

Enabling Inclusive Development

Public Finance Quarterly

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Editorial



Dear Readers,

I welcome you to the fifth issue of 'Public Finance Quarterly'. This quarter has been particularly significant from the public finance perspective. The Union Budget of India (2011-12) as well as the Economic Survey (2010-11) were released in February. With talk of efficiency and value for money in public resources, public finance management has been gaining increased attention.

Our main feature in this issue discusses the technique of generational accounting to assess distributional implications of the fiscal policy for different cohorts. It documents the results obtained from the empirical studies attempted so far, and examines India's situation in that framework.

The government of India's e-governance initiative has been facing delays on account of technological and systematic issues. Realising this, the government has set up the Technical Advisory Group for Unique Projects (TAG-UP) to examine issues of high-impact government IT projects and provide recommendations. Our Pick of the Quarter section presents a synopsis of the TAG-UP report, in this issue.

Our Round the Corner section provides updates on developments in government finances and policies across the globe. In Know our Work, we have featured our experience of developing an audit tracking system for government to address delays in audit compliance.

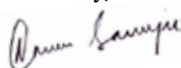
I would like to thank you for your overwhelming support and response. Your help and suggestions urge us to continuously improve this newsletter to ensure effective information-sharing.

We would like to invite you to contribute and share your experiences in the public finance space with us. Please write to me at ranen.banerjee@in.pwc.com or to our editorial team.

Happy reading!

Looking forward to your support.

Sincerely,



Ranen Banerjee
Executive Director-Public Finance

Round the Corner

Quarterly Stock of News Bytes and Releases

News Bytes

**Economic Survey of India, 2010-11:
Rebounding Growth**

*Ministry of Finance, India on
25 February 2011*

The economy rebounded from the slowdown caused by the global crisis, with GDP growth of eight per cent during 2009-10, 8.6% (advance estimate) in 2010-11 and an expected nine per cent next year. This growth is also broad-based across sectors: agriculture growth has rebounded, manufacturing continues its momentum and private services is picking up. As per the survey, macroeconomic fundamentals of India's economic growth have become stronger: savings and investment are up, exports are rising rapidly and inflation is falling (though still high), after a prolonged hiatus. The survey projects that the fiscal deficit for the current FY will fall to 4.8%, against a budgeted 5.5%. In addition to robust GDP growth, a number of windfall gains such as disinvestment proceeds and 3G revenue spectrum auctions have helped bring down the deficit. However, these are one-off benefits and will not be available going forward. Inflation, especially of food, was very high in February 2010 (at 20.22%), declined steadily, with a small spurt in November and December and now stands at 9.3%. Though this is a vast improvement, it remains a matter of concern.

<http://indiabudget.nic.in/survey.asp>

**The Union Budget of India, 2010-11: A
Balancing Act**

*Ministry of Finance, India on
28 February 2011*

The Union Budget 2010-11 was tabled in the backdrop of an improving economic scenario, both within India and globally. Yet, fiscal consolidation and expenditure

discipline have been rightly treated as the foremost priorities. Inflation is expected to run its course, largely determined by factors such as commodities and oil prices which are beyond the control of the government. Hence, relief for the poor is expected to come from improvements in the delivery of poverty alleviation programmes and even direct cash transfers. Such measures rely on the success of programmes such as the Universal Identification Number (UID) and the wider penetration of banking services. The agricultural sector has received renewed emphasis in this Budget with more investment in the rural economy, direct transfers, and also enhanced private and public investment in the supply chain. This ensures remunerative prices for producers without impacting end consumers. The education sector also saw some thrust through the funding of ₹200 crore to IIT Kharagpur, Regular ₹20 crore to IIM Kolkata and ₹50 crore to Muslim universities in different states. Budget 2011 seems to be a no-frills show, focusing on substantive measures, by introducing some development-related reforms. The Budget has provided amendments aimed as a catalyst for infrastructure development as also towards foreign investors. They have enhanced foreign investment limits in the insurance sector and opened the door for the issue of additional private sector banking licences. Overall, this Budget has tried to tread the fine line between controlling surging inflation and avoiding taking any measure that can hurt economic growth.

<http://indiabudget.nic.in/ub2010-11/bill.htm>

Releases

Panchayats and Economic Development

*Working Paper of National Institute of
Public Finance and Policy, March 2011*

Authors: M Govinda Rao,
T R Raghunandan

There has been a world-wide trend towards decentralisation since the 1990s. Many countries have embarked on the devolution of administrative, political, and fiscal responsibilities to lower levels of government. Dissatisfaction with the prevailing centralised systems of service delivery, transition from centralised planning to market economy, deepening democratic principles, focus on ensuring greater accountability and increasing need to recognise social, economic, and political diversities in different regions within the countries are some of the important reasons cited for this phenomenon. This paper reviews the analytical literature on the relationship between decentralisation and development. It brings out the impact of decentralisation on economic development from experiences both within the country and worldwide. It also identifies the preconditions and reforms needed to strengthen and deepen the panchayat system to make panchayats catalysts of development in India.

http://www.nipfp.org.in/newweb/sites/default/files/wp_2011_86.pdf

Federalism and Fiscal Reform in India

*Working Paper of National Institute of
Public Finance and Policy, February 2011*

Authors: M Govinda Rao,
T R Raghunandan

This paper attempts to analyse the experience of incentivising economic reforms at the state level through central transfers to states. It reviews the experiences of the central government while introducing incentives for reform

directly through various specific purpose transfers as well as the incentive schemes recommended by various Finance Commissions. The incentive schemes directly introduced by the central government include the accelerated irrigation benefit programme, the accelerated power development and reform programme, the Jawaharlal Nehru Urban Renewal Mission and education and health sector reforms. The reforms recommended by the Finance Commissions include incentivising tax reforms, fiscal restructuring and consolidation. The review of the Indian fiscal federalism shows that incentivising reforms has neither been an unqualified success nor a total failure. The paper summarises the lessons of experience from designing the incentive schemes and implementing them. While incorporating these in designing and implementing incentive schemes can be useful in the short- and medium-term, what matters in the long run is the political incentive for reforms.

