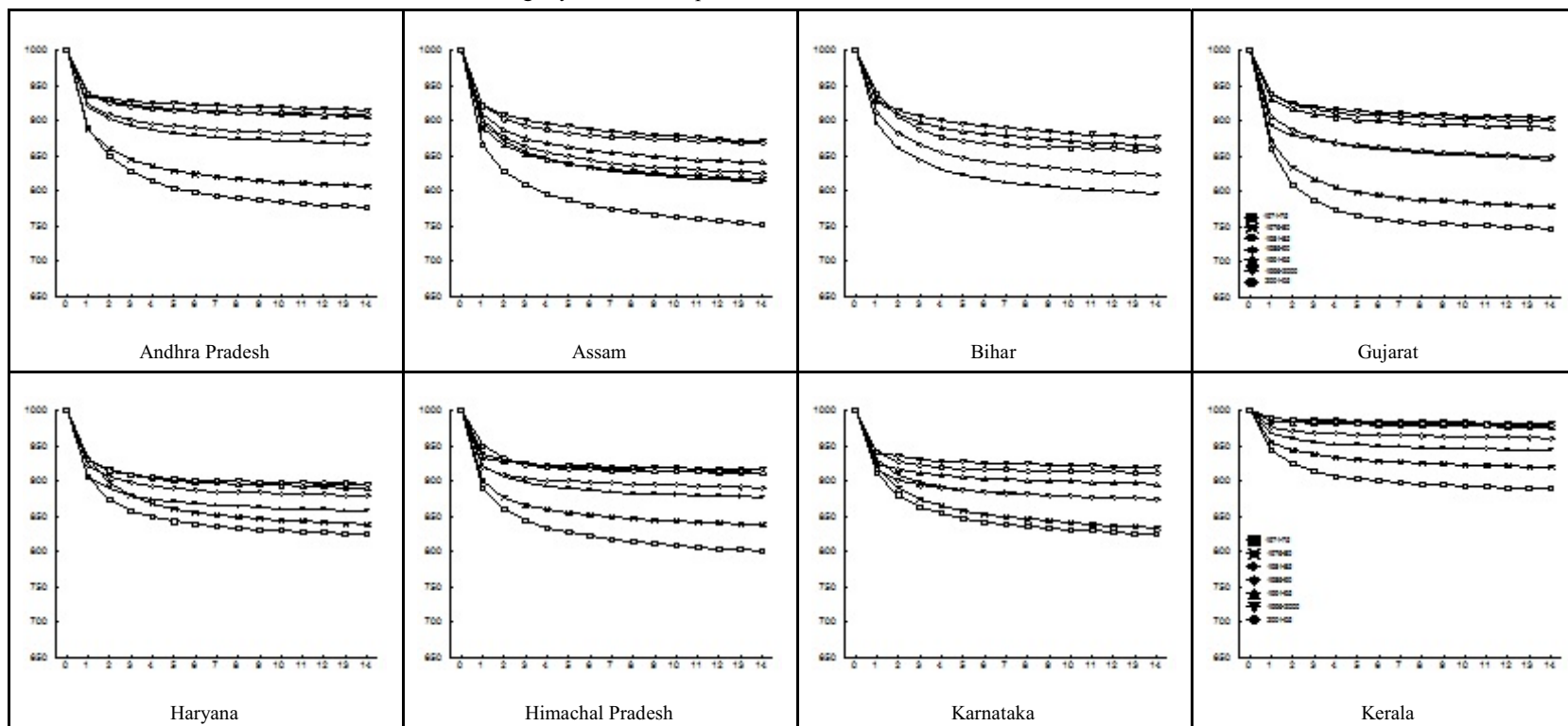
Figure 6
Trends in ${}_{14}P_0$, ${}_1P_0$, ${}_4P_1$, ${}_4P_5$ and ${}_4P_{10}$ in Indian states: 1971-75 through 2001-05

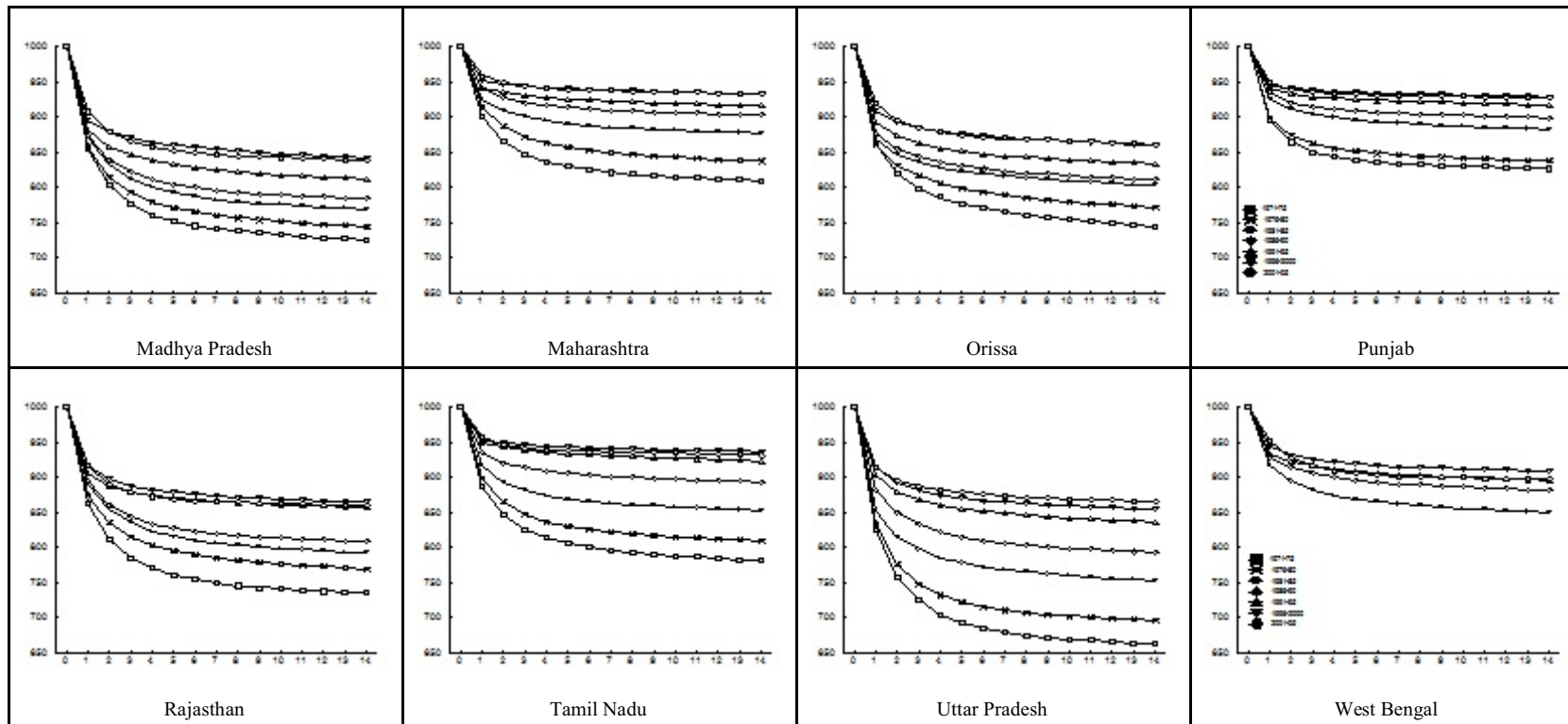




Source: Sample Registration System

Figure 7
Single year survival probabilities in Indian states: 1971-2005





Source: Sample Registration System

Discussion

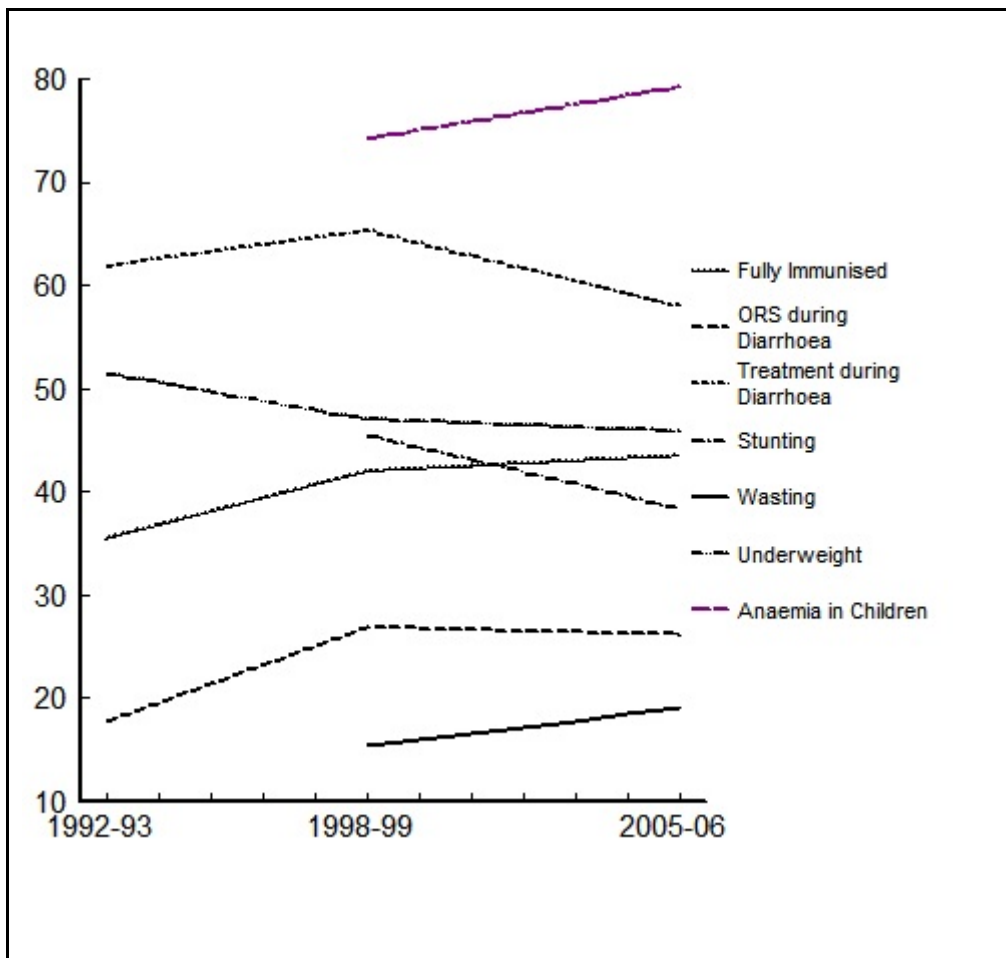
Although, improving survival and health of children has been one of the priority development agenda in the country right since independence, yet, there has been little systematic analysis of the impact of the official policies and programmes on child survival. Although, the government continues to find solace in the observation that infant mortality rate is declining and this decrease has been the result of the official policies and efforts, yet the fact remains that the target set for the reduction in infant mortality rate in different Five-year Development Plans could never be realised within the plan period. At the same time, there has been little effort to go beyond the first year of life. For example, the First Five-year Development Plan of the country noted that out of the total deaths in the age group 0-9 years in 1949, almost 38 per cent were confined to the age group 1-4 years (Government of India, 1952). However, the plan remained silent about measures to reduce deaths in children beyond the first year of life. A more or less similar situation continues to prevail even today. The analysis presented here clearly suggests the need of examining official child survival policies and programmes in the context of survival from birth to 15th birthday in addition to the survival during the first year of life.

The analysis presented here indicates a considerable slowing down in the progress towards child survival in India despite the fact that the prevailing levels of child survival probability are low by international standards and cannot be accepted either in the demographic context or through development perspective. The primary reason in the slowdown of the progress towards child survival is the trend in the survival probability beyond the first year of life which, despite all efforts, has shown a decreasing trend in recent years in the country as well as in all but one states. This decrease in the survival probability beyond the first year of life, especially in the age group 1-4 years, appears to be a reflection of poor performance of child survival efforts as reflected through repeated rounds of the National Family Health Survey. For example, the increase in the proportion of children 12-23 months of age fully immunised slowed down considerably between 1998-99 and 2005-06 as compared to 1992-93 and 1998-99 (Figure). Similarly, there has been no increase in the use of oral rehydration solution during bouts of diarrhoea while the proportion of children with diarrhoea attending a hospital for treatment decreased from 65 per cent to 58 per cent between 1998-99 and 2005-06. Clearly, child survival efforts in the country appeared to have lost steam.

