Fiscal Devolution and Health Financing Reform: Lessons for India from Brazil, China, and Mexico

Anit Mukherjee

Abstract

In 2015, India's system of fiscal devolution underwent a radical transformation, including greater flexibility at the state level for planning and implementing federally funded health programs. The objective of this paper is to understand the impact of fiscal devolution reform on how federal and subnational governments use or adjust their financing mechanisms to seek better health system outcomes. The three cases in our review illustrate how Brazil, China and Mexico used fiscal reform to better organize financing and intergovernmental transfers for health. The pre-reform system in all the countries were characterized by a lack of clarity in the objectives, modalities and financing of healthcare delivery, leading to insufficient and inefficient public expenditure and high healthcare costs especially for the poor. Post-reform, all of these countries made significant progress in increasing allocation by both federal and subnational governments on priority health interventions, expanding access to primary healthcare services and targeting public resources to improve health equity, and extending financial protection through both public and private insurance mechanisms, thereby reducing out-of-pocket expenditure and improving outcomes. The experience of Brazil, China, and Mexico therefore holds important lessons on how India can use the opportunity of fiscal devolution to create a more efficient and equitable system of health financing through better policy coordination between federal and local governments. My recommendations are as follows: India should 1) rethink the role of the central ministry of health as an information and program evaluation hub, 2) reform the National Health Mission to integrate primary care and social insurance especially targeted at those below poverty line in an overall framework of health system financing and delivery, 3) make formal, standardized 'pacts' with states, districts and local bodies under the National Health Mission, and 4) seek to increase allocation by designing incentives for better prioritization of health at the subnational level.

Anit Mukherjee. 2016. "Fiscal Devolution and Health Financing Reform: Lessons for India from Brazil, China and Mexico." CGD Policy Paper 97. Washington, DC: Center for Global Development. http://www.cgdev.org/publication/fiscal-devolution-health-financing-reform

CGD is grateful for contributions from the Bill & Melinda Gates Foundation in support of this work.

Center for Global Development
2055 L Street NW
Fifth Floor
Washington DC 20036
202-416-4000
www.cgdev.org

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CGD Policy Paper 097
December 2016

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Executive Summary

In 2015, India's system of fiscal devolution underwent a radical transformation following the central government's acceptance of the 14th Finance Commission recommendations. The share of states in the divisible pool of central taxes increased from 32 to 42 percent which significantly increased the flow of untied resources that the states can spend based on their own needs. At the same time, the central government has also proposed greater flexibility at the state level for planning and implementation of programmatic grants through federally funded national health programs.

Few studies have investigated the role of changing fiscal devolution mechanism on health financing arrangements in developing countries. The three cases in our review illustrate how Brazil, China and Mexico used the opportunity of fiscal reform to better organize financing and intergovernmental transfers for health. The objective of this paper is to understand the impact of fiscal devolution reform on how federal and subnational governments use or adjust their financing mechanisms to seek better health system outcomes. Lessons from these countries could act as a useful guide as India moves to the next phase of its intergovernmental fiscal relations following the implementation of the post-14th Finance Commission recommendations.

The pre-reform system in all the countries were characterized by a lack of clarity in the objectives, modalities and financing of healthcare delivery, leading to insufficient and inefficient public expenditure and high burden of cost of healthcare especially for the poor. This is not very different from the current Indian context where public expenditure on health is just 1 percent of GDP, more than two-thirds of all health expenditure is out-of-pocket and the poor are exposed to adverse income shocks due to lack of insurance.

Post-reform, all these countries made significant progress in increasing allocation by both federal and subnational governments on priority health interventions, expanding access to primary healthcare services and targeting public resources to improve health equity, and extending financial protection through both public and private insurance mechanisms, thereby reducing out-of-pocket expenditure and improving outcomes (Appendix Table 1). The experience of Brazil, China and Mexico therefore holds important lessons on how India can use the opportunity of fiscal devolution to create a more efficient and equitable system of health financing through better policy coordination between federal and local governments.