http://www.nipfp.org.in/newweb/sites/default/files/wp_2011_84.pdf

Indian Social Democracy: The Resource Perspective

Working Paper of National Institute of Public Finance and Policy, February 2011

Authors: Vijay Kelkar, Ajay Shah

This paper examines the strategy for obtaining adequate resources for the Indian state, where the goals of the state comprise the provision of public goods (which, by definition, benefit everyone) and income transfers to those below the poverty line. Living beyond our means is infeasible in the long run. A government has to fundamentally spend only tax revenues. The failure to live within our means yields the risk of crisis. It reduces

the headroom available for policy-makers to respond to catastrophic events. It reduces the average GDP growth rate. This paper emphasises that the primary tool through which the state can obtain resources is higher GDP growth. A tax/GDP ratio of 20%, with expenditure that is just slightly above 20%, is the reasonable scenario for the coming 30 years. Mobilising greater resources for the state is thus synonymous with undertaking reforms which yield higher GDP growth. In addition, fresh thinking about mechanisms of expenditure can yield greater bang for the buck thus freeing up resources while improving social justice and welfare outcomes.

http://www.nipfp.org.in/newweb/sites/default/files/wp_2011_82.pdf

Investing in Public Investment: An Index of Public Investment Efficiency

Working Paper of IMF, 01 February 2011

Authors: Era Dabla-Norris, Jim Brumby, Annette Kyobe, Zac Mills, and Chris Papageorgiou

It is widely acknowledged that a scaling-up of public investment in low-income countries, particularly in infrastructure, is central to their development prospects. Arguments for significantly boosting investment in physical and social infrastructure to achieve sustained growth rest on the high returns to investment in capital-scarce environments, and the pressing deficiencies in these areas. Historically, however, weaknesses in public investment management have resulted in inadequate returns to public and private investment in many low-income countries. This paper introduces a new index that captures the institutional environment underpinning public investment management across four different stages: project appraisal,

selection, implementation and evaluation. Covering 71 countries, including 40 low-income countries, the index allows for benchmarking across regions and country groups and for nuanced policy-relevant analysis and identification of specific areas where reform efforts could be prioritised. Potential research venues are outlined.

<http://www.imf.org/external/pubs/ft/wp/2011/wp1137.pdf>



Feature Article

Gaining an Insight into Public Finance Arena

Linking Fiscal Sustainability with Demographic Development

Abstract

The 'classic budget indicator' often cited to gauge the soundness of the fiscal health of a nation is that of the 'size of the budget (fiscal) deficit'. A relatively new method of accounting and analysing fiscal policy that emerged in the last decade of the 20th century is of Generational Accounting (GA) which identifies the financial costs and benefits of government policies to people of different ages, now living or yet to be born. In other words, generational accounts assess the distributional implications of fiscal policy for different cohorts. This is accomplished by estimating the present value of net tax payments (taxes paid less benefits received) over the lifetime of different generations under current tax and spending policies. This not only helps examine the aspect of inter-generational equity but also in ascertaining the sustainability of current fiscal policy.

The article is divided into three parts. Part I begins by explaining the concept of GA and contrasting the fiscal assessments flowing from GA with those based on official budget deficits. It then provides a brief description of the underlying technical methodology, followed by a snapshot of its inherent limitations. Part II summarises the results observed in countries for which generational accounts have been developed. Part III then examines India's situation in the light of the GA framework.

Part I: Introduction

Concept

Generational Accounting (GA) is a relatively new tool for fiscal analysis and planning developed to study a nation's long-term fiscal position. Unlike the short-term cash-flow budgeting¹ that characterises fiscal policy-making throughout the developed and developing world, GA considers the entire future time-paths of fiscal variables. *Generational accounts show the net discounted life-time tax contribution (i.e. taxes minus transfers/welfare benefits), positive or negative, that people, as a function of their age, are expected to make to the government exchequer.* It calculates how much current and future generations² will have to pay, in present value, to cover the government's current and future spending, also valued in the present.

Thus, GA effectively is the measurement of the government's finances by their impact on different generations. In doing so, GA allows policy-makers to determine whether future generations will have to shoulder a larger fiscal burden than current generations, or vice versa. GA also provides policy-makers with a means of identifying those fiscal policy changes whose implementation would promote generational equity. Hence, generational accounts add to the box of tools for policy analysis and seek to answer the following questions:

- How much will people of each cohort receive and how much will they pay?

- What is their lifetime contribution to running the government?
- How much of a burden are current generations leaving for future ones?
- Whether the government is solvent in the long-run?
- What is the cost of risk in choosing a particular policy stance?

Rationale

The underlying premise under GA's investigation is that the government's tax programmes and fiscal policy can be adjusted to provide more care and benefits for certain members of a country's population. However, focusing programmes on a specific group forces other generations to pay the costs, essentially imposing a taxation without representation, as in the 'pay-as-you-go' finance of age-related expenditures such as health and welfare benefits for elderly people through younger generations footing the bill. This concept can be extended to future generations, e.g. the government were to lavishly spend on programmes to benefit its current population in the short term. The debt obligations could be so large, that the current population would be unable to repay them in an average lifetime. In this case, the debt would be passed on to the next generation of citizens, who must then pay for benefits they never received.

¹ The cash flow budget is prediction of future cash receipts and expenditures for a particular time period. It usually covers a period in the short-term future and estimates can be made monthly, quarterly, annually, etc. The cash flow budget helps to determine whether income/receipts (cash inflows) will be sufficient to cover expenses/expenditure (cash outflows) and to what extent, outside financing will be needed to meet the deficit.

² A generation is defined as including all males and females (accounted for separately because of differing tax and benefits profiles) born in the same year.

As discussed above, the method of GA assesses the distributional implications of fiscal policy (government spending and tax programmes) for different cohorts. It analyses whether that benefit to current members of society will produce an unfair tax obligation for future generations, or vice versa. The aim is to *achieve inter-generational balance*, where current and future generations have equivalent lifetime net tax rates (taxes paid less transfers received), which allows for fiscal sustainability. It is accomplished through examining what permanent change in some tax or transfer instrument, such as an increase in income taxes or a reduction in old-age social security benefits, would be necessary to equalise the lifetime growth-adjusted per capita fiscal burden facing current newborns and future generations. Further, GA by highlighting and measuring the extent of inter-generational imbalance provides a meaningful way of evaluating fiscal policy.

In addition, the results have even been taken further by placing GA in a general equilibrium context to indicate the following:

- The relationship between changes in generational accounts and changes in generations' levels of utility and,
- How changes in the fiscal treatment of different generations affect an economy's saving, investment, and growth, when the economy is closed, and its balance of payments, when the economy is open.