The decrease in the probability of survival in the age group 1-4 years also appears to be a reflection of the nutritional status of children. It is argued that mortality in children 1-4 years of age is high in populations where post weaning nutrition is poor (Le Gros Clark, 1951). On the basis of the relationship between the risk of death and the level of malnutrition in children aged 1-4 years, it is suggested that mortality in 1-4 years of age can be equated to some extent with malnutrition in early childhood and the death rate in the age group 1-4 years may be treated as an index of malnutrition (Wharton, 1971; Wills and Waterlow, 1958). It has also been estimated that nearly 60 per cent of deaths in children under 5 years are due to malnutrition and its interactive effects on preventable diseases like diarrhoea and pneumonia. Most of these deaths are confined to the age group 1-4 years as effects of malnutrition are the most severe in young growing children. These observations are again supported by the evidence available through the National Family Health Survey. The prevalence of stunting

decreased between 1998-99 and 2005-06 but the prevalence of wasting increased during this period. This implies that while there has been some improvement in the long-term nutrient deficiency and frequent infections among children, the short-term nutrient deficiency has increased. The short term nutrient deficiency is the result of acute significant food shortage and/or disease. The increase in the prevalence of wasting indicates the seriousness of the problem which gets reflected in the decrease in the probability of survival in the age group 1-4 years.

Figure 8
Progress of child survival efforts in India: 1992-2006



It may be pointed out here that the need for special services for children in India was first outlined in the report of the Health Survey and Development Committee constituted in 1943 during the colonial period (Government of India, 1946). The Committee recommended that special services for children must ensure a continuity of health protection from the prenatal age through childbirth and the subsequent years of life and suggested that, as far as possible, the same service provider - doctor, midwife

or public health nurse - should be responsible for the care of the mother and the child during infancy and during the childhood period. The, however, stressed that these special services should not be considered as functioning independently of the general health organisation.

The recommendations of the Health Survey and Development Committee became the basis for the evolution of the public health care delivery system in India after independence in 1947. However, the recommendations of the Committee could be implemented only partially and one of the recommendations that was not implemented was related to special services for children. The general thinking, at that time, was that the expansion and strengthening of the general public health care delivery system in general and maternal and child health services, in particular, will automatically take care of specific survival needs of children. This thinking is reflected in the report of the first Health Survey and Planning Committee constituted in the independent India in 1959 and subsequent Committees paid little attention towards special services for the survival and health of children. However, improvements in the health of women and children remained one of the key development agenda of the country as is reflected through different Five-year Development Plans and a priority in the evolution of the public health care delivery system leading to selected interventions directed towards child survival. For example, BCG vaccination was introduced in the First Five-year Development Plan. Another effort was in the direction of establishing Maternal and Child Health Centres within the primary health care units. These interventions, however, were confined to health care delivery institutions which had a limited reach with the result that majority of the population, especially living in rural and remote areas and the marginalised sections of the community remained largely devoid of the benefits of these interventions.

The history of child survival efforts in India can be divided into three distinct phases. The first phase started with independence and lasted up to 1977. During this phase, efforts directed towards improving child survival and health were located within the public health care delivery system in the form of maternal and child health services with little or no emphasis on meeting specific needs of children as recommended by the Health Survey and Development Committee way back in 1946. Most of the child survival and health related services available during this phase were largely institution-based and so their reach was limited. Their impact in terms of preventing deaths during childhood was also limited.

The second phase of child survival efforts ranged from 1978 through 1992. This phase focussed squarely on reducing the risk of death during childhood. Essential characteristics of this phase were the adoption and universal application of appropriate technology like immunisation and oral rehydration therapy and community-based child survival activities. This phase of child survival efforts also focussed on mobilising the community towards the cause of child survival. The evidence presented in this paper suggests that there was an acceleration in the improvement in child survival probability in the country during this phase.

The third and the last phase of child survival efforts begun in 1992. This phase may be characterised by the integrated approach in which child survival activities were integrated with reproductive health and other services. This integration, however, led to a deceleration and even stagnation in the improvement in child survival probability

as is revealed through the present analysis. The recent decrease in the probability of survival beyond the first year of life. It appears that the integrated approach adopted during the third phase could not sustain the good efforts that were initiated to promote child survival during the 1980s.

Conclusions

An accelerated improvement in the child survival in India is the need of the time in the context of Millennium Development Goals nationally as well as internationally. However, in recent years, progress towards child survival in India appears to have stagnated with the probability of survival in the age group 1-4 years recording a decrease, not increase, since 1999-2000. Although, the probability of survival in the first year of life in the country continues to increase but the bad omen is that the improvement has decelerated substantially in recent years. The current trends in the child survival probability in India indicate that there is little possibility of the country achieving Millennium Development Goal of reducing child mortality by three-fourth by 2015 from the level that existed around 1995.

Primary reason behind the slowdown and stagnation in the child survival probability in India appears to be a shift in the policy towards child survival. The integration of child survival activities with reproductive health activities and the emphasis on institutional rather than community-based services appear to have possibly resulted in a residual attention to such child survival activities and interventions as outreach immunisation services, growth monitoring and oral rehydration therapy, etc. There has been improvement in the institution-based child survival services but because of the limited reach of institution-based services, these improvements appear to have only a limited impact on the risk of death during infancy and childhood.

From the policy perspective, India always lacked a comprehensive approach towards child survival. Despite the fact that child survival is perhaps the most sensitive indicator of social and economic progress and improvement in the quality of life, child survival policies and programmes in India have always been planned and implemented through a techno-medical perspective focussed on reducing infant mortality and now reducing neonatal mortality. There has been little attempt to evolve a system of care which ensures continuum of maternal, newborn and child health as recommended by the Health Survey and Development Committee was back in 1946 and recently endorsed by the World Health Organisation (2005). The current emphasis in promoting child survival is on the integrated management of neonatal and childhood illness but this approach is essentially institution-based.

India needs a more pragmatic yet comprehensive approach towards child survival that takes into account the social and cultural ethos of the Indian society and builds upon the family economics rather than techno-medical interventions. It is estimated that more than half of the current child deaths can be prevented through full implementation of a few known and effective interventions. In order to universalise these interventions, there is a need of incorporating interventions that address the social and cultural aspects of child survival that are family-based. At the same time, there is a pressing need of enhancing the efficiency and effectiveness of the public health care delivery system through building a child information system right up to the grass roots level that can support planning for child survival, regular monitoring of provision and

use of child health care services, and of intervention coverage. In view of the limited reach of the institution-based child care services there is also a pressing need of reinvigorating community-based initiatives that can facilitate universalisation of simple, low cost appropriate child survival and child health technologies. Given the current state of affairs, however, this appears a tall order which requires strong long-term political and administrative commitment and endurance. Such commitment and endurance appear to be lacking at present.

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Table 1
Transition in child survival probability in India and states: 1971-2005

State	Level of child survival probability						Change in child survival probability					
	Period	${}_1P_0$	${}_4P_1$	${}_4P_5$	${}_4P_{10}$	${}_{14}P_0$	Period	$\nabla {}_1P_0$	$\nabla {}_4P_1$	$\nabla {}_4P_5$	$\nabla {}_4P_{10}$	$\nabla {}_{14}P_0$
Combined Population												
Total	1971-75	0.8681	0.9090	0.9768	0.9888	0.7623						
	1976-80	0.8763	0.9203	0.9802	0.9903	0.7828	1971-75/1976-80	0.0093	0.0124	0.0034	0.0015	0.0266
	1981-85	0.8961	0.9359	0.9825	0.9910	0.8166	1976-80/1981-85	0.0224	0.0167	0.0024	0.0007	0.0423
	1986-90	0.9099	0.9479	0.9855	0.9922	0.8435	1981-85/1986-90	0.0153	0.0128	0.0030	0.0012	0.0324
	1991-95	0.9200	0.9635	0.9882	0.9929	0.8697	1986-90/1991-95	0.0111	0.0162	0.0027	0.0007	0.0307
	1996-2000	0.9284	0.9686	0.9902	0.9937	0.8848	1991-95/1996-2000	0.0090	0.0053	0.0020	0.0009	0.0172
	2001-05	0.9347	0.9606	0.9922	0.9947	0.8861	1996-2000/2001-05	0.0067	-0.0083	0.0021	0.0009	0.0015
						1971-75/2001-05	<i>0.0738</i>	0.0551	0.0157	0.0059	0.1506	
Male	1971-75	0.8705	0.9224	0.9787	0.9895	0.7775						
	1976-80	0.8789	0.9327	0.9816	0.9907	0.7972	1971-75/1976-80	0.0096	0.0112	0.0030	0.0012	0.0250
	1981-85	0.8960	0.9461	0.9840	0.9916	0.8271	1976-80/1981-85	0.0192	0.0142	0.0025	0.0009	0.0368
	1986-90	0.9129	0.9568	0.9869	0.9926	0.8556	1981-85/1986-90	0.0187	0.0113	0.0029	0.0011	0.0340
	1991-95	0.9193	0.9696	0.9894	0.9933	0.8760	1986-90/1991-95	0.0070	0.0133	0.0026	0.0007	0.0236
	1996-2000	0.9286	0.9749	0.9913	0.9942	0.8921	1991-95/1996-2000	0.0101	0.0054	0.0019	0.0008	0.0182
	2001-05	0.9359	0.9711	0.9926	0.9947	0.8973	1996-2000/2001-05	0.0078	-0.0039	0.0013	0.0005	0.0058
						1971-75/2001-05	<i>0.0724</i>	0.0515	0.0142	0.0053	0.1433	
Female	1971-75	0.8657	0.8946	0.9750	0.9881	0.7460						
	1976-80	0.8733	0.9083	0.9781	0.9899	0.7681	1971-75/1976-80	0.0088	0.0153	0.0033	0.0018	0.0291
	1981-85	0.8954	0.9195	0.9811	0.9894	0.7992	1976-80/1981-85	0.0250	0.0123	0.0030	-0.0005	0.0398
	1986-90	0.9135	0.9377	0.9842	0.9918	0.8361	1981-85/1986-90	0.0199	0.0196	0.0031	0.0025	0.0451
	1991-95	0.9208	0.9568	0.9869	0.9924	0.8629	1986-90/1991-95	0.0080	0.0202	0.0028	0.0005	0.0315
	1996-2000	0.9281	0.9608	0.9889	0.9933	0.8759	1991-95/1996-2000	0.0079	0.0041	0.0020	0.0009	0.0149
	2001-05	0.9332	0.9488	0.9919	0.9947	0.8736	1996-2000/2001-05	0.0055	-0.0125	0.0030	0.0014	-0.0026
						1981-85/2001-05	<i>0.0751</i>	0.0589	0.0172	0.0067	0.1579	