The lessons from the review of country cases broadly support the recommendations of those of the CGD Working Group Report on Intergovernmental Fiscal Transfers for Health in India published in December 2015 and are detailed below:

1. The review of these cases underscores the importance of stewardship by the central government to raise adequate revenues for health, determine subnational allocation formula and incentives, and generate evidence to evaluate outcomes. **India should rethink the role of the central ministry of health as an information hub, implementing a comprehensive management information system (similar to DataSUS for Brazil, for example) and conducting regular program evaluation through independent statutory bodies, such as CONEVAL in Mexico.** This will create a positive feedback loop into allocation and expenditure decisions enabling policymakers to achieve efficiency of public expenditure both at the central and subnational levels.

2. The countries in this review have been able to reduce the burden of out-of-pocket expenditure through effective prioritization of public health interventions and targeted extension of social insurance to ensure financial protection for the poor. **India should follow their lead and reform the National Health Mission to integrate primary care and social insurance especially targeted at those below poverty line in an overall framework of health system financing and delivery.** In this context, investment in data, information and surveillance systems is one of the key roles that the central government can play to harmonize fiscal resources and program design both at the national and subnational level.

3. The success of health financing reform, however, depends on the capacity of states to adapt to new fiscal transfer arrangements and manage the reorganization of service delivery. Drawing lessons from Brazil and Mexico, **we recommend that transfers from the central government to states, districts and local bodies be made on the basis of formal 'pacts' under the National Health Mission, including an agreed set of indicators for access, quality and outcomes.** The allocations should on the basis of risk-weighted capitation payments based on subnational performance on a set of health indicators that are tracked, evaluated and benchmarked across states.

4. Finally, the review points to the fact that increases in unconditional transfers may not necessarily be prioritized for health**. While other countries have used legislative mandates to force states to increase public expenditure on health, India should seek to increase allocation by designing incentives for better prioritization of health at the subnational level.** In this framework, additional non-Finance Commission transfers over and above the tax devolution grants from center to states could be based on their performance in financing and delivery of health services linked to achievement of outcomes that are evaluated and verified independently.

1. Introduction and Motivation

In 2015, India's system of fiscal devolution underwent a radical transformation following the central government's acceptance of the 14th Finance Commission recommendations. The share of states in the divisible pool of central taxes increased from 32 to 42 percent which significantly increased the flow of untied resources that the states can spend based on their own needs. Early evidence from Bihar and Uttar Pradesh, the two most populous and least developed states, indicates an increase of over 30 percent in tax devolution in 2015-16, the first year under the 14th Finance Commission formula, compared to 2014-15, the last year under the previous formula.[1]

At the same time, the central government announced its intention to restructure the way sector-specific funds were allocated to states through large national programs, including the National Health Mission. As a first step, the states' matching contribution to these programs has been increased from 25 to 40 percent. The center has also proposed greater flexibility in planning and implementation of these programmatic grants at the state level. This is significant in the context of other initiatives aimed at empowering state governments to take the lead in identifying development objectives and needs, and to provide a greater share of financing from their own budgets to fulfill their expenditure mandates in health, for example.

The strategic shift in India's intergovernmental fiscal transfer system provides an opportunity to harmonize health care financing mechanisms, delivery systems and accountability structures across central, state and local governments. There is a need to have a clear vision and a framework for a post-devolution center-state engagement that is aimed at meeting national health goals, increasing the efficiency, effectiveness and coordination of health spending, and reducing interstate disparities in health outcomes.

India is not alone in undertaking a reorganization of its intergovernmental fiscal transfer system, giving greater fiscal space to subnational governments to determine their own expenditure priorities. Over the last three decades, several large federal countries such as Brazil and China undertook such fiscal devolution reforms. In these countries, this devolution has reshaped federal-to-state transfers in social sectors whereby state and local governments have been entrusted with greater responsibility for delivery of services.

Few studies have investigated the role of changing fiscal devolution mechanism on health sector reform in developing countries. The objective of this paper is to understand the impact of fiscal devolution reform on how federal and subnational governments adjust their financing mechanisms to seek better outcomes in health. Lessons from these countries could act as a useful guide as India moves to the next phase of its intergovernmental fiscal relations following the implementation of the post-14th Finance Commission recommendations. This review of experiences will help inform the framework that would define the respective roles of the center and the states in addressing national health challenges, harmonizing centre-state responsibilities in financing health, and aligning incentives for all levels of government to achieve better health outcomes.