Contrast

The current system of cash-flow budgeting usually involves annual spending, taxes and consequent deficit in a particular year. By that token, it essentially indicates

short-term thrust of fiscal policy. The budget deficit records the increase in government debt held by the public, i.e. legal obligations that people buy with cash and will present for payment later. The cash from issuing debt pays for current government spending in excess of revenue. As a measure of that excess, the deficit shows how much the government reduces current national saving, other things being equal. Moreover, the higher public debt recorded by the deficit crowds out private assets because both compete for the same supply of funds. The private assets that are displaced would have generated income later. This situation of more debt and fewer assets provides the scope for future generations to inherit the mortgage instead of the house.

The reported deficit may also suggest policy implications for the future and can transfer resources by age if used to consume more now and let later generations pay. But the fact is that the budget deficit need not show what implications policy has for any generation because tax and spending programmes affect people of different ages differently. The current deficit does not record implicit obligations. An example for *implicit obligation* can be that today's debt does not reflect how much it will cost to pay social security benefits under current law when the baby boomers retire. The deficit does not record such implicit obligations because they do not represent binding claims. For example, retirees have no legal claim to the Medicare benefits they expected when they retired. Technically, the benefits can be reduced at any time, even though people had planned on receiving higher benefits.³

This is in contrast to the technique of GA which emphasises the importance of both implicit and explicit government commitments. GA takes into account the fact that fiscal policy can distribute resources between different generations (sometimes deliberately and often inadvertently) whether the budget deficit rises or falls. At any moment in time, one generation is in work and paying taxes that support other generations (those in school or retired) that are not working. Over its lifetime hence, one generation's mix of taxes paid and benefits received (transfers) may differ sharply from that of another generation. Politicians are often tempted to ignore the needs of future generations in order to win the support of current generations, for instance by borrowing heavily to fund current spending. For example, an increase in social security benefits paid for by a payroll tax would not change the deficit. But the policy would aid those who are in or near retirement at a cost to all others, alive or yet to be born. Recognising this, GA by incorporating all the tax and spending in current and future periods to which a government is committed, thereby serves as a much better guide to the sustainability of a fiscal policy than measures such as the explicit budget deficit, which looks only at taxes and spending in the current year.

Thus, GA makes it feasible to derive the implicit debt of a country's fiscal policy flowing through its welfare benefits/entitlement programmes such as social security or social health insurance schemes. This enables quantitative determination and confirmation for statements on long-term implications and sustainability of a current fiscal policy.

³ CBO Study on 'Who pays and when- an assessment of Generational Accounting', 1995



Methodology

The methodological root goes back to economists, Alan Auerbach, Jagadeesh Gokhale, and Laurence Kotlikoff (1991, 1992 and 1994), who sought to illustrate the effects of inter-generational fiscal policy. The generational accounts rely on two standard ideas⁴:

- *Present value* expresses a stream of net payments over time by what they would be worth if they were all paid at a given date as one sum. Present value makes it possible to compare net taxes (taxes less transfers) of various generations on a common basis. To calculate present value, the accounts use an *interest rate* to discount all net payments to the given date.
- The *zero-sum nature of inter-generational fiscal policy* specifies that future generations must pay with interest for purchases that past and current generations do not pay for. The constraint may be expressed as an equation: the present value of net taxes of future generations must equal the current value of government debt, plus the present value of all prospective purchases by the government, less the present value of net taxes of current generations.

Using these ideas, generational accounts address a hypothetical question: if policy remained as it is for current generations for the rest of their lives, how much would they pay in net taxes, and how much would future generations have to pay? Thus, the accounts do not try to predict the actual course of policy. Instead, they ask an ‘as if’ question to reveal what policy now implies.

To answer their ‘as if’ question, the accounts project government purchases and net taxes of current generations and calculate their present values. Given the level of government debt in the base year, the accounts then calculate the present value of net taxes of future generations through the equation of the zero-sum constraint. Thus, the procedure depends on economic and demographic projections, assumes a discount rate, and requires a policy rule that determines taxes and spending for current generations according to age.

To recapitulate, GA is based on the inter-temporal budget constraint⁵, capturing all present and future payment and transfer flows between an individual and the public sector, thus allowing a calculation of net tax payments of every living and future generation over their remaining lifecycle. Using this concept, a fiscal policy can be called sustainable if the inter-temporal budget constraint holds, i.e., if all net tax payments of all living and future generations plus the official budget (explicit) debt sum up to zero. If this is not the case, the fiscal situation of a country is unbalanced or in other words, unsustainable. The public is then confronted with a so-called fiscal gap, the sum of the explicit and implicit debt. It reveals the unfunded claims of a country’s population against its public coffers.

The data requirements can be summed up as projections of population, forecasts of expenditures and revenues of the government in the base year, age and sex-specific micro-profiles for the different expenditure and revenue types (i.e. age-tax and age-transfer profiles derived from cross-sectional microdata sets), a growth rate for the economy as well as a discount rate.

⁴ CBO Study on ‘Who pays and when- an assessment of Generational Accounting’, 1995

Limitations

Having captured the benefits of construction of generational accounts in the prior section, we present below the flip side of GA in terms of its shortcomings:

1. The results are sensitive to assumptions about population, productivity and the discount rate due to which the resultant variations may be significant at times when doing long-term projections.
2. The accounts estimate who pays for what the government buys, but do not estimate who benefits. Barring the categories of government expenditure treated as 'transfer payments' such as on health and education, it is an uphill task to attribute the benefits of government's purchases of goods and services to particular generations. This renders imputation of the value of the government's purchases to generations infeasible. Therefore, the accounts do not show the full net benefit or burden that any particular generation receives from government policy as a whole.
3. Furthermore, the accounts do not consider how policy distributes resources among income groups, either within or between generations.
4. A discount rate is needed to calculate the present values of lifetime net taxes. Major issues arise because the estimation of the right discount rate has always eluded analysts, and different choices of the discount rate lead to most of the variation in results. Further, the accounts assume that the same discount rate applies to all net taxes of all generations, an assumption which is not strictly warranted.

5. The accounts assume that fiscal policy has no effect on potential income. Although that assumption is reasonable in the short run, it becomes less so in the long term.
6. The accounts have a horizon that is very distant- indeed, it is infinite.
7. The analysis resulting from generational accounts ignores people's responses to their economic environment. For instance, if taxes are raised to meet an inter-temporal budget deficit, some contraction of the tax base would be expected as a response to the tax hike. Since generational accounts do not incorporate any behavioural responses, the increase in tax suggested by the GA analysis to deliver the inter-temporal solvency would be inadequate. This issue however can be addressed by supplementing the GA analysis with behavioural models.