State	Level of child survival probability						Change in child survival probability					
	Period	${}_1P_0$	${}_4P_1$	${}_4P_5$	${}_4P_{10}$	${}_{14}P_0$	Period	$\nabla {}_1P_0$	$\nabla {}_4P_1$	$\nabla {}_4P_5$	$\nabla {}_4P_{10}$	$\nabla {}_{14}P_0$
	Rural Population											
Total	1971-75	0.8583	0.8993	0.9746	0.9879	0.7431						
	1976-80	0.8649	0.9123	0.9780	0.9894	0.7635	1971-75/1976-80	0.0077	0.0143	0.0036	0.0015	0.0270
	1981-85	0.8871	0.9276	0.9802	0.9902	0.7987	1976-80/1981-85	0.0253	0.0166	0.0022	0.0008	0.0450
	1986-90	0.8997	0.9411	0.9837	0.9914	0.8258	1981-85/1986-90	0.0141	0.0145	0.0036	0.0012	0.0333
	1991-95	0.9137	0.9591	0.9867	0.9921	0.8580	1986-90/1991-95	0.0155	0.0190	0.0031	0.0007	0.0383
	1996-2000	0.9221	0.9670	0.9891	0.9930	0.8758	1991-95/1996-2000	0.0091	0.0082	0.0024	0.0009	0.0206
	2001-05	0.9279	0.9567	0.9912	0.9942	0.8749	1996-2000/2001-05	0.0063	-0.0107	0.0021	0.0012	-0.0011
							1971-75/2001-05	0.0780	0.0619	0.0169	0.0063	0.1632
Male	1971-75	0.8616	0.9144	0.9791	0.9929	0.7659						
	1976-80	0.8693	0.9261	0.9797	0.9899	0.7807	1971-75/1976-80	0.0089	0.0128	0.0006	-0.0031	0.0191
	1981-85	0.8872	0.9389	0.9821	0.9908	0.8105	1976-80/1981-85	0.0203	0.0137	0.0025	0.0009	0.0375
	1986-90	0.8994	0.9517	0.9852	0.9919	0.8364	1981-85/1986-90	0.0137	0.0135	0.0032	0.0011	0.0315
	1991-95	0.9131	0.9661	0.9882	0.9926	0.8654	1986-90/1991-95	0.0151	0.0151	0.0030	0.0008	0.0340
	1996-2000	0.9226	0.9731	0.9903	0.9935	0.8834	1991-95/1996-2000	0.0104	0.0072	0.0022	0.0009	0.0206
	2001-05	0.9292	0.9689	0.9916	0.9942	0.8875	1996-2000/2001-05	0.0071	-0.0044	0.0013	0.0007	0.0047
							1971-75/2001-05	0.0755	0.0579	0.0127	0.0013	0.1474
Female	1971-75	0.8552	0.8843	0.9725	0.9870	0.7259						
	1976-80	0.8624	0.8984	0.9758	0.9891	0.7478	1971-75/1976-80	0.0084	0.0158	0.0033	0.0021	0.0297
	1981-85	0.8872	0.9157	0.9783	0.9896	0.7864	1976-80/1981-85	0.0283	0.0190	0.0026	0.0005	0.0504
	1986-90	0.9000	0.9294	0.9822	0.9907	0.8140	1981-85/1986-90	0.0143	0.0149	0.0040	0.0012	0.0345
	1991-95	0.9143	0.9516	0.9852	0.9915	0.8499	1986-90/1991-95	0.0158	0.0236	0.0030	0.0008	0.0431
	1996-2000	0.9215	0.9596	0.9878	0.9925	0.8669	1991-95/1996-2000	0.0078	0.0084	0.0027	0.0010	0.0199
	2001-05	0.9264	0.9438	0.9941	0.9944	0.8643	1996-2000/2001-05	0.0053	-0.0167	0.0064	0.0019	-0.0031
							1971-75/2001-05	0.0800	0.0651	0.0219	0.0075	0.1744

State	Level of child survival probability						Change in child survival probability					
	Period	${}_1P_0$	${}_4P_1$	${}_4P_5$	${}_4P_{10}$	${}_{14}P_0$	Period	$\nabla {}_1P_0$	$\nabla {}_4P_1$	$\nabla {}_4P_5$	$\nabla {}_4P_{10}$	$\nabla {}_{14}P_0$
Urban Population												
Total	1971-75	0.9112	0.9605	0.9875	0.9928	0.8581						
	1976-80	0.9257	0.9578	0.9899	0.9944	0.8727	1971-75/1976-80	0.0157	-0.0029	0.0024	0.0017	0.0169
	1981-85	0.9363	0.9677	0.9915	0.9944	0.8933	1976-80/1981-85	0.0114	0.0104	0.0016	-0.0001	0.0233
	1986-90	0.9421	0.9743	0.9924	0.9952	0.9066	1981-85/1986-90	0.0062	0.0067	0.0009	0.0008	0.0147
	1991-95	0.9467	0.9803	0.9936	0.9955	0.9180	1986-90/1991-95	0.0048	0.0062	0.0013	0.0003	0.0125
	1996-2000	0.9548	0.9813	0.9944	0.9962	0.9281	1991-95/1996-2000	0.0085	0.0011	0.0007	0.0007	0.0110
	2001-05	0.9593	0.9745	0.9959	0.9963	0.9275	1996-2000/2001-05	0.0047	-0.0070	0.0015	0.0001	-0.0007
						1971-75/2001-05	<i>0.0514</i>	0.0144	0.0084	0.0036	0.0778	
Male	1971-75	0.9154	0.9714	0.9885	0.9925	0.8724						
	1976-80	0.9260	0.9635	0.9909	0.9948	0.8795	1971-75/1976-80	0.0115	-0.0081	0.0024	0.0023	0.0081
	1981-85	0.9349	0.9733	0.9920	0.9945	0.8976	1976-80/1981-85	0.0095	0.0101	0.0011	-0.0003	0.0204
	1986-90	0.9384	0.9783	0.9931	0.9955	0.9076	1981-85/1986-90	0.0037	0.0052	0.0011	0.0010	0.0111
	1991-95	0.9452	0.9833	0.9937	0.9957	0.9196	1986-90/1991-95	0.0072	0.0051	0.0007	0.0001	0.0132
	1996-2000	0.9537	0.9861	0.9950	0.9964	0.9324	1991-95/1996-2000	0.0090	0.0028	0.0013	0.0007	0.0138
	2001-05	0.9604	0.9801	0.9959	0.9965	0.9341	1996-2000/2001-05	0.0070	-0.0061	0.0009	0.0001	0.0018
						1971-75/2001-05	<i>0.0480</i>	0.0089	0.0074	0.0040	0.0683	
Female	1971-75	0.9172	0.9488	0.9866	0.9929	0.8525						
	1976-80	0.9252	0.9519	0.9889	0.9941	0.8658	1971-75/1976-80	0.0086	0.0033	0.0024	0.0012	0.0155
	1981-85	0.9379	0.9618	0.9909	0.9942	0.8887	1976-80/1981-85	0.0137	0.0103	0.0020	0.0001	0.0261
	1986-90	0.9459	0.9700	0.9918	0.9947	0.9051	1981-85/1986-90	0.0085	0.0084	0.0009	0.0005	0.0183
	1991-95	0.9483	0.9771	0.9935	0.9952	0.9161	1986-90/1991-95	0.0025	0.0073	0.0017	0.0005	0.0120
	1996-2000	0.9559	0.9771	0.9944	0.9961	0.9251	1991-95/1996-2000	0.0080	0.0000	0.0009	0.0009	0.0098
	2001-05	0.9580	0.9683	0.9959	0.9962	0.9203	1996-2000/2001-05	0.0022	-0.0091	0.0015	0.0001	-0.0053
						1971-75/2001-05	0.0435	0.0203	0.0094	0.0033	0.0765	

Source: Sample Registration System

Table 2

Sex differentials and rural-urban differentials in child survival probability in India: 1971-2005

Period	Sex differentials in child survival probability					Rural-urban differentials in child survival probability				
	Ψ_1P_0	Ψ_4P_0	Ψ_4P_5	Ψ_4P_{10}	$\Psi_{14}P_0$	P_1P_0	P_4P_0	P_4P_5	P_4P_{10}	$P_{14}P_0$
	Combined					Both Sexes				
1971-75	0.00556	0.03060	0.00378	0.00139	0.04133	0.05980	0.06587	0.01318	0.00493	0.14379
1976-80	0.00635	0.02655	0.00351	0.00078	0.03719	0.06788	0.04866	0.01200	0.00512	0.13365
1981-85	0.00059	0.02846	0.00298	0.00219	0.03422	0.05397	0.04239	0.01139	0.00420	0.11196
1986-90	-0.00068	0.02019	0.00276	0.00080	0.02306	0.04608	0.03467	0.00878	0.00380	0.09334
1991-95	-0.00168	0.01330	0.00252	0.00098	0.01511	0.03543	0.02184	0.00696	0.00334	0.06757
1996-2000	0.00056	0.01456	0.00238	0.00088	0.01839	0.03481	0.01471	0.00529	0.00321	0.05802
2001-05	0.00286	0.02321	0.00075	-0.00001	0.02680	0.03318	0.01841	0.00470	0.00215	0.05844
	Rural					Male				
1971-75	0.00742	0.03340	0.00673	0.00605	0.05360	0.06059	0.06049	0.00957	-0.00041	0.13024
1976-80	0.00791	0.03034	0.00397	0.00080	0.04301	0.06322	0.03961	0.01138	0.00498	0.11919
1981-85	-0.00003	0.02507	0.00389	0.00123	0.03017	0.05241	0.03595	0.00999	0.00372	0.10208
1986-90	-0.00065	0.02363	0.00305	0.00114	0.02717	0.04242	0.02761	0.00792	0.00368	0.08163
1991-95	-0.00135	0.01518	0.00308	0.00114	0.01805	0.03455	0.01764	0.00559	0.00304	0.06082
1996-2000	0.00121	0.01401	0.00255	0.00106	0.01883	0.03314	0.01325	0.00473	0.00286	0.05397
2001-05	0.00299	0.02625	-0.00251	-0.00016	0.02657	0.03301	0.01152	0.00430	0.00230	0.05112
	Urban					Female				
1971-75	-0.00198	0.02349	0.00196	-0.00036	0.02311	0.06999	0.07040	0.01434	0.00599	0.16072
1976-80	0.00092	0.01208	0.00198	0.00072	0.01571	0.07021	0.05787	0.01337	0.00505	0.14650
1981-85	-0.00324	0.01184	0.00108	0.00030	0.00998	0.05562	0.04918	0.01280	0.00466	0.12226
1986-90	-0.00798	0.00855	0.00132	0.00082	0.00271	0.04975	0.04269	0.00965	0.00400	0.10609
1991-95	-0.00329	0.00639	0.00026	0.00051	0.00387	0.03649	0.02643	0.00841	0.00368	0.07500
1996-2000	-0.00231	0.00922	0.00062	0.00028	0.00781	0.03665	0.01804	0.00666	0.00363	0.06498
2001-05	0.00246	0.01214	0.00002	0.00029	0.01490	0.03354	0.02563	0.00177	0.00184	0.06278