1 Mukherjee, A.N., A. Glassman and R. Mahbub (2016). States set to spend more: An analysis of fiscal reforms on state budgets for health in Bihar and Uttar Pradesh. CGD Policy Brief

2. Country Cases and Contexts—Relevance for India

Only a few developing countries are of comparable scale, organization and assignment of taxation and expenditure responsibilities between the center and the states as India. Among them are Brazil, China and Mexico. We would look at the experience of these populous and diverse countries with a three-tier governance structure that share challenges of addressing inter-state inequality in fiscal capacity and health service delivery similar to India. Each country reformed their intergovernmental fiscal transfer system over the last three decades, leading to changing in financing and delivery of health at the subnational level.

Among these countries, there are two basic channels of fiscal reforms that have been undertaken: a) change in tax sharing ratios and transfers between federal and state (provincial) governments that determine fiscal space at the subnational level; and b) changing the assignment of responsibility for delivering services such as health through decentralization of funds, functions and human resources to provincial and local governments. Although the motivation, modalities and mechanisms differ, it will be instructive to compare the processes and outcomes of these fiscal reforms on the financing of health at the subnational level. A key lesson would be how fiscal devolution and decentralization processes can be harmonized to achieve the twin goals of reducing inequalities and improving health outcomes across states.

In the context of the post-14th Finance Commission fiscal reform, lessons from these countries are useful to understand the impact of devolution on federal and subnational governments' financing mechanisms for better outcomes in health. This review of experiences will help inform the framework that would define the respective roles of the center and the states in addressing national health challenges, harmonizing center-state responsibilities in financing health, and aligning incentives for all levels of government to achieve better health outcomes.

Restructuring of center-to-state transfers in India provides a window of opportunity to initiate much-needed reform of health financing and delivery. Over the last three decades, Brazil, China and Mexico radically reformed their health systems to improve access, equity and accountability, following their restructuring of intergovernmental transfer system. These same principles are included in the draft National Health Policy that is currently under review in India. The draft NHP appreciates the need for higher budgetary allocation, the urgency to achieve universal health coverage, the obligation to reduce the burden of out-of-pocket expenditure especially for the poor and the opportunity to reform financing of healthcare to improve outcomes. India's vision of a future health system is therefore consistent with the countries in this review who have already undertaken such reform in the last three decades with positive outcomes. This review would be instructive for policy makers in India and help guide the health financing reform agenda over the next decade.

3. Brazil: Designing Fiscal Transfers to fund Constitutional Mandate for Right to Health

3.1 Pre-reform Context and Key Drivers of the Fiscal Devolution

Brazil, the fifth largest country in the world by geographical area, has a long and complex federalist history. The early Brazilian federalist model was adopted during what is known as 'The Old Republic', which lasted from 1889 to 1930. Between 1930 and 1987, the nation saw various changes in administration led by the military coups and shifted towards a centralized political and fiscal system. In 1984, after more than 20 years under the military regime, democracy was restored in Brazil and in 1988, and a new constitution that enshrined Brazil's current federal structure of governance came into effect (Paim et.al. 2011).

As per Article 1 of the Constitution, the Brazilian Federation is the "indissoluble union" of three levels of distinct political entities: federal government, 26 states and one federal district, and 5570 municipalities. States and municipalities have autonomous administrations, collect their own taxes and receive a share of taxes collected by the Union government.

Brazil's taxation system is extremely complex with heavy reliance on indirect taxes such as the ICMS, a state tax levied on the sale of physical movement of goods, freight, communication services and electricity, as a means of revenue mobilization. There are also various taxes on income as well as supplementary 'social contributions' that finance a wide array of social rights enshrined in the Constitution, most notably, health. Brazil has observed a sharp rise in the share of social contributions since inception of Constitution in contrast to the relative decline in the share of direct taxes on individual income and corporate profits. In 2010, various forms of the social contributions, including social security, accounted for a combined share of 22 percent of the aggregate national revenues constituting 8.28 percent of GDP (Afonso et.al. 2013).

This is often attributed to the federal government's attempt to tap new sources of non-shared revenue and to fund increasing allocations for health, social security and pensions (Lustig 2015). For health, most of the increase in resources for health in the 1990s came from the federal government. To complement social contributions, the federal government also instituted a tax on financial transactions in 1997 to fulfill the constitutional mandate and allocate greater revenues for expansion of SUS. States and municipalities started contributing a greater share of public expenditure on health following the Constitutional Amendment 29 of 2000, as we shall discuss below.