We would like to highlight here that as evidenced by many studies conducted in the past, neither of these problems has weakened the qualitative conclusion concerning the sustainability of prevailing policy. It is the quantitative results that have been left open to question, especially for future generations.

Hence, despite the above limitations, it is believed that the accounts should remain a tool to analyse policy from a conceptual perspective, rather than serve as an official budget statement. It should be viewed as a supplementary technique for analysis of sustainability and inter-generational distribution.

Part II: Application/Results Elsewhere

As per the 2009 Research Report by Ifo Institute for Economic Research at the University of Munich⁶, in the last 15 years, several GA studies for 29 different countries have been added to literature. Some countries such as Norway even include Generational Accounts in their government reports. However, it must be noted that there is heterogeneity in the way individual countries have approached the concept of GA to construct and develop respective generational accounts. Due to different sets of necessary assumptions and statistical measures and methodologies, these studies hence are often not comparable.

While the assumptions and statistical methodologies may remain at odds, the common understanding across studies is presented below:

The ultimate generational impact is a function of the following:

- The proportion of dependent population in the country capturing the effects of ageing population and/or baby boomers, and
- The policy and institutional responses adopted to provide for the various needs of total dependent population, i.e. for the health and pension needs of the elderly of the future and/or for the education provisioning for the young of the future.

The criticality of the first point on the nation's demography or to be precise, age-wise population structure, emanates from the fact that people tend to be net recipients before they start work and after retirement, and net contributors while they are of working age. The generational account reflects this life-cycle pattern.

⁶ It is essential to distinguish the 'inter-generational balance gap' from the 'inter-temporal budget gap'. The former assumes that current and future newborns are all treated in the same way, and calculates the tax change needed for this. The latter is the tax change needed for solvency without any requirement that all future generations should be treated in the same way.

In other words, changes in population age composition affects the percentage of the population that is of working age (typically defined as ages 15 to 59)–members of the population who can (but not necessarily will) contribute to the economy, as well as the percentage of population that is of dependent age (typically defined 0-14 and 60 or above), presumed to be too young or too old to support themselves through labour market activity and who therefore need to be supported by others, typically the family or the state.

The total dependency ratio is a commonly used measure of potential social support needs. It is calculated as the ratio of the number of children (persons under age 15) and older persons (persons aged 60 years and above) to the number of persons in the working ages (that is, those aged 15 to 60) expressed per 100 population.

This composition of age structure has a profound impact on a broad range of economic, political and social processes, leading to second point above. It has implications for decisions relating to the extent of social support systems required for the dependent population. How to finance those systems also assumes importance for the well-being of both the older and younger generations. For instance, an increase in young/ old-age dependency ratio is likely to pose heavier demands on the working-age population, whether in the form of higher taxes or other contributions, so as to maintain a stable flow of benefits to the younger/older population social security schemes.

Common Thread

As the studies suggest, as the 20th century drew to a close, many developed countries had been witnessing the phenomenon of population ageing. A population ages when increases in the proportion of older persons (that is, those aged 60 years and above) are accompanied by reductions in the proportion of children (persons under age 15) which eventually reflects in the decline in the proportions of persons in the working ages (15 to 59). Typically, it happens as a consequence of rapid changes in fertility and mortality patterns. Alternately put, population ageing occurs when the average age of a region's population gets older.

In most cases, these ageing societies also experienced rapid economic growth during the second half of the 20th century. While major shortcomings and unmet needs remained, most developed countries expanded and diversified their systems of social security and healthcare and, on the whole, the standard of living of the old as well as the young improved as populations aged. However, the policy-makers largely financed the demands for retirement benefits through payroll taxes paid by current workers in a pay-as-you-go manner. Thus, strains started building in those support systems, as the older population continued to grow more rapidly than younger adults and as earlier withdrawal from the labour force added to the demands on public pension systems⁷. The examination of inter-generational balance as a consequence reveals that people currently alive have enjoyed the existing structure of taxes and benefits, leaving future generations with a much less favourable framework in order to deliver/restore public sector balance.

In fact, as the results of empirical studies points out, only a handful of nations have been able to avert these large fiscal imbalances, e.g. New Zealand has been relatively more successful in dealing with the phenomenon of population ageing which plagued the US and other OECD countries. It was able to achieve so not by placing large tax burdens on young current generations, but by limiting the size of its commitments. Its fiscal health, therefore, is contingent on the maintenance of such spending discipline.

In addition, in more recent times, the financial and economic crisis that began in 2007 and unfolded in 2008 and 2009 put additional pressure on pension systems and on the prospective pension benefits of workers nearing retirement age.

⁶ CESifo DICE Report dated 4/2009

⁷ World Population Ageing 2009 Report by Department of Economic and Social Affairs, UN

Part III: India in Perspective

This section attempts to examine India briefly in the light of the GA framework. After assessing its fiscal situation, it presents the fact file in terms of its demographic patterns and examines the age-related components of government spending in India.

Experience in Fiscal Management

In order to provide a fair understanding of India's current fiscal situation, it is necessary to review the situation since the last decade of the 20th century and reforms initiated post-2003.

Government finances in India deteriorated during the second half of the 1990s consequent to a host of factors including significant reform-induced losses in revenue (from reductions in customs and excise duty rates), poor tax performance due to a narrow tax base and low tax buoyancy, and the government's inability to affect compression in its expenditure. Both, the centre and state governments contributed to the fiscal deterioration in India, with the implementation of the civil service wage increases recommended by the Fifth Pay Commission widening deficits, especially at the state level. Persistent primary deficits led to a sharp accumulation of debt⁸. In 2003-04, at nine per cent of GDP, India had one of the largest general government deficits in the world (Kochhar and Purfield, 2004) and its debt reached more than 87% of GDP.

Against this fiscal background and after three years of discussion, India enacted the Fiscal Responsibility and Budgetary Management Act (FRBMA) in August 2003. The FRBMA covered only the central government and some of its stated

objectives were to ensure inter-generational equity in fiscal management, achieve fiscal sustainability necessary for long-term macro-economic stability and improve the transparency of central government fiscal operations. Thus, the long-term consideration and the related aspect of inter-generational equity were recognised in India through the adoption of FRBMA. In July 2004, a set of rules⁹ came into force. Similar to most Fiscal Responsibility Legislations (FRLs) around the world, the FRBMA established the broad framework for conducting fiscal policy by setting out both procedural as well as numerical rules.