Table 3

Single year child survival probabilities in India: 1971-2005

Period	${}_1p_0$	${}_1p_1$	${}_1p_2$	${}_1p_3$	${}_1p_4$	${}_1p_5$	${}_1p_6$	${}_1p_7$	${}_1p_8$	${}_1p_9$	${}_1p_{10}$	${}_1p_{11}$	${}_1p_{12}$	${}_1p_{13}$	${}_1p_{14}$	
Total Population																
Total	1971-75	0.8681	0.9550	0.9761	0.9851	0.9899	0.9927	0.9945	0.9957	0.9965	0.9971	0.9975	0.9977	0.9979	0.9979	0.9978
	1976-80	0.8763	0.9603	0.9793	0.9872	0.9913	0.9938	0.9953	0.9963	0.9970	0.9975	0.9979	0.9981	0.9981	0.9981	0.9980
	1981-85	0.8961	0.9687	0.9834	0.9896	0.9928	0.9947	0.9959	0.9967	0.9973	0.9977	0.9980	0.9982	0.9983	0.9983	0.9982
	1986-90	0.9099	0.9747	0.9867	0.9916	0.9941	0.9956	0.9966	0.9973	0.9978	0.9981	0.9983	0.9985	0.9985	0.9985	0.9984
	1991-95	0.9200	0.9827	0.9907	0.9939	0.9956	0.9966	0.9973	0.9978	0.9981	0.9983	0.9985	0.9986	0.9986	0.9986	0.9985
	1996-2000	0.9284	0.9850	0.9921	0.9949	0.9963	0.9972	0.9978	0.9981	0.9984	0.9986	0.9987	0.9988	0.9988	0.9988	0.9987
	2001-05	0.9347	0.9794	0.9900	0.9943	0.9964	0.9975	0.9982	0.9986	0.9989	0.9990	0.9990	0.9990	0.9990	0.9989	0.9988
Male	1971-75	0.8705	0.9618	0.9799	0.9873	0.9912	0.9935	0.9950	0.9960	0.9967	0.9972	0.9975	0.9978	0.9980	0.9981	0.9981
	1976-80	0.8789	0.9668	0.9827	0.9892	0.9925	0.9945	0.9957	0.9966	0.9971	0.9976	0.9979	0.9981	0.9982	0.9983	0.9982
	1981-85	0.8960	0.9739	0.9862	0.9912	0.9938	0.9953	0.9963	0.9970	0.9975	0.9978	0.9981	0.9983	0.9984	0.9984	0.9984
	1986-90	0.9129	0.9792	0.9890	0.9930	0.9950	0.9962	0.9970	0.9975	0.9979	0.9982	0.9984	0.9985	0.9986	0.9986	0.9986
	1991-95	0.9193	0.9858	0.9923	0.9949	0.9963	0.9971	0.9976	0.9980	0.9983	0.9984	0.9986	0.9987	0.9987	0.9987	0.9987
	1996-2000	0.9286	0.9881	0.9937	0.9958	0.9970	0.9976	0.9980	0.9983	0.9985	0.9987	0.9988	0.9989	0.9989	0.9988	0.9988
	2001-05	0.9359	0.9853	0.9928	0.9956	0.9970	0.9978	0.9983	0.9986	0.9988	0.9989	0.9990	0.9990	0.9990	0.9989	0.9988
Female	1971-75	0.8657	0.9478	0.9718	0.9826	0.9884	0.9918	0.9940	0.9954	0.9964	0.9971	0.9975	0.9977	0.9977	0.9977	0.9975
	1976-80	0.8733	0.9545	0.9758	0.9851	0.9900	0.9929	0.9948	0.9960	0.9968	0.9974	0.9978	0.9980	0.9981	0.9980	0.9979
	1981-85	0.8954	0.9595	0.9788	0.9873	0.9917	0.9941	0.9956	0.9966	0.9971	0.9975	0.9977	0.9978	0.9979	0.9979	0.9979
	1986-90	0.9135	0.9696	0.9838	0.9899	0.9931	0.9950	0.9963	0.9971	0.9977	0.9981	0.9983	0.9984	0.9985	0.9984	0.9982
	1991-95	0.9208	0.9794	0.9890	0.9929	0.9949	0.9962	0.9970	0.9975	0.9979	0.9982	0.9984	0.9985	0.9985	0.9985	0.9984
	1996-2000	0.9281	0.9810	0.9900	0.9937	0.9956	0.9967	0.9974	0.9979	0.9983	0.9985	0.9987	0.9987	0.9987	0.9987	0.9985
	2001-05	0.9332	0.9732	0.9867	0.9925	0.9955	0.9971	0.9981	0.9986	0.9989	0.9991	0.9991	0.9991	0.9991	0.9990	0.9987

Period	iP ₀	iP ₁	iP ₂	iP ₃	iP ₄	iP ₅	iP ₆	iP ₇	iP ₈	iP ₉	iP ₁₀	iP ₁₁	iP ₁₂	iP ₁₃	iP ₁₄
Rural Population															
Total	1971-75	0.8583	0.9501	0.9734	0.9834	0.9888	0.9919	0.9940	0.9953	0.9962	0.9969	0.9973	0.9976	0.9977	0.9976
	1976-80	0.8649	0.9563	0.9771	0.9858	0.9904	0.9931	0.9948	0.9959	0.9967	0.9973	0.9977	0.9979	0.9980	0.9979
	1981-85	0.8871	0.9647	0.9812	0.9881	0.9918	0.9939	0.9954	0.9963	0.9970	0.9975	0.9978	0.9980	0.9981	0.9981
	1986-90	0.8997	0.9713	0.9848	0.9904	0.9933	0.9951	0.9962	0.9970	0.9975	0.9979	0.9981	0.9983	0.9984	0.9983
	1991-95	0.9137	0.9807	0.9896	0.9932	0.9951	0.9962	0.9970	0.9975	0.9979	0.9981	0.9983	0.9984	0.9985	0.9984
	1996-2000	0.9221	0.9844	0.9917	0.9945	0.9960	0.9969	0.9975	0.9979	0.9982	0.9984	0.9986	0.9986	0.9986	0.9985
	2001-05	0.9279	0.9775	0.9890	0.9936	0.9959	0.9972	0.9980	0.9984	0.9987	0.9989	0.9989	0.9989	0.9988	0.9987
Male	1971-75	0.8616	0.9574	0.9777	0.9861	0.9906	0.9933	0.9950	0.9961	0.9970	0.9976	0.9980	0.9984	0.9986	0.9989
	1976-80	0.8693	0.9635	0.9809	0.9880	0.9917	0.9939	0.9953	0.9962	0.9968	0.9973	0.9977	0.9979	0.9980	0.9981
	1981-85	0.8872	0.9704	0.9843	0.9900	0.9929	0.9947	0.9959	0.9966	0.9972	0.9976	0.9979	0.9981	0.9982	0.9983
	1986-90	0.8994	0.9767	0.9877	0.9921	0.9944	0.9957	0.9966	0.9972	0.9976	0.9979	0.9982	0.9983	0.9984	0.9984
	1991-95	0.9131	0.9842	0.9914	0.9943	0.9958	0.9967	0.9973	0.9978	0.9981	0.9983	0.9984	0.9985	0.9986	0.9985
	1996-2000	0.9226	0.9874	0.9933	0.9955	0.9967	0.9974	0.9978	0.9982	0.9984	0.9985	0.9987	0.9987	0.9987	0.9987
	2001-05	0.9292	0.9844	0.9922	0.9952	0.9967	0.9976	0.9981	0.9984	0.9987	0.9988	0.9989	0.9989	0.9989	0.9987
Female	1971-75	0.8552	0.9426	0.9689	0.9808	0.9872	0.9910	0.9934	0.9950	0.9961	0.9968	0.9972	0.9975	0.9975	0.9974
	1976-80	0.8624	0.9495	0.9730	0.9834	0.9889	0.9921	0.9942	0.9956	0.9965	0.9972	0.9976	0.9978	0.9979	0.9978
	1981-85	0.8872	0.9589	0.9778	0.9860	0.9905	0.9931	0.9948	0.9960	0.9968	0.9974	0.9977	0.9979	0.9980	0.9979
	1986-90	0.9000	0.9654	0.9816	0.9885	0.9922	0.9944	0.9958	0.9967	0.9974	0.9978	0.9981	0.9982	0.9982	0.9980
	1991-95	0.9143	0.9770	0.9876	0.9919	0.9942	0.9956	0.9966	0.9972	0.9977	0.9980	0.9982	0.9983	0.9984	0.9982
	1996-2000	0.9215	0.9807	0.9897	0.9934	0.9953	0.9964	0.9972	0.9977	0.9981	0.9983	0.9985	0.9986	0.9986	0.9984
	2001-05	0.9264	0.9688	0.9853	0.9926	0.9961	0.9978	0.9987	0.9991	0.9993	0.9993	0.9992	0.9991	0.9989	0.9985

Period	iP ₀	iP ₁	iP ₂	iP ₃	iP ₄	iP ₅	iP ₆	iP ₇	iP ₈	iP ₉	iP ₁₀	iP ₁₁	iP ₁₂	iP ₁₃	iP ₁₄
Urban Population															
Total	1971-75	0.9112	0.9810	0.9900	0.9935	0.9954	0.9965	0.9972	0.9976	0.9980	0.9982	0.9984	0.9985	0.9986	0.9986
	1976-80	0.9257	0.9786	0.9893	0.9935	0.9957	0.9969	0.9976	0.9981	0.9985	0.9987	0.9988	0.9989	0.9989	0.9988
	1981-85	0.9363	0.9839	0.9919	0.9950	0.9966	0.9975	0.9980	0.9984	0.9987	0.9988	0.9989	0.9989	0.9988	0.9988
	1986-90	0.9421	0.9875	0.9936	0.9959	0.9971	0.9978	0.9983	0.9986	0.9988	0.9989	0.9990	0.9991	0.9991	0.9990
	1991-95	0.9467	0.9906	0.9951	0.9968	0.9977	0.9982	0.9986	0.9988	0.9990	0.9991	0.9991	0.9991	0.9991	0.9991
	1996-2000	0.9548	0.9909	0.9954	0.9970	0.9979	0.9984	0.9987	0.9989	0.9991	0.9992	0.9993	0.9993	0.9993	0.9992
	2001-05	0.9593	0.9861	0.9936	0.9966	0.9980	0.9987	0.9991	0.9993	0.9994	0.9994	0.9994	0.9993	0.9993	0.9992
Male	1971-75	0.9154	0.9871	0.9928	0.9950	0.9962	0.9970	0.9974	0.9978	0.9980	0.9982	0.9984	0.9985	0.9985	0.9986
	1976-80	0.9260	0.9815	0.9909	0.9945	0.9963	0.9973	0.9979	0.9983	0.9986	0.9988	0.9989	0.9990	0.9990	0.9989
	1981-85	0.9349	0.9869	0.9933	0.9958	0.9970	0.9977	0.9982	0.9985	0.9987	0.9988	0.9989	0.9989	0.9989	0.9988
	1986-90	0.9384	0.9895	0.9946	0.9965	0.9975	0.9981	0.9984	0.9987	0.9989	0.9990	0.9991	0.9991	0.9991	0.9991
	1991-95	0.9452	0.9923	0.9958	0.9972	0.9979	0.9983	0.9986	0.9988	0.9989	0.9990	0.9991	0.9991	0.9992	0.9991
	1996-2000	0.9537	0.9935	0.9966	0.9977	0.9983	0.9987	0.9989	0.9991	0.9992	0.9992	0.9993	0.9993	0.9993	0.9992
	2001-05	0.9604	0.9892	0.9951	0.9973	0.9983	0.9988	0.9991	0.9993	0.9993	0.9994	0.9994	0.9993	0.9993	0.9992
Female	1971-75	0.9172	0.9749	0.9869	0.9918	0.9944	0.9959	0.9969	0.9975	0.9980	0.9983	0.9985	0.9986	0.9986	0.9985
	1976-80	0.9252	0.9759	0.9877	0.9926	0.9950	0.9965	0.9974	0.9980	0.9984	0.9986	0.9988	0.9989	0.9989	0.9987
	1981-85	0.9379	0.9809	0.9903	0.9941	0.9960	0.9972	0.9979	0.9983	0.9986	0.9988	0.9989	0.9989	0.9988	0.9987
	1986-90	0.9459	0.9854	0.9924	0.9952	0.9967	0.9975	0.9981	0.9985	0.9987	0.9989	0.9990	0.9990	0.9989	0.9988
	1991-95	0.9483	0.9888	0.9943	0.9964	0.9975	0.9981	0.9985	0.9988	0.9990	0.9991	0.9991	0.9991	0.9990	0.9989
	1996-2000	0.9559	0.9885	0.9943	0.9965	0.9976	0.9983	0.9987	0.9990	0.9992	0.9993	0.9993	0.9993	0.9993	0.9991
	2001-05	0.9580	0.9829	0.9918	0.9957	0.9976	0.9985	0.9991	0.9993	0.9994	0.9995	0.9994	0.9994	0.9992	0.9991