Brazil has a relatively high tax-GDP ratio compared to other upper middle income countries such as China and Mexico. It increased from 16 percent in 1960 to 22 percent in 1988, and reached 34 percent in 2016. As of 2013, Brazil's tax-GDP ratio is comparable to developed OECD countries and nearly two times the level of other middle-income developing countries such as India (Lustig, forthcoming). While the federal government raises nearly two-thirds of own revenue, Table 1 also shows the magnitude of fiscal transfers across the three layers of government. What sets Brazil apart from most other federal countries is the extent of transfers from the state to the municipal level, which is almost 2.31 percent of GDP. The combined federal and state transfers to municipalities is approximately 12 percent of total revenue, closing the gap in resource needs for delivery of local services.

Table 1: Aggregate Revenue before and after fiscal transfer (% of total)

Fiscal Year 2013	Federal	State	Municipal	Total
Own Revenue	67.8 (23.06)	26.0 (9.06)	6.2 (2.07)	100 (34.19)
Post Federal-to-State and Municipality transfer	57.4 (19.52)	31.4 (10.94)	11.2 (3.73)	100 (34.19)
Post State-to-Municipality transfer	57.4 (19.52)	24.3 (8.49)	18.4 (6.18)	100 (34.19)

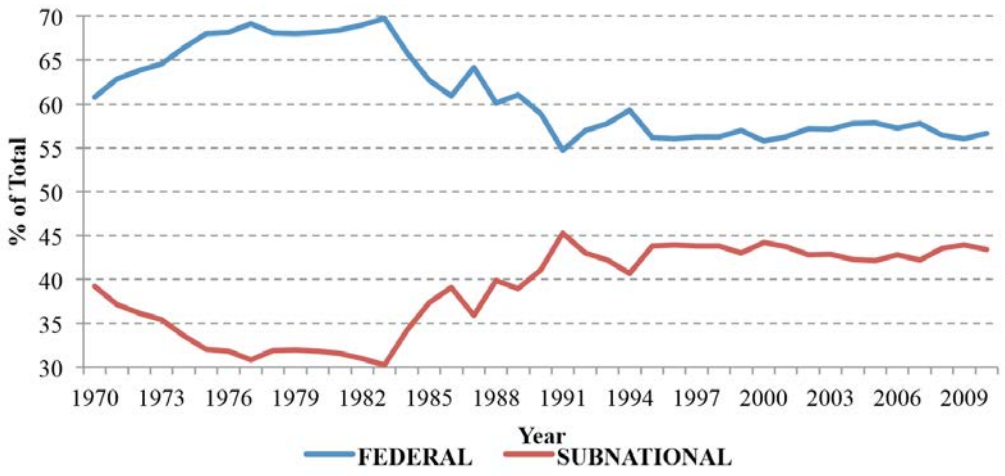
Source: Sen et.al.2014; Figures in parentheses represent percentage of GDP

3.2 Nature of Intergovernmental Fiscal Reform:

As mentioned above, the promulgation of the new Constitution and the various laws passed over the last two decades has determined the structure of fiscal relations between the federal and subnational government in Brazil. Three key areas of reform were:

1. Reducing vertical imbalances between federal and subnational governments: In keeping with the spirit of the federalism, the assignment of taxes reflected a desire to fiscally empower the states by entrusting them with significant sources of revenue, for example, the ICMS, a state tax levied on the sale of physical movement of goods, freight, communication services and electricity. States are free to set their tax rates and share the revenue with the municipalities which also have an array of local taxes and user fees under their fiscal domain. As we see from Figure 1, the share of subnational governments in total revenue increased significantly from 30 to 45 percent between 1984 and 1991, fell slightly during the hyperinflationary period of the early 1990s, and has remained practically stable for the last two decades in the range near the 1990 level. This stability in vertical shares has consolidated the structures of fiscal federalism in Brazil over a period of economic growth and rapid increase in the tax-GDP ratio. It has also enabled states to focus on access and financing of basic services, including health and education.

Figure 1: Distribution of Revenues between Federal and Subnational Governments, historical trend



Source: Afonso, et.al. 2013

Even with substantial devolution to states, significant gaps in share of revenue collection and expenditure responsibilities remain. States are constitutionally responsible for nearly half of total public expenditure while their own share in total revenues is only one-third. This is made up by federal transfers to states and municipalities, but also through a discretionary social contribution grants to fund universal healthcare that is the cornerstone of Brazil's reforms post-1988.