Emerging Demographic Trends

As mentioned in Part II, one of the two critical determinants of the eventual generational impact is the demography and concomitant dependent- independent population ratio (i.e. effects of population ageing and baby boomers) in the country.

Population ageing is pervasive since it affects nearly all the countries of the world. It has resulted mainly from reductions of fertility and to some extent, in mortality rates that have become virtually universal. Decreasing fertility along with increasing life expectancy has reshaped the age structure of the population in most regions of the planet by shifting the relative weight of the population from younger to older groups. The role of international migration in changing age distributions has been far less important than that of fertility and mortality.

Because fertility levels are unlikely to rise again to the high levels of the past,

population ageing is irreversible and the young populations that were common until recently will become rare in the 21st century.

The UN 2007 report *World Population Ageing* in fact describes the development of population ageing in the character of the Indian population as a critical and unprecedented process. The projections of elderly population in India and the world are contained in the UN's World Population Ageing Report of 2009, which are captured in the table below.

Table 1: Projections of elderly population in the world and India

	Population aged 60 years or over('000)		% population aged >= 60 yrs		Old age support ratio	
	2009	2050	2009	2050	2009	2050
India	88,605	315,637	7	20	13	5
World	737,275	2,008,244	11	12	9	4

Source: World Population Ageing, 2009 by Population Division, Department of Economic and Social Affairs, United Nations

As stated in the above table, in 2009, 88.6 million elderly people lived in India and comprised seven per cent of the total population, which by 2050, is projected to rise to 20%. In fact, India's share in the world's elderly population is also set to increase from 12% in 2009 to 16% in 2050. The drop in old-age support ratio will also be higher in India.

In the Indian context, hence, two points emerge from the above analysis:

- Population ageing has already set into the character of India's population and as evident from the composition of dependency ratio, it is poised to become a distinctive trait during the second-half of the 21st century. However, till then, child dependency

⁸ The debt definition includes domestic liabilities of the central government (internal debt, small savings deposits, provident funds and others, reserve funds and deposits), liabilities of the state governments (market loans, provident funds and other accounts) and external debt at fiscal year-end exchange rates.

⁹ Fiscal rules are defined as in Kopits and Symansky (1998) as a permanent constraint on fiscal policy in terms of an indicator or a set of indicators of overall fiscal performance.

will also continue to remain significant by virtue of its sheer size.

- The growth of the ageing population is going to be faster than what has been observed in the past for developed nations.

Key Age-Related Components of Government Spending

Below is an examination of those components of Indian government expenditure that are age-related, i.e. which are a function of age profiles of population and which respond to the respective dependency ratios:

- Child dependency ratio:
 - Education spending is associated predominantly with children and young adults.
 - Increased spending on medical services is also associated with babies at least till the pre-teens.

Interestingly, the total education expenditures have not empirically been found to be correlated with the total fertility rate and instead have been seen as a political decision.

- Old dependency ratio:
 - Spending on pensions programmes

Unlike in the US and other developed nations which have universal social security systems, India has government-sponsored pension programmes in the organised sector for the elderly. The organised sector (including the private sector) hardly covers eight per cent of the total labour force. As per the Da Vanzo paper of 2010, it is estimated that only 10 to 11% of India's workers participated in any form of a guaranteed retirement income system (Gillingham and Kanda, 2001).

Conclusion

The shifting weights of the various age groups tend to create social and political pressures that may result in changing patterns of resource allocation among generations, leading to inter-generational conflict.

The composition of the dependency ratio in India suggests that in the immediate/ short-run context, it will be about younger dependents as that generation will continue to place the burden on existing generations to finance their education. The ageing population dependence factor will dominate in the medium to longer-run context. Further, because of a shorter time to adapt to the changes associated with population ageing, it is urgent that the government begin taking steps to face the challenges and make the best of the opportunities that population ageing brings.

As India will be required to respond to the irreversible course of future demographic development, it behoves the country to develop this tool of fiscal analysis to measure the extent of inter-generational balance, and thereby develop a meaningful way to assess the prudence in the prevailing fiscal policy (government spending and tax programmes).

The inter-generational results can be as startling as had been the case for developed nations. But if the correct policies are adopted well in advance, then it will be good news all around.

Pick of the Quarter

Sharing a Viewpoint

Technical Advisory Group for Unique Projects (TAG-UP): Evaluating Implementation of Government IT Projects

The government of India has initiated several e-governance projects. While some have been implemented successfully through the joint efforts of various stakeholders, others had to face serious problems due to lack of financial independence, the unavailability of the right personnel, technological obsolescence, lack of speed and productivity in implementation, lack of ownership on the part of the user community, leading to cost and time overruns and failure to fulfill requirements.

Considering the complex nature of such projects, it is necessary to not only get the design and implementation of such systems right, but also that institutional capacity be built up to support these projects and sustain them on an ongoing basis. The challenge is thus of finding ways to rapidly roll out these systems, to achieve and then sustain high levels of reliable performance on an ongoing basis.

Realising this, the government had set up a committee known as the *Technical Advisory Group for Unique Projects (TAG-UP)* in pursuance of the finance minister's budget speech (2010-11) under the chairmanship of Nandan Nilekani. It was responsible for examining the technological and systemic issues of select projects called High Impact Government IT Projects (termed as Unique Projects) such as tax information network, new pension scheme, national treasury management agency, expenditure information network, goods and service tax, all in different stages of roll-out in the country.

We present a synopsis of the report submitted by the TAG-UP group on 31 January 2011. It further expresses the author's views over the recommendations contained in the report.

Synopsis of Recommendations

The TAG-UP report aims at establishing an effective tax administration and financial governance system through the creation of IT projects which are reliable, secure and efficient. Its recommendations have been captured across two dimensions of public policies and technology policies.

Public Policies

The committee has recommended a *National Information Utilities (NIU)* to be instituted, to work in partnership with the government to handle all aspects of IT systems for complex projects. These NIUs will participate in high-level design, specification of requirements, proof-of-concept studies, while strategic control will remain with the government.