Table 4
Transition in child survival probability in India and states: 1971-2005

State	Level of child survival probability						Change in child survival probability					
	Period	${}_1P_0$	${}_4P_1$	${}_4P_5$	${}_4P_{10}$	${}_{14}P_0$	Period	$\nabla {}_1P_0$	$\nabla {}_4P_1$	$\nabla {}_4P_5$	$\nabla {}_4P_{10}$	$\nabla {}_{14}P_0$
Andhra Pradesh	1971-75	0.8885	0.9044	0.9746	0.9877	0.7735						
	1976-80	0.8877	0.9327	0.9811	0.9907	0.8047	1971-75/1976-80	-0.0009	0.0308	0.0066	0.0029	0.0395
	1981-85	0.9195	0.9594	0.9871	0.9920	0.8639	1976-80/1981-85	0.0353	0.0282	0.0061	0.0014	0.0710
	1986-90	0.9218	0.9672	0.9898	0.9932	0.8765	1981-85/1986-90	0.0025	0.0081	0.0027	0.0012	0.0145
	1991-95	0.9348	0.9802	0.9921	0.9939	0.9036	1986-90/1991-95	0.0140	0.0134	0.0023	0.0007	0.0304
	1996-2000	0.9369	0.9857	0.9941	0.9945	0.9130	1991-95/1996-2000	0.0022	0.0056	0.0020	0.0006	0.0103
	2001-05	0.9371	0.9756	0.9957	0.9959	0.9066	1996-2000/2001-05	0.0003	-0.0103	0.0016	0.0013	-0.0071
Assam							1971-75/2001-05	0.0530	0.0861	0.0198	0.0069	0.1657
	1971-75	0.8643	0.9100	0.9695	0.9825	0.7491						
	1976-80	0.8881	0.9435	0.9820	0.9893	0.8139	1971-75/1976-80	0.0272	0.0361	0.0128	0.0069	0.0831
	1981-85	0.8983	0.9330	0.9779	0.9884	0.8100	1976-80/1981-85	0.0114	-0.0112	-0.0041	-0.0009	-0.0048
	1986-90	0.9003	0.9415	0.9807	0.9897	0.8227	1981-85/1986-90	0.0022	0.0091	0.0028	0.0014	0.0155
	1991-95	0.9079	0.9486	0.9828	0.9908	0.8387	1986-90/1991-95	0.0085	0.0075	0.0022	0.0011	0.0192
	1996-2000	0.9219	0.9665	0.9846	0.9896	0.8683	1991-95/1996-2000	0.0153	0.0188	0.0018	-0.0012	0.0347
2001-05	0.9205	0.9585	0.9885	0.9929	0.8659	1996-2000/2001-05	-0.0016	-0.0083	0.0039	0.0032	-0.0028	
Bihar							1971-75/2001-05	0.0646	0.0603	0.0155	0.0073	0.1477
	1971-75											
	1976-80						1971-75/1976-80					
	1981-85	0.8952	0.9189	0.9762	0.9881	0.7935	1976-80/1981-85					
	1986-90	0.9105	0.9303	0.9790	0.9890	0.8201	1981-85/1986-90	0.0169	0.0123	0.0029	0.0009	0.0330
	1991-95	0.9281	0.9536	0.9831	0.9905	0.8618	1986-90/1991-95	0.0192	0.0248	0.0041	0.0014	0.0495
	1996-2000	0.9307	0.9612	0.9854	0.9913	0.8739	1991-95/1996-2000	0.0027	0.0079	0.0024	0.0009	0.0139
2001-05	0.9388	0.9271	0.9892	0.9941	0.8559	1996-2000/2001-05	0.0087	-0.0361	0.0038	0.0028	-0.0208	
						1981-85/2001-05	0.0388	0.0451	0.0094	0.0032	0.0965	

State	Level of child survival probability						Change in child survival probability					
	Period	${}_1P_0$	${}_4P_1$	${}_4P_5$	${}_4P_{10}$	${}_{14}P_0$	Period	$\nabla {}_1P_0$	$\nabla {}_4P_1$	$\nabla {}_4P_5$	$\nabla {}_4P_{10}$	$\nabla {}_{14}P_0$
Gujarat	1971-75	0.8585	0.8917	0.9817	0.9912	0.7449						
	1976-80	0.8714	0.9160	0.9822	0.9909	0.7768	1971-75/1976-80	0.0149	0.0270	0.0004	-0.0003	0.0419
	1981-85	0.8928	0.9662	0.9862	0.9908	0.8429	1976-80/1981-85	0.0243	0.0534	0.0041	-0.0001	0.0817
	1986-90	0.9051	0.9553	0.9871	0.9931	0.8476	1981-85/1986-90	0.0137	-0.0113	0.0009	0.0023	0.0056
	1991-95	0.9289	0.9702	0.9916	0.9946	0.8888	1986-90/1991-95	0.0259	0.0155	0.0046	0.0014	0.0474
	1996-2000	0.9367	0.9748	0.9931	0.9959	0.9030	1991-95/1996-2000	0.0083	0.0047	0.0015	0.0013	0.0159
	2001-05	0.9386	0.9682	0.9937	0.9952	0.8986	1996-2000/2001-05	0.0020	-0.0068	0.0006	-0.0007	-0.0049
							1971-75/2001-05	0.0871	0.0892	0.0115	0.0047	0.1925
Haryana	1971-75	0.9060	0.9294	0.9847	0.9919	0.8225						
	1976-80	0.9312	0.9239	0.9814	0.9904	0.8363	1971-75/1976-80	0.0274	-0.0060	-0.0033	-0.0015	0.0167
	1981-85	0.9059	0.9607	0.9891	0.9933	0.8551	1976-80/1981-85	-0.0275	0.0390	0.0078	0.0029	0.0223
	1986-90	0.9210	0.9655	0.9921	0.9947	0.8774	1981-85/1986-90	0.0164	0.0050	0.0030	0.0013	0.0258
	1991-95	0.9298	0.9683	0.9923	0.9936	0.8878	1986-90/1991-95	0.0096	0.0029	0.0002	-0.0011	0.0117
	1996-2000	0.9307	0.9704	0.9935	0.9959	0.8936	1991-95/1996-2000	0.0010	0.0021	0.0012	0.0023	0.0066
	2001-05	0.9308	0.9697	0.9948	0.9969	0.8951	1996-2000/2001-05	0.0000	-0.0007	0.0014	0.0009	0.0016
							1971-75/2001-05	0.0269	0.0431	0.0089	0.0041	0.0830
Himachal Pradesh	1971-75	0.8894	0.9292	0.9778	0.9869	0.7975						
	1976-80	0.8994	0.9495	0.9873	0.9914	0.8359	1971-75/1976-80	0.0111	0.0216	0.0097	0.0045	0.0469
	1981-85	0.9216	0.9645	0.9900	0.9950	0.8756	1976-80/1981-85	0.0244	0.0157	0.0027	0.0037	0.0465
	1986-90	0.9191	0.9782	0.9941	0.9941	0.8886	1981-85/1986-90	-0.0026	0.0141	0.0041	-0.0009	0.0147
	1991-95	0.9322	0.9867	0.9936	0.9951	0.9095	1986-90/1991-95	0.0141	0.0086	-0.0005	0.0010	0.0232
	1996-2000	0.9394	0.9811	0.9962	0.9978	0.9161	1991-95/1996-2000	0.0076	-0.0057	0.0026	0.0027	0.0073
	2001-05	0.9502	0.9648	0.9965	0.9982	0.9119	1996-2000/2001-05	0.0115	-0.0167	0.0003	0.0004	-0.0046
							1971-75/2001-05	0.0546	0.0543	0.0186	0.0110	0.1386

State	Level of child survival probability						Change in child survival probability					
	Period	${}_1P_0$	${}_4P_1$	${}_4P_5$	${}_4P_{10}$	${}_{14}P_0$	Period	$\nabla {}_1P_0$	$\nabla {}_4P_1$	$\nabla {}_4P_5$	$\nabla {}_4P_{10}$	$\nabla {}_{14}P_0$
Karnataka	1971-75	0.9110	0.9293	0.9810	0.9898	0.8220						
	1976-80	0.9188	0.9330	0.9799	0.9901	0.8317	1971-75/1976-80	0.0085	0.0040	-0.0011	0.0003	0.0118
	1981-85	0.9304	0.9543	0.9892	0.9934	0.8724	1976-80/1981-85	0.0126	0.0225	0.0095	0.0033	0.0478
	1986-90	0.9169	0.9658	0.9912	0.9943	0.8728	1981-85/1986-90	-0.0146	0.0121	0.0021	0.0009	0.0004
	1991-95	0.9255	0.9787	0.9930	0.9949	0.8948	1986-90/1991-95	0.0094	0.0132	0.0018	0.0006	0.0250
	1996-2000	0.9416	0.9843	0.9945	0.9955	0.9176	1991-95/1996-2000	0.0172	0.0057	0.0015	0.0006	0.0251
	2001-05	0.9414	0.9749	0.9958	0.9970	0.9111	1996-2000/2001-05	-0.0002	-0.0096	0.0013	0.0015	-0.0070
							1971-75/2001-05	0.0331	0.0575	0.0137	0.0057	0.1100
Kerala	1971-75	0.9441	0.9556	0.9893	0.9952	0.8882						
	1976-80	0.9545	0.9745	0.9921	0.9957	0.9187	1971-75/1976-80	0.0109	0.0196	0.0028	0.0005	0.0338
	1981-85	0.9679	0.9821	0.9948	0.9968	0.9425	1976-80/1981-85	0.0140	0.0078	0.0028	0.0011	0.0256
	1986-90	0.9757	0.9900	0.9964	0.9974	0.9600	1981-85/1986-90	0.0081	0.0081	0.0016	0.0007	0.0184
	1991-95	0.9845	0.9956	0.9976	0.9979	0.9757	1986-90/1991-95	0.0089	0.0056	0.0012	0.0004	0.0162
	1996-2000	0.9881	0.9972	0.9976	0.9977	0.9806	1991-95/1996-2000	0.0037	0.0016	-0.0001	-0.0002	0.0051
	2001-05	0.9883	0.9940	0.9978	0.9982	0.9785	1996-2000/2001-05	0.0002	-0.0032	0.0002	0.0006	-0.0022
							1971-75/2001-05	0.0455	0.0426	0.0084	0.0025	0.0990
Madhya Pradesh	1971-75	0.8549	0.8785	0.9750	0.9866	0.7224						
	1976-80	0.8566	0.8991	0.9744	0.9884	0.7418	1971-75/1976-80	0.0020	0.0232	-0.0006	0.0018	0.0265
	1981-85	0.8716	0.9083	0.9786	0.9900	0.7670	1976-80/1981-85	0.0173	0.0102	0.0043	0.0016	0.0334
	1986-90	0.8729	0.9209	0.9814	0.9908	0.7816	1981-85/1986-90	0.0015	0.0138	0.0028	0.0008	0.0189
	1991-95	0.8809	0.9446	0.9827	0.9895	0.8091	1986-90/1991-95	0.0092	0.0253	0.0013	-0.0012	0.0346
	1996-2000	0.8941	0.9610	0.9856	0.9911	0.8394	1991-95/1996-2000	0.0148	0.0173	0.0030	0.0016	0.0367
	2001-05	0.9071	0.9391	0.9884	0.9925	0.8357	1996-2000/2001-05	0.0145	-0.0231	0.0028	0.0014	-0.0044
							1971-75/2001-05	0.0448	0.0898	0.0109	0.0046	0.1501