2. Addressing horizontal imbalances through mandated transfers: Like India, Brazil is a geographically and economically diverse country and has substantial inter-state inequality in resource mobilization capacity. To address this, the Constitution mandates untied transfers to states and municipalities through two mechanisms: the Fundo de Participação dos Estados e Distrito Federal (FPE) or the State Revenue Sharing Fund, and the Fundo de Participação dos Municípios (FPM) or the Municipal Revenue Sharing Fund. Together they make up almost 40 percent of the total devolution. States also share the proceeds of the tax on circulation of goods and services, or ICMS, with the municipalities thereby increasing their revenue base. In addition to these unconditional transfers, there are conditional transfers from the public education fund (known as FUNDEB) which constitutes nearly 27 percent of total intergovernmental transfers. The role of discretionary transfers is limited to less than 5 percent of total transfers (Table 2).

Table 2: Main Instruments of Revenue Sharing, 2011

Tax/Type of Sharing	Percentage of GDP	Percentage of Total
Federal to States	**1.7**	**28.4**
FPE	1.2	19.4
FUNDEB	0.3	5.9
Compensatory Sharing	0.1	2.0
Others	0.1	1.1
Federal to Municipalities	**1.8**	**30.5**
FPM	1.3	21.4
FUNDEB	0.5	8.4
Others	0.05	0.7
States to Municipalities	**2.5**	**41.1**
ICMS	1.4	23.1
Vehicle Tax (IPVA)	0.3	4.6
Transfers for Education	0.8	13.0
Other	0.02	0.4
Total	**6.0**	**100.0**

Source: Ter-Minassian (2012)

The most significant divergence in the mechanism of horizontal transfer was a change in the fiscal devolution formula. Before 1988, only 10 percent of income tax collected by the federal government was distributed to the states—five percent of the transfer was based on area and the other 95 percent was distributed proportional to the population weighted inversely by per capita income of the state. Under the Supplemental Law 62 of 1989, the proportion of income tax to be distributed increased to 21 percent. The previous formula was scrapped in favor of state-specific fixed coefficients. These fixed coefficients, where were the outcome of political negotiations between the federal government and the states

rather than any objective criterion, ranged from 0.69 for the Federal District to 7.33 for Ceara and 9.39 for Bahia—two of the poorest states in the country. This horizontal distribution formula has remained in place in spite of the Federal Supreme Court in 2010 deeming it unconstitutional and suggesting a formula similar to the one that was in place before 1988 (Afonso et.al., 2013).

Overall, 85 percent of FPE transfers go to 20 states of north, north-east and mid-west regions of Brazil, and only 15 percent to eight south and south-eastern states. While this distribution broadly targets the poorest states and regions of the country, transfers based on fixed coefficients is inequitable. Roraima, a state with twice the percapita GDP of Alagoas, gets 4.5 times per capita from FPE as the latter. The inflexible nature of the sharing ratio limits the effectiveness of FPE transfers across states and regions in Brazil.

3. Financing social transfers through social contributions: Social contributions form an integral part of Brazil's tax and transfer system. The 1988 Constitution created, in practice, two parallel tax systems: one consisting of taxes whose revenues are shared with states and municipalities, and another consisting of social contributions, whose revenue is not shared. Since then, contributions have multiplied and the revenues collected through them have surpassed those of taxes, concentrating revenue with the federal government. The use of social contributions is pervasive—it is imposed on payroll, corporate revenues, natural resources, excise duties and most importantly, financial transactions. As noted above, the share of social contributions is nearly half of all tax collection, which provides the necessary headroom for the federal government to provide grants to states and municipalities for social services, especially health. In 2010, social contributions constituted 8.28 percent of GDP, out of which 5.66 percent was in the form of contributory social security and the rest 2.62 percent accrued to the federal government for discretionary transfers to states and municipalities—health sector being the most important beneficiary (Afonso et.al., 2013).