NIUs have been envisaged to be private companies with a public purpose: profit-making, but not profit maximising. They will be primarily responsible for technology-related aspects of implementation, bound by tight service level agreements (SLAs) and subject to periodic audits. The group acknowledged that the project must be designed so that strategic control is retained within the government. It therefore proposes a strong dedicated team within the government inter alia to drive policies, design a suitable solution architecture, supervise execution, frame appropriate contracts, adopt outcome based pricing, evolve SLAs and conduct independent audits.

The group recommends an independent



project management empowered to take quick and efficient business decisions pertaining to attracting and retaining talent, procurement, rapid response to business exigencies, adopting new technologies, etc. Since independence of management is linked to the financial independence of the NIU, the NIU should be able to get funding independently and have a self-sustaining financial model.

The NIU is to be structured as a company, rather than a society, with limited liability and subject to sound corporate governance norms, such as those required for listed companies. This is due to the greater ability of a company as compared to a society to raise funds. Also, it allows for financial independence, operational flexibility, quicker decision-making, greater accountability and transparency.

Total private ownership within NIUs is suggested to be at least 51% while the government should own at least 26% of it. While the concerned department that owns the project should recognise the capabilities and limitations of the technology solution, the NIU should perceive its responsibility as extending beyond merely meeting a technical or legal requirement under the agreement. This will provide a holistic service to achieve the projected business change.

Human Resource Policies

The concerned department is to put in place a high-level body that will review the progress of the project during its implementation and later evaluate the realisation of benefits and objectives on a periodic basis. It is proposed that every project has a dedicated mission leader within the government department, of the rank of joint or additional secretary, responsible for the project and a dedicated mission execution team to support the

mission leader. The mission leader should have the freedom to choose the mission execution team from within or outside the government.

To build capacity within departments embarking on complex projects with mission-critical IT systems, the training curriculum for the workforce should include training on the technical aspects of IT systems, project management and evaluation, procurement management, governance issues and change management.

To retain in-service staff deployed in IT functions, it is suggested to provide them with IT professional allowance. A scheme of non-monetary incentives such as public acknowledgement of contributions, certificates of outstanding performance, etc. may be instituted with a view to motivating both in-service officers and contracted personnel. Also, the method of performance appraisal has to be reconsidered, by redefining the purpose and principles, conducting a job analysis, obtaining employee feedback, reviewing standards of objectivity, conducting training for both managers and employees and reviewing the results of the system.

Contracting

The group mandates the government-NIU relationship to be defined through an agreement that outlines broad project goals, placement of tasks, financials, SLAs, and most importantly, embodies the spirit of partnership. The agreement should include the scope of work, activities to be undertaken by NIU, obligations of the government and NIU, financial arrangement, SLA and business continuity plan upon exit.

One of the first steps in the incubation of a project is the creation of a suitable institutional framework. Depending on

the nature of the project, it may either be housed within a department, or in a new institution created with the specific purpose of executing the project. The project should publish a mission strategy document that describes the project, the stakeholders, the broad legal framework, the solution architecture, the nature of the platform and role of the ecosystem and potential pricing. The project is advised to be rolled out as soon as possible, and iterated rapidly, to get customer feedback early on, and allowing mid-course corrections as necessary.

A critical aspect of IT projects that span multiple levels of government is that the solution must be incentive-compatible across stakeholders. For this, the group suggests common functions to be included in a single application shared by all stakeholders. Such a single application, while respecting the constitutional autonomy of all governments involved, may be deployed in a decentralised environment, but its development must necessarily be centralised.

Technology Policies

The various technology policies suggested by the group are as follows:

Solution Architecture

- At the outset of a project, the IT strategy should be conceived and published as part of the mission strategy document.
- A functional system diagram should be created to capture the role of multiple levels of government, key business processes and workflows (information flow, funds flow, etc.) and integration with various stakeholders.
- A structured change management process should be put in place, so that

- the process is incremental. Changes in policy should be accompanied by the corresponding changes in IT systems. The two should go hand-in-hand.
- All system design should have a self-cleaning mechanism. Clean data can be ensured by standardising processes, matching and verifying information in workflows, simple and well-defined open data formats, electronic payments and processing, instant feedback to customers, incentives for compliance and penalisation for non-compliance.
- Solution architecture should be vendor-neutral.
- Open standards should be adopted and open source should be used as prudent.
- Large complex IT projects touching a number of stakeholders should employ a service-oriented architecture making it possible for an ecosystem to evolve around standards and services provided by the government.
- The government should make it a priority to provide connectivity and banking facilities ubiquitously.

An efficient payments-and-transfers system warrants bank connectivity to every individual and institution, including those in remote rural areas. In the absence of bank accounts, payments have to be effected via an intermediary, which in turn creates room for leakages. The group advocates that with a *universal bank account*, it can be mandated that payments be made directly into bank accounts.

In order to achieve this, the following are proposed:

- *Account opening*: Access to bank accounts should be universal. Although the KYC guidelines are largely enabling, more effort in account opening needs to be undertaken.
- *Unique identification of individuals and firms*: Errors in identifying individuals (as beneficiaries under various schemes) and firms need to be minimised and foolproof ways for authenticating transactions have to be ensured. The group believes that dovetailing efforts with the Aadhaar initiative will ensure payments being sent electronically by various governments directly to beneficiaries using an Aadhaar payments bridge. All submissions by individuals and non-individuals that involve money transfer and payments would be made electronically and authenticated immediately, to the extent possible. It is suggested that the government should work closely with all stakeholders to define a uniform banking interface, so that inter-government payments may be tightly integrated with internal government processes.

Openness

- Use of open standards in the design and implementation is highly desirable in IT systems. Multiple vendors can provide competing solutions that can be used interchangeably with open standards.
- Open source software should be adopted in projects as prudent. The government in partnership with stakeholders should set up an open source foundation to host open source software released by government projects.
- On the one hand, the government, as the producer of public goods funded by taxpayers, should define open standards and release open data in open file formats, along with open source software to the extent possible. On the other hand, the use of open standards, open data and open source within large complex IT projects brings down costs, leads to higher competition and increased transparency in implementation.

Information Security

The group strongly supports giving security the utmost importance. It has suggested a security-conscious design of the solution architecture, a dedicated security team headed by a Chief Information Security Officer (CISO) and basic security training for all employees to tackle internal and external security threats. The scope of audits may include technology review, process review and third-party review.