State	Level of child survival probability						Change in child survival probability					
	Period	${}_1P_0$	${}_4P_1$	${}_4P_5$	${}_4P_{10}$	${}_{14}P_0$	Period	$\nabla {}_1P_0$	$\nabla {}_4P_1$	$\nabla {}_4P_5$	$\nabla {}_4P_{10}$	$\nabla {}_{14}P_0$
Maharashtra	1971-75	0.9003	0.9206	0.9820	0.9915	0.8070						
	1976-80	0.9134	0.9378	0.9833	0.9917	0.8353	1971-75/1976-80	0.0144	0.0185	0.0014	0.0002	0.0345
	1981-85	0.9256	0.9615	0.9894	0.9937	0.8750	1976-80/1981-85	0.0133	0.0249	0.0062	0.0020	0.0464
	1986-90	0.9397	0.9716	0.9920	0.9949	0.9011	1981-85/1986-90	0.0151	0.0105	0.0026	0.0012	0.0294
	1991-95	0.9417	0.9825	0.9933	0.9949	0.9143	1986-90/1991-95	0.0021	0.0112	0.0013	0.0001	0.0146
	1996-2000	0.9511	0.9880	0.9954	0.9963	0.9318	1991-95/1996-2000	0.0099	0.0055	0.0021	0.0013	0.0189
	2001-05	0.9582	0.9802	0.9956	0.9955	0.9309	1996-2000/2001-05	0.0075	-0.0079	0.0002	-0.0008	-0.0010
							1971-75/2001-05	0.0548	0.0706	0.0135	0.0048	0.1437
Orissa	1971-75	0.8612	0.9013	0.9713	0.9835	0.7414						
	1976-80	0.8606	0.9275	0.9763	0.9864	0.7687	1971-75/1976-80	-0.0007	0.0287	0.0052	0.0030	0.0362
	1981-85	0.8689	0.9462	0.9836	0.9901	0.8007	1976-80/1981-85	0.0096	0.0200	0.0074	0.0038	0.0408
	1986-90	0.8765	0.9467	0.9841	0.9907	0.8089	1981-85/1986-90	0.0087	0.0005	0.0004	0.0006	0.0102
	1991-95	0.8932	0.9521	0.9862	0.9912	0.8313	1986-90/1991-95	0.0189	0.0057	0.0022	0.0005	0.0273
	1996-2000	0.9072	0.9653	0.9879	0.9915	0.8578	1991-95/1996-2000	0.0156	0.0138	0.0017	0.0003	0.0314
	2001-05	0.9186	0.9510	0.9908	0.9926	0.8591	1996-2000/2001-05	0.0124	-0.0149	0.0029	0.0011	0.0015
							1971-75/2001-05	0.0521	0.0686	0.0170	0.0082	0.1458
Punjab	1971-75	0.8937	0.9378	0.9899	0.9941	0.8247						
	1976-80	0.8978	0.9473	0.9886	0.9941	0.8358	1971-75/1976-80	0.0046	0.0102	-0.0013	-0.0001	0.0134
	1981-85	0.9252	0.9681	0.9898	0.9928	0.8801	1976-80/1981-85	0.0300	0.0217	0.0012	-0.0013	0.0516
	1986-90	0.9349	0.9707	0.9939	0.9951	0.8975	1981-85/1986-90	0.0104	0.0027	0.0041	0.0023	0.0195
	1991-95	0.9419	0.9814	0.9950	0.9942	0.9144	1986-90/1991-95	0.0075	0.0110	0.0011	-0.0009	0.0187
	1996-2000	0.9436	0.9907	0.9957	0.9962	0.9271	1991-95/1996-2000	0.0018	0.0094	0.0007	0.0020	0.0138
	2001-05	0.9477	0.9832	0.9968	0.9973	0.9263	1996-2000/2001-05	0.0043	-0.0076	0.0011	0.0012	-0.0009
							1971-75/2001-05	0.0543	0.0549	0.0058	0.0020	0.1170

State	Level of child survival probability						Change in child survival probability					
	Period	${}_1P_0$	${}_4P_1$	${}_4P_5$	${}_4P_{10}$	${}_{14}P_0$	Period	$\nabla {}_1P_0$	$\nabla {}_4P_1$	$\nabla {}_4P_5$	$\nabla {}_4P_{10}$	$\nabla {}_{14}P_0$
Rajasthan	1971-75	0.8618	0.8814	0.9740	0.9901	0.7326						
	1976-80	0.8737	0.9093	0.9764	0.9887	0.7671	1971-75/1976-80	0.0137	0.0311	0.0025	-0.0014	0.0460
	1981-85	0.8905	0.9152	0.9791	0.9900	0.7900	1976-80/1981-85	0.0190	0.0064	0.0028	0.0013	0.0295
	1986-90	0.8940	0.9251	0.9833	0.9911	0.8060	1981-85/1986-90	0.0039	0.0108	0.0042	0.0010	0.0199
	1991-95	0.9047	0.9618	0.9894	0.9933	0.8552	1986-90/1991-95	0.0119	0.0389	0.0062	0.0023	0.0593
	1996-2000	0.9153	0.9589	0.9892	0.9946	0.8635	1991-95/1996-2000	0.0117	-0.0030	-0.0002	0.0013	0.0097
	2001-05	0.9157	0.9484	0.9929	0.9954	0.8583	1996-2000/2001-05	0.0004	-0.0110	0.0038	0.0008	-0.0061
						1971-75/2001-05	0.0602	0.0843	0.0155	0.0045	0.1645	
Tamil Nadu	1971-75	0.8861	0.9082	0.9782	0.9888	0.7785						
	1976-80	0.8985	0.9232	0.9823	0.9909	0.8074	1971-75/1976-80	0.0138	0.0164	0.0042	0.0021	0.0365
	1981-85	0.9162	0.9481	0.9867	0.9916	0.8499	1976-80/1981-85	0.0195	0.0266	0.0045	0.0007	0.0512
	1986-90	0.9343	0.9687	0.9908	0.9941	0.8914	1981-85/1986-90	0.0196	0.0215	0.0041	0.0025	0.0477
	1991-95	0.9492	0.9835	0.9929	0.9944	0.9216	1986-90/1991-95	0.0158	0.0151	0.0021	0.0003	0.0334
	1996-2000	0.9520	0.9899	0.9960	0.9962	0.9351	1991-95/1996-2000	0.0030	0.0066	0.0031	0.0018	0.0145
	2001-05	0.9575	0.9791	0.9966	0.9956	0.9302	1996-2000/2001-05	0.0057	-0.0110	0.0006	-0.0006	-0.0052
						1971-75/2001-05	0.0718	0.0862	0.0180	0.0074	0.1833	
Uttar Pradesh	1971-75	0.8235	0.8397	0.9667	0.9882	0.6606						
	1976-80	0.8313	0.8675	0.9728	0.9888	0.6937	1971-75/1976-80	0.0095	0.0326	0.0063	0.0007	0.0490
	1981-85	0.8507	0.9138	0.9762	0.9890	0.7505	1976-80/1981-85	0.0231	0.0520	0.0034	0.0001	0.0786
	1986-90	0.8808	0.9248	0.9800	0.9905	0.7906	1981-85/1986-90	0.0347	0.0120	0.0039	0.0015	0.0521
	1991-95	0.9032	0.9461	0.9848	0.9921	0.8349	1986-90/1991-95	0.0251	0.0227	0.0049	0.0017	0.0545
	1996-2000	0.9126	0.9530	0.9873	0.9924	0.8521	1991-95/1996-2000	0.0103	0.0072	0.0026	0.0003	0.0204
	2001-05	0.9137	0.9608	0.9898	0.9934	0.8632	1996-2000/2001-05	0.0013	0.0082	0.0025	0.0010	0.0130
						1971-75/2001-05	0.1027	0.1265	0.0211	0.0043	0.2546	

State	Level of child survival probability					Change in child survival probability						
	Period	${}_1P_0$	${}_4P_1$	${}_4P_5$	${}_4P_{10}$	${}_{14}P_0$	Period	$\nabla {}_1P_0$	$\nabla {}_4P_1$	$\nabla {}_4P_5$	$\nabla {}_4P_{10}$	$\nabla {}_{14}P_0$
West Bengal	1971-75											
	1976-80						1971-75/1976-80					
	1981-85	0.9172	0.9466	0.9845	0.9916	0.8476	1976-80/1981-85					
	1986-90	0.9285	0.9649	0.9883	0.9932	0.8794	1981-85/1986-90	0.0123	0.0191	0.0039	0.0016	0.0368
	1991-95	0.9325	0.9742	0.9904	0.9934	0.8938	1986-90/1991-95	0.0043	0.0096	0.0021	0.0003	0.0162
	1996-2000	0.9446	0.9720	0.9932	0.9949	0.9072	1991-95/1996-2000	0.0129	-0.0023	0.0027	0.0015	0.0149
	2001-05	0.9527	0.9493	0.9943	0.9962	0.8959	1996-2000/2001-05	0.0085	-0.0236	0.0012	0.0013	-0.0126
							1981-85/2001-05	0.0295	0.0265	0.0087	0.0033	0.0680

Table 5
Child Survival Probability in Indian states and deviation from the national average, 1971-2005

Country/State	Period	Child survival probability					Deviation from the national average				
		iP_0	$4P_1$	$4P_5$	$4P_{10}$	$_{14}P_0$	N_{1P_0}	N_{4P_1}	N_{4P_5}	$N_{4P_{10}}$	N_{14P_0}
India	1971-75	0.8681	0.9090	0.9768	0.9888	0.7623					
	2001-05	0.9347	0.9606	0.9922	0.9947	0.8861					
Andhra Pradesh	1971-75	0.8885	0.9044	0.9746	0.9877	0.7735	0.0232	-0.0051	-0.0022	-0.0011	0.0147
	2001-05	0.9371	0.9756	0.9957	0.9959	0.9066	0.0026	0.0155	0.0034	0.0012	0.0228
Assam	1971-75	0.8643	0.9100	0.9695	0.9825	0.7491	-0.0045	0.0010	-0.0075	-0.0065	-0.0175
	2001-05	0.9205	0.9585	0.9885	0.9929	0.8659	-0.0153	-0.0022	-0.0038	-0.0018	-0.0231
Gujarat	1971-75	0.8585	0.8917	0.9817	0.9912	0.7449	-0.0111	-0.0193	0.0050	0.0024	-0.0230
	2001-05	0.9386	0.9682	0.9937	0.9952	0.8986	0.0042	0.0079	0.0015	0.0005	0.0140
Haryana	1971-75	0.9060	0.9294	0.9847	0.9919	0.8225	0.0427	0.0222	0.0080	0.0031	0.0760
	2001-05	0.9308	0.9697	0.9948	0.9969	0.8951	-0.0042	0.0094	0.0026	0.0022	0.0100
Himachal Pradesh	1971-75	0.8894	0.9292	0.9778	0.9869	0.7975	0.0242	0.0219	0.0011	-0.0019	0.0452
	2001-05	0.9502	0.9648	0.9965	0.9982	0.9119	0.0165	0.0044	0.0043	0.0035	0.0287
Karnataka	1971-75	0.9110	0.9293	0.9810	0.9898	0.8220	0.0481	0.0220	0.0043	0.0010	0.0754
	2001-05	0.9414	0.9749	0.9958	0.9970	0.9111	0.0072	0.0148	0.0036	0.0023	0.0278
Kerala	1971-75	0.9441	0.9556	0.9893	0.9952	0.8882	0.0839	0.0499	0.0127	0.0064	0.1529
	2001-05	0.9883	0.9940	0.9978	0.9982	0.9785	0.0558	0.0342	0.0056	0.0036	0.0991
Madhya Pradesh	1971-75	0.8549	0.8785	0.9750	0.9866	0.7224	-0.0154	-0.0342	-0.0019	-0.0023	-0.0537
	2001-05	0.9071	0.9391	0.9884	0.9925	0.8357	-0.0299	-0.0226	-0.0039	-0.0022	-0.0586
Maharashtra	1971-75	0.9003	0.9206	0.9820	0.9915	0.8070	0.0364	0.0126	0.0053	0.0027	0.0571
	2001-05	0.9582	0.9802	0.9956	0.9955	0.9309	0.0249	0.0202	0.0034	0.0008	0.0493

Country/State	Period	Child survival probability					Deviation from the national average				
		${}_1P_0$	${}_4P_1$	${}_4P_5$	${}_4P_{10}$	${}_{14}P_0$	N_1P_0	N_4P_1	N_4P_5	N_4P_{10}	$N_{14}P_0$
Orissa	1971-75	0.8612	0.9013	0.9713	0.9835	0.7414	-0.0081	-0.0086	-0.0056	-0.0055	-0.0278
	2001-05	0.9186	0.9510	0.9908	0.9926	0.8591	-0.0174	-0.0100	-0.0015	-0.0021	-0.0310
Punjab	1971-75	0.8937	0.9378	0.9899	0.9941	0.8247	0.0290	0.0311	0.0133	0.0053	0.0788
	2001-05	0.9477	0.9832	0.9968	0.9973	0.9263	0.0138	0.0233	0.0046	0.0026	0.0443
Rajasthan	1971-75	0.8618	0.8814	0.9740	0.9901	0.7326	-0.0073	-0.0309	-0.0028	0.0013	-0.0397
	2001-05	0.9157	0.9484	0.9929	0.9954	0.8583	-0.0205	-0.0127	0.0007	0.0007	-0.0319
Tamil Nadu	1971-75	0.8861	0.9082	0.9782	0.9888	0.7785	0.0205	-0.0009	0.0015	-0.0000	0.0210
	2001-05	0.9575	0.9791	0.9966	0.9956	0.9302	0.0242	0.0191	0.0044	0.0009	0.0486
Uttar Pradesh	1971-75	0.8235	0.8397	0.9667	0.9882	0.6606	-0.0528	-0.0794	-0.0103	-0.0007	-0.1432
	2001-05	0.9137	0.9608	0.9898	0.9934	0.8632	-0.0226	0.0002	-0.0025	-0.0013	-0.0261