Among the three countries studied in this paper, India's current fiscal reforms is closest to Brazil's. The share of subnational governments in Brazil's total tax revenue increased by 10 percent from 1988 to 1992 as a result of the changes in fiscal transfer mechanism following the adoption of the new Constitution. This is exactly of the same magnitude as the 14th Finance Commission recommendations in India. While Brazil's fiscal transfer mechanism further devolves tax revenues to municipalities, this is generally not the case except in a few states of India. However, with the institution of the Goods and Service Tax (GST), India's indirect tax system will be very similar to Brazil's ICMS and may hold lessons for intra-State devolution of funds for social service delivery, especially health.

3.3 Fiscal Reforms and Impact on Subnational Health Financing

The Brazilian health system and financing mechanisms have evolved over the last half a century. In the 1970s, Brazil had a segregated health system. The higher income groups and salaried workers had access to private hospitals whereas limited public services existed for the poor and unemployed. Preventive health care was financed by social security contributions and therefore had a strict budget constraint. The 1988 Constitution established health as a basic right of citizens and included provisions to establish a unified health system

(Sistema Unico de Saude, SUS) for all citizens, with the principles of universalism, equity and integration. Thus, post-1988, Brazil's delivery of healthcare changed significantly—from a highly privatized model to one where service provision, delivery and financing were a state's responsibility with private sector playing a supplementary role.

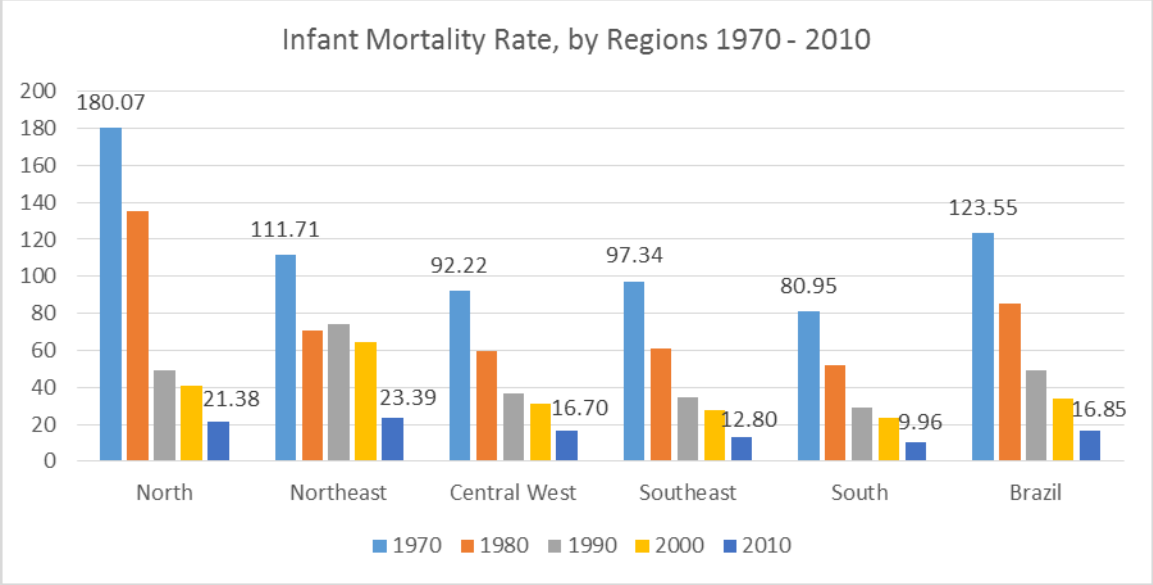
Following the change in the devolution structure, states and municipalities were entrusted with greater responsibility to expand access and delivery. Subnational governments were expected to utilize their untied transfers to ensure access to healthcare services. For its part, the federal government's role changed from a direct purchaser of health services to one where it focused on expanding primary care especially in remote and underserved parts of the country and to provide high-cost tertiary care through its own network of hospitals. States acted as agents to deliver both primary as well as secondary and tertiary care through both public and private health infrastructure financed through federal transfers and their own budgetary allocations.

Structurally, this is similar to the Indian context where central government's expenditure is executed by state-level health system. The equity objective is addressed by earmarking greater share of resources to states and districts with lower outcomes and weaker health systems. The challenges in terms of efficiency and effectiveness of public expenditure on health are therefore similar to Brazil as well.