Accountability, Transparency and Self-Corrective Forces

Designers of government IT systems are to decide which information to share publicly. A transparency portal is suggested to have been set up to aid in monitoring and feedback at various levels: within the service provider, within the government, and by citizens at large. It is an essential part of self-corrective forces that leads to greater accountability and transparency. The fact that such a portal is implemented means that analytics about the performance of the project are generated immediately. As a result, any deviation from expected behaviour will be detected quickly and rectified.

The contact centre closes the feedback loop and establishes multiple channels of communication with all stakeholders, including end-users, for gathering information and reporting grievances. Enabling citizens and beneficiaries of public schemes to provide feedback using web and mobile phone-based platforms will be a powerful way of involving citizens in improving public accountability.

Protection of the Individual

- As IT systems become commonplace in governance, issues related to the protection of the individual's right to privacy come to the fore. The Department of Personnel and Training (DoPT) is currently engaged in preparing a legislative framework on data protection, which will also address issues pertaining to an individual's data in the context of IT systems.
- The solution architecture should ensure that any Personal Identifiable Information (PII) is stored safely, and access is carefully monitored.
- To the extent possible, workflows should be designed so that access to PII is avoided.
- PII should be stored in an encrypted form, and separately from other data. Separate access controls may be defined, with strict access control, monitoring and logging of all access to PII data.
- Stringent penalties must be in place to address the issue of unauthorised access of personal data.
- Strict protocol and processes must be in place to detect such access to deal with swiftly and to deter future occurrence. This is desirable from a privacy as well as a security perspective.
- Data should be carefully anonymised when released publicly, or when shared with other organisations that do not require access to PII, as allowed within the data protection and privacy framework.

- Data retention and usage policies should be defined well, especially for PII. It may be necessary to retain transaction logs for long periods of time for purposes of analysis and research, but PII should be scrubbed from these logs after a pre-defined period.

We believe that the recommendations in the report are useful and if implemented, have the potential of favourable results:

- The report has clearly broken away from the ad-hoc strategy to a single cohesive one for governance. The challenges of governance in IT projects, of conceptualisation, selection of partners, governance structure and execution are sought to be met by the creation of NIUs as an intermediary.
- On the part of the government, reforms are essential in internal governance and the idea of a dedicated mission manager with assured tenure, incentive plans and flexibility for onboarding laterals should solve the challenge of lack of full focus. But terms should be set for a faster approval process through an empowered committee mechanism.
- Success also depends on the selection of service providers. These projects are complex and need partners with deep pockets. Careful selection based on track record rather than L1 needs to be done. The stress on open standards and transparency is certainly welcome.

- We concur with the recommendation of efforts to be dovetailed with the Aadhaar initiative. This will help ensure that the welfare funds reach all target beneficiaries and thus help minimise errors of exclusion and inclusion.
- The report addresses tax-payer concerns under the proposed GST. It has suggested setting up a common GST portal, as a pass-through device for information, while enhancing it with intelligence to plug leakages. “It will also act as a tax-booster matching the input tax credits in the returns to detect tax evasion,” the report said, adding that the system will also provide for verification of permanent account number (PAN). Thus, the portal will take care of payment gateways, returns filing but will also ensure that tax-evaders have a hard time.
- Induction of talent from outside the government and setting up the NIU in the private sector for handling all aspects of IT systems will help get more future-oriented IT systems designed by using the latest enriched database of the private sector, given limited IT capacity in the public sector.
- With flexibility to offer market-level compensation, combined with the intellectual stimulation of the task, NIUs should be in a better position to attract, retain and motivate talented professionals, as compared to official organisations. The government shareholding ensures strategic control and access into ministries, while its minority nature will free the NIUs from the constraints and straitjacket of bureaucracy and governmental procedures.
- The report rightly emphasises the need for strong support from top leadership within the government. Also, it is not enough to have a dedicated mission leader. It is essential that this person--and, indeed, all core personnel in the team--stay in the job for a few years at least. Guidelines will have to be explicitly worked out for transparent selection of appropriate, well-qualified, private-sector investors in the NIUs.

We believe that the report is path-breaking and can accelerate governance. However, its implementation will call for dramatic changes in the internal processes and financial rules of the government to make it work.



PwC Updates

PwC's Contribution towards the Sector

Know Our Work

Audit Tracking System

One of our state government clients planned to develop a system for online monitoring of its auditing process performed across departments. This initiative was primarily taken up by the finance department, to span across all departments. Audit processes typically involve prolonged cases with lack of timely resolution of audit paras and inadequate monitoring of reply deadlines.

PwC in consultation with the government, developed the envisaged web-based audit tracking system.

The audit tracking and monitoring application is a workflow-based application for tracking follow up on audit reports of the Comptroller Auditor General of India (CAG) for various state government departments. The system is expected to facilitate the following:

- Reduce turnaround time on reply to audit reports
- Monitor a report as soon as it is captured
- Summarise status reports
- Raise action and record action against Draft Paras
- Store document
- Provide bilingual language support (Hindi-English)
- Provide workflow for approval of replies

The application will be Internet-based where users will be able to use the system based on the role provided to them. The application will also be able to store relevant documents which can be viewed/edited based on the user's access rights. The application will support Hindi and English languages.

Audit Tracking System

A Snapshot

Sl. No.	Category	Description	Status	Created On	Updated On
1	General	General audit report	Pending	20/01/2018	20/01/2018
2	General	General audit report	Pending	20/01/2018	20/01/2018
3	General	General audit report	Pending	20/01/2018	20/01/2018
4	General	General audit report	Pending	20/01/2018	20/01/2018
5	General	General audit report	Pending	20/01/2018	20/01/2018
6	General	General audit report	Pending	20/01/2018	20/01/2018
7	General	General audit report	Pending	20/01/2018	20/01/2018
8	General	General audit report	Pending	20/01/2018	20/01/2018
9	General	General audit report	Pending	20/01/2018	20/01/2018
10	General	General audit report	Pending	20/01/2018	20/01/2018

Application

Workflow-based application to track and monitor status of audit reports captured by the CAG office for various state government departments