Table 6
Single year child survival probabilities in Indian states: 1971-2005

Period	${}_1P_0$	${}_1P_1$	${}_1P_2$	${}_1P_3$	${}_1P_4$	${}_1P_5$	${}_1P_6$	${}_1P_7$	${}_1P_8$	${}_1P_9$	${}_1P_{10}$	${}_1P_{11}$	${}_1P_{12}$	${}_1P_{13}$	${}_1P_{14}$
Andhra Pradesh															
1971-75	0.8885	0.9540	0.9744	0.9838	0.9889	0.9920	0.9940	0.9953	0.9962	0.9969	0.9973	0.9975	0.9977	0.9977	0.9975
1976-80	0.8877	0.9671	0.9826	0.9890	0.9924	0.9943	0.9956	0.9965	0.9971	0.9975	0.9978	0.9980	0.9982	0.9983	0.9984
1981-85	0.9195	0.9807	0.9897	0.9933	0.9952	0.9963	0.9971	0.9976	0.9979	0.9982	0.9984	0.9984	0.9985	0.9984	0.9983
1986-90	0.9218	0.9842	0.9917	0.9947	0.9962	0.9971	0.9977	0.9981	0.9984	0.9986	0.9987	0.9987	0.9987	0.9986	0.9985
1991-95	0.9348	0.9911	0.9950	0.9966	0.9974	0.9979	0.9983	0.9985	0.9987	0.9988	0.9989	0.9989	0.9988	0.9988	0.9986
1996-2000	0.9369	0.9934	0.9964	0.9976	0.9982	0.9985	0.9987	0.9989	0.9990	0.9990	0.9990	0.9990	0.9989	0.9988	0.9987
2001-05	0.9371	0.9865	0.9941	0.9968	0.9980	0.9987	0.9990	0.9992	0.9993	0.9994	0.9994	0.9993	0.9992	0.9991	0.9989
Assam															
1971-75	0.8643	0.9579	0.9763	0.9843	0.9886	0.9912	0.9930	0.9942	0.9951	0.9957	0.9961	0.9964	0.9966	0.9966	0.9966
1976-80	0.8881	0.9728	0.9856	0.9907	0.9933	0.9949	0.9959	0.9966	0.9971	0.9974	0.9977	0.9978	0.9979	0.9979	0.9979
1981-85	0.8983	0.9687	0.9826	0.9885	0.9917	0.9936	0.9949	0.9958	0.9965	0.9969	0.9973	0.9975	0.9977	0.9979	0.9979
1986-90	0.9003	0.9726	0.9849	0.9900	0.9928	0.9944	0.9956	0.9963	0.9969	0.9973	0.9976	0.9978	0.9980	0.9981	0.9981
1991-95	0.9079	0.9760	0.9868	0.9912	0.9936	0.9951	0.9961	0.9967	0.9972	0.9976	0.9979	0.9981	0.9982	0.9983	0.9983
1996-2000	0.9219	0.9856	0.9914	0.9939	0.9952	0.9960	0.9966	0.9970	0.9973	0.9976	0.9977	0.9979	0.9980	0.9980	0.9980
2001-05	0.9205	0.9796	0.9895	0.9934	0.9954	0.9966	0.9973	0.9978	0.9982	0.9984	0.9986	0.9987	0.9986	0.9986	0.9984
Bihar															
1971-75															
1976-80															
1981-85	0.8952	0.9615	0.9786	0.9862	0.9903	0.9928	0.9944	0.9955	0.9963	0.9969	0.9973	0.9976	0.9977	0.9978	0.9977
1986-90	0.9105	0.9673	0.9817	0.9881	0.9916	0.9937	0.9951	0.9961	0.9968	0.9972	0.9976	0.9978	0.9979	0.9979	0.9979
1991-95	0.9281	0.9790	0.9880	0.9919	0.9940	0.9953	0.9961	0.9968	0.9972	0.9976	0.9978	0.9980	0.9981	0.9982	0.9982
1996-2000	0.9307	0.9826	0.9901	0.9932	0.9949	0.9960	0.9967	0.9972	0.9976	0.9979	0.9981	0.9982	0.9983	0.9983	0.9983
2001-05	0.9388	0.9647	0.9795	0.9881	0.9930	0.9958	0.9974	0.9983	0.9987	0.9989	0.9990	0.9989	0.9988	0.9987	0.9986

Period	iP_0	iP_1	iP_2	iP_3	iP_4	iP_5	iP_6	iP_7	iP_8	iP_9	iP_{10}	iP_{11}	iP_{12}	iP_{13}	iP_{14}
Gujarat															
1971-75	0.8585	0.9429	0.9711	0.9836	0.9900	0.9935	0.9956	0.9968	0.9976	0.9980	0.9983	0.9983	0.9983	0.9982	0.9981
1976-80	0.8714	0.9569	0.9781	0.9870	0.9915	0.9942	0.9958	0.9968	0.9975	0.9979	0.9981	0.9982	0.9982	0.9982	0.9981
1981-85	0.8928	0.9849	0.9914	0.9940	0.9954	0.9963	0.9969	0.9973	0.9976	0.9979	0.9980	0.9981	0.9982	0.9982	0.9982
1986-90	0.9051	0.9783	0.9887	0.9928	0.9949	0.9962	0.9970	0.9976	0.9980	0.9983	0.9985	0.9986	0.9987	0.9987	0.9987
1991-95	0.9289	0.9854	0.9925	0.9953	0.9967	0.9975	0.9981	0.9984	0.9987	0.9988	0.9989	0.9990	0.9990	0.9989	0.9988
1996-2000	0.9367	0.9875	0.9937	0.9961	0.9973	0.9980	0.9984	0.9987	0.9989	0.9991	0.9992	0.9992	0.9992	0.9992	0.9991
2001-05	0.9386	0.9830	0.9921	0.9955	0.9972	0.9981	0.9986	0.9989	0.9990	0.9991	0.9991	0.9991	0.9991	0.9990	0.9989
Haryana															
1971-75	0.9060	0.9645	0.9815	0.9889	0.9928	0.9950	0.9964	0.9973	0.9978	0.9981	0.9983	0.9984	0.9984	0.9984	0.9983
1976-80	0.9312	0.9641	0.9792	0.9870	0.9914	0.9940	0.9956	0.9966	0.9973	0.9977	0.9979	0.9981	0.9981	0.9982	0.9981
1981-85	0.9059	0.9806	0.9901	0.9938	0.9957	0.9968	0.9975	0.9980	0.9983	0.9985	0.9987	0.9987	0.9987	0.9987	0.9986
1986-90	0.9210	0.9821	0.9914	0.9949	0.9966	0.9976	0.9982	0.9986	0.9988	0.9990	0.9990	0.9990	0.9990	0.9989	0.9987
1991-95	0.9298	0.9835	0.9921	0.9954	0.9969	0.9978	0.9983	0.9986	0.9988	0.9988	0.9988	0.9988	0.9987	0.9987	0.9986
1996-2000	0.9307	0.9843	0.9927	0.9958	0.9972	0.9980	0.9985	0.9988	0.9990	0.9991	0.9992	0.9992	0.9992	0.9992	0.9991
Himachal Pradesh															
2001-05	0.9308	0.9831	0.9927	0.9960	0.9976	0.9984	0.9988	0.9991	0.9992	0.9993	0.9994	0.9994	0.9994	0.9994	0.9993
1971-75	0.8894	0.9664	0.9816	0.9880	0.9914	0.9935	0.9949	0.9958	0.9965	0.9970	0.9973	0.9974	0.9975	0.9974	0.9973
1976-80	0.8994	0.9743	0.9872	0.9923	0.9948	0.9962	0.9971	0.9977	0.9980	0.9982	0.9983	0.9983	0.9983	0.9982	0.9982
1981-85	0.9216	0.9827	0.9911	0.9943	0.9960	0.9970	0.9977	0.9981	0.9985	0.9987	0.9989	0.9990	0.9990	0.9991	0.9991
1986-90	0.9191	0.9887	0.9947	0.9968	0.9978	0.9984	0.9987	0.9989	0.9990	0.9990	0.9990	0.9989	0.9988	0.9987	0.9986
1991-95	0.9322	0.9943	0.9966	0.9976	0.9981	0.9984	0.9986	0.9988	0.9989	0.9989	0.9990	0.9990	0.9991	0.9990	0.9990
1996-2000	0.9394	0.9897	0.9955	0.9974	0.9983	0.9988	0.9991	0.9993	0.9994	0.9995	0.9996	0.9996	0.9996	0.9996	0.9995
2001-05	0.9502	0.9803	0.9910	0.9955	0.9976	0.9986	0.9992	0.9994	0.9996	0.9997	0.9997	0.9997	0.9997	0.9996	0.9995

Period	iP_0	iP_1	iP_2	iP_3	iP_4	iP_5	iP_6	iP_7	iP_8	iP_9	iP_{10}	iP_{11}	iP_{12}	iP_{13}	iP_{14}
Karnataka															
1971-75	0.9110	0.9659	0.9814	0.9883	0.9920	0.9941	0.9955	0.9965	0.9971	0.9975	0.9978	0.9980	0.9980	0.9980	0.9979
1976-80	0.9188	0.9687	0.9824	0.9885	0.9919	0.9939	0.9953	0.9962	0.9969	0.9974	0.9977	0.9980	0.9981	0.9982	0.9982
1981-85	0.9304	0.9771	0.9883	0.9929	0.9953	0.9966	0.9975	0.9980	0.9984	0.9986	0.9987	0.9988	0.9987	0.9986	0.9985
1986-90	0.9169	0.9827	0.9915	0.9948	0.9964	0.9974	0.9980	0.9984	0.9986	0.9988	0.9989	0.9989	0.9989	0.9988	0.9987
1991-95	0.9255	0.9898	0.9947	0.9966	0.9975	0.9981	0.9984	0.9987	0.9988	0.9990	0.9990	0.9990	0.9990	0.9989	0.9989
1996-2000	0.9416	0.9925	0.9961	0.9975	0.9981	0.9985	0.9988	0.9990	0.9991	0.9991	0.9992	0.9992	0.9991	0.9991	0.9990
2001-05	0.9414	0.9860	0.9939	0.9967	0.9980	0.9987	0.9990	0.9993	0.9994	0.9995	0.9995	0.9995	0.9995	0.9994	0.9993
Kerala															
1971-75	0.9441	0.9784	0.9884	0.9928	0.9952	0.9966	0.9975	0.9980	0.9984	0.9987	0.9989	0.9990	0.9991	0.9991	0.9991
1976-80	0.9545	0.9880	0.9935	0.9958	0.9970	0.9977	0.9982	0.9985	0.9987	0.9989	0.9990	0.9991	0.9992	0.9992	0.9992
1981-85	0.9679	0.9913	0.9955	0.9972	0.9980	0.9985	0.9988	0.9990	0.9992	0.9993	0.9993	0.9994	0.9994	0.9994	0.9993
1986-90	0.9757	0.9953	0.9975	0.9984	0.9988	0.9990	0.9992	0.9993	0.9994	0.9994	0.9995	0.9995	0.9995	0.9995	0.9995
1991-95	0.9845	0.9982	0.9989	0.9992	0.9993	0.9994	0.9995	0.9995	0.9996	0.9996	0.9996	0.9996	0.9996	0.9996	0.9995
1996-2000	0.9881	0.9991	0.9993	0.9994	0.9994	0.9995	0.9995	0.9995	0.9995	0.9995	0.9995	0.9995	0.9995	0.9995	0.9995
2001-05	0.9883	0.9972	0.9985	0.9990	0.9993	0.9994	0.9995	0.9996	0.9996	0.9997	0.9997	0.9997	0.9997	0.9996	0.9996
Madhya Pradesh															
1971-75	0.8549	0.9382	0.9671	0.9804	0.9875	0.9916	0.9940	0.9956	0.9965	0.9971	0.9973	0.9974	0.9974	0.9973	0.9971
1976-80	0.8566	0.9502	0.9733	0.9833	0.9887	0.9918	0.9939	0.9953	0.9962	0.9969	0.9974	0.9976	0.9978	0.9978	0.9977
1981-85	0.8716	0.9542	0.9758	0.9852	0.9901	0.9931	0.9949	0.9961	0.9969	0.9975	0.9978	0.9980	0.9981	0.9981	0.9980
1986-90	0.8729	0.9602	0.9795	0.9875	0.9916	0.9940	0.9956	0.9966	0.9973	0.9978	0.9980	0.9982	0.9982	0.9982	0.9981
1991-95	0.8809	0.9735	0.9858	0.9908	0.9934	0.9950	0.9960	0.9967	0.9972	0.9976	0.9978	0.9979	0.9980	0.9979	0.9978
1996-2000	0.8941	0.9821	0.9901	0.9933	0.9950	0.9961	0.9968	0.9972	0.9976	0.9979	0.9981	0.9982	0.9983	0.9983	0.9982
2001-05	0.9071	0.9682	0.9843	0.9910	0.9944	0.9962	0.9973	0.9980	0.9983	0.9985	0.9986	0.9986	0.9985	0.9984	0.9983