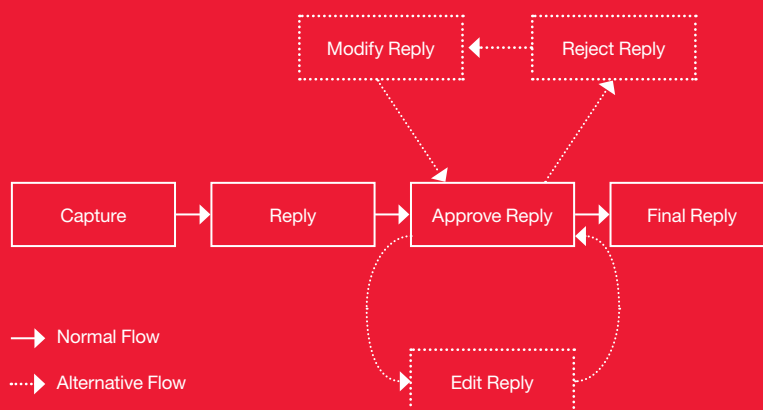
Utility

- Improved monitoring of status of audit reports
- Reduced time taken for replying to audit observations
- Repository of reports, replies and follow-ups
- Summarised status reports

Implementation

Web-based application with role-based user access

Workflow-Based Audit Para Tracking System



Know our People

Rishav Singh,

Manager, Public Finance, GRID, PwC

Profile at a glance

Age:	31 years
Designation:	Manager, Public Finance, GRID
Professional Experience:	More than six years
Education:	PGDM (Finance), Indian Institute of Management Calcutta; B.A. (Honours) Economics, Patna University
Worked in:	India, Sri Lanka, Maldives

Current Projects

- Mizoram Public Resource Management Programme;
- TA-Supporting the Assam Governance and Public Resource Management;
- Institutional Strengthening For Economic Management, Republic of Maldives;
- Strengthening Performance Management Programme, Government of MP

Rishav Singh is a Manager with the Public Finance team of Government Reforms and Infrastructure Development group of PwC India. Rishav brings significant domain knowledge in the field of economics and financial management, with an experience span of more than six years in PFM consultancy. Being an economics graduate and holding a PGDM from IIM Calcutta, Rishav has considerable knowledge of government sector mechanisms through his work experience as a government sector employee in West Bengal. He has been involved in projects that include public finance, public financial management, revenue administration, preparation of MTEF, study of regulations, process documentation, etc. Rishav has extensive research experience, interaction, management inputs and project management across a range of sectors including power, water, financial services and state government departments.

Rishav is currently managing the DfID-funded Strengthening Performance

Management in Government project for the government of Madhya Pradesh. As a part of the project, Rishav had undertaken overall supervision and quality assurance for the project. He managed the preparation of medium-term expenditure framework, medium-term fiscal framework, debt management and system improvement and rationalisation of social security schemes. Rishav is also involved in the preparation of MTEF for the school education department in Mizoram. Rishav is also supporting the government of Assam in preparing a debt management manual.

Rishav had been involved in the management of treasury computerisation for the government of Orissa. He had also supported the implementation of the tourism component of Industrial Policy Resolution where he was responsible for the module involving capacity-building for escorting and facilitating clearances to investors. Rishav was a part of the team that undertook fiscal management reform



programme for the government of Sri Lanka. The programme was aimed at assisting the government in the modernisation of revenue administration and strengthening the financial management system.

Rishav has also been actively involved in Project Preparatory Technical Assistance, Assam Governance Reform and Resources Management (Phase III), Study of Avenues for improvement in non-tax revenue in Madhya Pradesh and West Bengal Development Finance. He has undertaken financial assessment of the Andhra Pradesh Health Sector Reform Programme (HSRP), Department of Health and Family Welfare, Orissa, Department of Health and Family Welfare, Madhya Pradesh and Department of Women and Child Welfare, Madhya Pradesh.

Field Anecdote

Two experts, one was in his early 30s, while the other a sexagenarian had recently joined the Public Finance team. The two experts, sharing no kinship and an age gap of nearly 35 years between them, looked very different. The younger expert was fit, smoothly shaven and looked even less than his age. The sexagenarian was lean and nearly bald.

Neha, manager, Public Finance, had recently come back to our Gurgaon office after a long stay at a client location. She had not yet met the two new members of the team.

Our Partner informed Neha about the new younger expert in the team with whom she was supposed to work next. Further, in a light vein, he asked Neha to take him seriously because “though he was termed a ‘cuddly boy’ by one of our clients, he was highly experienced and a tough taskmaster”.

Neha walked to the bay pointed out by the Partner to meet the ‘cuddly boy’. The younger expert unfortunately was on leave that day and the sexagenarian had decided to sit on his seat. Neha almost choked at the bald ‘cuddly boy’ in his 60s. It left her doubting the wisdom of the Partner and the client!

The next morning, the Partner and the real ‘cuddly boy’ were having coffee in the cafeteria when Neha walked in. The Partner called her over and said, “So you have met our new expert with whom you are to work on your next assignment”. Neha was a relieved woman.

About us

The Public Finance Practice of Government Reforms and Infrastructure Development (GRID) SBU of PwC in India has been closely working with clients in the public sector and at all levels of the government as well as key donors such as DfID, JBIC, World Bank and ADB.

A large team of full-time dedicated professionals and associates provide services in areas that include public expenditure management, revenue administration, budgetary policy development, financial restructuring, performance improvement, institutional strengthening and capacity-building, accounting and financial management systems and human resource development.

PwC has been providing advisory services to governments, multilateral and private sector clients in the area of public finance. The work has broadly included budget reform, revenue augmentation strategies, automation/computerisation and debt management. Most of these projects included training and capacity-building of government counterparts working with the PF team on specific modules. In addition, the team has gained a lot of traction in the PEFA/FRA area with many assignments across South Asia.



Workshop for the Government of Meghalaya

About PwC

PwC firms provide industry-focused assurance, tax and advisory services to enhance value for their clients. More than 161,000 people in 154 countries in firms across the PwC network share their thinking, experience and solutions to develop fresh perspectives and practical advice. See pwc.com for more information.

In India, PwC (www.pwc.com/India) offers a comprehensive portfolio of Advisory and Tax & Regulatory services; each, in turn, presents a basket of finely defined deliverables. Network firms of PwC in India also provide services in Assurance as per the relevant rules and regulations in India.

Complementing our depth of industry expertise and breadth of skills is our sound knowledge of the local business environment in India. We are committed to working with our clients in India and beyond to deliver the solutions that help them take on the challenges of the ever-changing business environment.

PwC has offices in Ahmedabad, Bangalore, Bhubaneswar, Chennai, Delhi NCR, Hyderabad, Kolkata, Mumbai and Pune.

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