Period	iP_0	iP_1	iP_2	iP_3	iP_4	iP_5	iP_6	iP_7	iP_8	iP_9	iP_{10}	iP_{11}	iP_{12}	iP_{13}	iP_{14}
Maharashtra															
1971-75	0.9003	0.9607	0.9790	0.9872	0.9915	0.9941	0.9957	0.9967	0.9974	0.9979	0.9982	0.9983	0.9984	0.9984	0.9983
1976-80	0.9134	0.9699	0.9838	0.9898	0.9930	0.9949	0.9961	0.9969	0.9975	0.9979	0.9982	0.9983	0.9984	0.9984	0.9984
1981-85	0.9256	0.9812	0.9902	0.9939	0.9957	0.9968	0.9976	0.9980	0.9984	0.9986	0.9987	0.9988	0.9988	0.9988	0.9987
1986-90	0.9397	0.9861	0.9929	0.9955	0.9969	0.9977	0.9982	0.9985	0.9987	0.9989	0.9990	0.9990	0.9990	0.9990	0.9989
1991-95	0.9417	0.9920	0.9956	0.9970	0.9978	0.9982	0.9985	0.9987	0.9989	0.9990	0.9990	0.9990	0.9990	0.9990	0.9989
1996-2000	0.9511	0.9945	0.9970	0.9980	0.9985	0.9988	0.9990	0.9991	0.9992	0.9993	0.9993	0.9993	0.9993	0.9992	0.9991
2001-05	0.9582	0.9891	0.9952	0.9974	0.9983	0.9988	0.9991	0.9992	0.9992	0.9992	0.9992	0.9992	0.9992	0.9991	0.9990
Orissa															
1971-75	0.8612	0.9523	0.9739	0.9832	0.9883	0.9914	0.9933	0.9946	0.9955	0.9961	0.9965	0.9967	0.9968	0.9968	0.9967
1976-80	0.8606	0.9657	0.9813	0.9877	0.9911	0.9932	0.9945	0.9955	0.9962	0.9967	0.9970	0.9973	0.9974	0.9974	0.9973
1981-85	0.8689	0.9740	0.9863	0.9912	0.9937	0.9952	0.9962	0.9969	0.9974	0.9977	0.9979	0.9980	0.9981	0.9981	0.9980
1986-90	0.8765	0.9742	0.9864	0.9913	0.9938	0.9953	0.9963	0.9970	0.9975	0.9978	0.9980	0.9982	0.9982	0.9982	0.9981
1991-95	0.8932	0.9764	0.9879	0.9924	0.9946	0.9960	0.9969	0.9974	0.9978	0.9981	0.9982	0.9983	0.9983	0.9982	0.9982
1996-2000	0.9072	0.9837	0.9912	0.9942	0.9957	0.9967	0.9973	0.9977	0.9980	0.9982	0.9983	0.9984	0.9984	0.9983	0.9981
2001-05	0.9186	0.9740	0.9876	0.9930	0.9956	0.9971	0.9979	0.9984	0.9986	0.9987	0.9987	0.9987	0.9987	0.9986	0.9984
Punjab															
1971-75	0.8937	0.9663	0.9842	0.9913	0.9947	0.9966	0.9976	0.9983	0.9986	0.9988	0.9989	0.9989	0.9989	0.9988	0.9987
1976-80	0.8978	0.9728	0.9867	0.9921	0.9948	0.9964	0.9973	0.9979	0.9983	0.9986	0.9987	0.9988	0.9989	0.9988	0.9988
1981-85	0.9252	0.9847	0.9920	0.9948	0.9963	0.9971	0.9977	0.9981	0.9983	0.9985	0.9986	0.9986	0.9986	0.9986	0.9985
1986-90	0.9349	0.9843	0.9928	0.9959	0.9974	0.9981	0.9986	0.9989	0.9991	0.9991	0.9992	0.9991	0.9991	0.9989	0.9988
1991-95	0.9419	0.9903	0.9955	0.9973	0.9982	0.9987	0.9989	0.9991	0.9991	0.9991	0.9991	0.9990	0.9988	0.9987	0.9986
1996-2000	0.9436	0.9958	0.9977	0.9984	0.9987	0.9989	0.9991	0.9992	0.9992	0.9993	0.9993	0.9993	0.9993	0.9992	0.9991
2001-05	0.9477	0.9906	0.9960	0.9978	0.9986	0.9990	0.9993	0.9994	0.9995	0.9995	0.9996	0.9995	0.9995	0.9994	0.9993

Period	iP_0	iP_1	iP_2	iP_3	iP_4	iP_5	iP_6	iP_7	iP_8	iP_9	iP_{10}	iP_{11}	iP_{12}	iP_{13}	iP_{14}
Rajasthan															
1971-75	0.8618	0.9409	0.9679	0.9804	0.9872	0.9912	0.9937	0.9953	0.9964	0.9972	0.9977	0.9980	0.9981	0.9982	0.9981
1976-80	0.8737	0.9556	0.9761	0.9850	0.9897	0.9926	0.9944	0.9956	0.9965	0.9971	0.9975	0.9977	0.9979	0.9978	0.9978
1981-85	0.8905	0.9584	0.9776	0.9861	0.9906	0.9933	0.9950	0.9962	0.9970	0.9975	0.9978	0.9980	0.9981	0.9981	0.9980
1986-90	0.8940	0.9623	0.9804	0.9882	0.9923	0.9946	0.9961	0.9970	0.9976	0.9979	0.9981	0.9982	0.9983	0.9982	0.9982
1991-95	0.9047	0.9811	0.9904	0.9940	0.9958	0.9969	0.9976	0.9980	0.9983	0.9985	0.9987	0.9987	0.9987	0.9987	0.9985
1996-2000	0.9153	0.9797	0.9896	0.9935	0.9955	0.9967	0.9975	0.9980	0.9983	0.9986	0.9988	0.9989	0.9990	0.9990	0.9989
2001-05	0.9157	0.9713	0.9870	0.9932	0.9961	0.9976	0.9984	0.9988	0.9990	0.9991	0.9992	0.9991	0.9991	0.9990	0.9989
Tamil Nadu															
1971-75	0.8861	0.9547	0.9756	0.9850	0.9900	0.9930	0.9948	0.9960	0.9969	0.9974	0.9977	0.9978	0.9979	0.9978	0.9976
1976-80	0.8985	0.9617	0.9798	0.9877	0.9919	0.9943	0.9958	0.9968	0.9974	0.9979	0.9981	0.9983	0.9983	0.9982	0.9980
1981-85	0.9162	0.9743	0.9867	0.9918	0.9944	0.9960	0.9969	0.9976	0.9980	0.9982	0.9984	0.9984	0.9984	0.9983	0.9981
1986-90	0.9343	0.9848	0.9921	0.9950	0.9965	0.9973	0.9979	0.9983	0.9985	0.9987	0.9988	0.9989	0.9989	0.9988	0.9986
1991-95	0.9492	0.9927	0.9958	0.9971	0.9977	0.9981	0.9984	0.9986	0.9988	0.9989	0.9989	0.9990	0.9989	0.9989	0.9987
1996-2000	0.9520	0.9953	0.9975	0.9983	0.9987	0.9990	0.9991	0.9992	0.9993	0.9993	0.9994	0.9993	0.9993	0.9992	0.9990
2001-05	0.9575	0.9881	0.9949	0.9974	0.9985	0.9990	0.9993	0.9994	0.9994	0.9994	0.9993	0.9992	0.9991	0.9990	0.9989
Uttar Pradesh															
1971-75	0.8235	0.9191	0.9555	0.9730	0.9826	0.9883	0.9918	0.9941	0.9956	0.9966	0.9972	0.9976	0.9978	0.9978	0.9977
1976-80	0.8313	0.9322	0.9642	0.9786	0.9862	0.9906	0.9934	0.9951	0.9963	0.9971	0.9975	0.9978	0.9979	0.9978	0.9977
1981-85	0.8507	0.9577	0.9776	0.9858	0.9901	0.9927	0.9944	0.9955	0.9964	0.9969	0.9974	0.9977	0.9979	0.9980	0.9980
1986-90	0.8808	0.9631	0.9805	0.9877	0.9916	0.9938	0.9953	0.9963	0.9970	0.9975	0.9978	0.9980	0.9982	0.9982	0.9982
1991-95	0.9032	0.9738	0.9862	0.9912	0.9939	0.9954	0.9965	0.9972	0.9976	0.9980	0.9982	0.9984	0.9985	0.9985	0.9984
1996-2000	0.9126	0.9769	0.9880	0.9925	0.9948	0.9962	0.9971	0.9977	0.9980	0.9983	0.9985	0.9985	0.9985	0.9985	0.9984
2001-05	0.9137	0.9804	0.9902	0.9939	0.9958	0.9970	0.9977	0.9981	0.9984	0.9986	0.9987	0.9987	0.9987	0.9986	0.9985

Period	iP_0	iP_1	iP_2	iP_3	iP_4	iP_5	iP_6	iP_7	iP_8	iP_9	iP_{10}	iP_{11}	iP_{12}	iP_{13}	iP_{14}
West Bengal															
1971-75															
1976-80															
1981-85	0.9172	0.9744	0.9862	0.9912	0.9938	0.9954	0.9964	0.9971	0.9976	0.9979	0.9982	0.9983	0.9984	0.9984	0.9983
1986-90	0.9285	0.9836	0.9911	0.9941	0.9957	0.9967	0.9973	0.9978	0.9981	0.9984	0.9985	0.9986	0.9987	0.9987	0.9986
1991-95	0.9325	0.9882	0.9935	0.9956	0.9967	0.9974	0.9978	0.9982	0.9984	0.9986	0.9987	0.9987	0.9987	0.9987	0.9986
1996-2000	0.9446	0.9858	0.9930	0.9958	0.9971	0.9979	0.9984	0.9988	0.9989	0.9991	0.9991	0.9991	0.9990	0.9989	0.9988
2001-05	0.9527	0.9743	0.9860	0.9924	0.9958	0.9977	0.9987	0.9992	0.9994	0.9995	0.9994	0.9994	0.9992	0.9991	0.9990