From 1994, the federal government programs—the family health programme (Programa Saúde da Família, PSF) and the community health agents' programme (PACS) expanded comprehensive primary health care to the poorest regions. The federal government provided per-person payments (Piso Asistencial Basico) to increase funding for designated primary care interventions delivered by municipalities. In 2012, over 33 thousand family health teams covered 100 million Brazilian citizens (54.8 percent of the population) and 257 thousand health community agents covered 119 million people (65.4 percent of the population). This significant expansion of public and community health services reinforced the improvement in health outcomes across the country from the early 1970s, including for infant mortality and chronic illnesses (see Figure 2).

However, the open-ended nature of the Constitutional mandate and judicial intervention ensures that the government is duty-bound to ensure that nobody is denied their fundamental right to healthcare. This implies that secondary and tertiary care as well as procurement cost of life-saving drugs provided publicly through SUS consumes half of the total federal health budget. Increasingly, states are also getting fiscally stressed in order to ensure access to healthcare with adverse consequences for quality. Without significantly increasing the overall budget, there is little fiscal headroom to further expand primary care and to ensure access and quality of secondary and tertiary care (Gragnolati et.al., 2013).

Figure 2: Accelerated Improvement in IMR across Brazilian Regions



Source: Grangnolati et.al. 2013, data from IBGE

Yet, several challenges remain. Brazil's public expenditure on health, after a period of rapid increase in the last decade, has begun to stagnate mainly due to the slowing economy. Quality of care in public settings is also deficient, leading to an increasing proportion of expenditure on private healthcare insurance which is likely to increase inequality in health outcomes in the long run.

3.4 Financing Responsibility of Federal, State and Municipal Governments

As illustrated in Table 1, the fiscal reforms post-1988 created three main channels of transfers—federal to state, federal to municipal and state to municipal—constituting 15.8 percent of total revenues which was distributed untied to increase fiscal space at the subnational level. Devolution of responsibility and financing of health services to states and municipalities was an integral part of the unified health system.

Following the adoption of the new Constitution, there was a period of macroeconomic instability until 1994. There was a decline in percapita expenditure on health due largely to decrease in allocation by the federal government which was not compensated for by states from their own untied devolved funds. This was followed by a period of recovery from 1995 onwards, but percapita expenditure on health remained relatively stagnant leading to an unfunded constitutional mandate. This motivated the Constitutional Amendment 29 (EC29) that stipulated minimum growth in the federal contribution to health indexed to nominal change in the previous GDP. At the same time, EC29 specified shares of state and municipal spending to their total revenues from taxes and transfers, thereby ring-fencing 12 percent and 15 percent of state and municipal fiscal space for health, respectively. Currently, Brazil's SUS is financed by federal government transfers (20.5 percent of the federal revenue), municipalities (at least 15 percent of the municipalities' revenue), and states (at least 12 percent of the states' budget).

This unique institutional mechanism led to a significant increase in health financing in Brazil, especially during the period of high economic growth from 2003 onwards (Piola et.al. 2016). However, this goes against the principle of greater state autonomy in determining expenditure priorities from devolved resources. Early evidence from India suggests that states like Uttar Pradesh and Bihar have increased budgetary allocations post 14th Finance Commission devolution, relieving the necessity to resort to legal mandates as in the case of Brazil.

The impact of the financing arrangement can be seen clearly from Figure 3 and Table 3. Per capita public expenditure on health increased from around R450 to nearly R800 in less than a decade. At the same time, the increase was shared between the three levels of government, with the share of states and municipalities increasing significantly. Taken together, sub-national governments spend 55 percent of total public expenditure on health in 2010, nearly reversing the funding ratio at the beginning of the decade. However, with the decline in GDP growth from 2012 onwards, federal funding of health is expected to slow considerably and states and municipalities will have to bear additional burden of financing healthcare. Brazil's health financing system is likely facing its biggest challenge in the last decade and a half.

3.5 Prioritization of Interventions and Achieving National Goals

With increasing fiscal autonomy following the promulgation of the 1988 Constitution, states and municipalities also had greater responsibility for management and delivery of healthcare services within their jurisdictions. In large and diverse federal countries, there is a risk of exacerbating existing inequalities if health is not prioritized and aligned with national goals. As explained above, allocations for health increased significantly at all levels of government following the Constitutional Amendment 29 of 2000. This ensured that states and municipalities used their untied fiscal space and conditional transfers for health in a complementary manner to fund the Constitutional mandate for health as a right of the individuals.

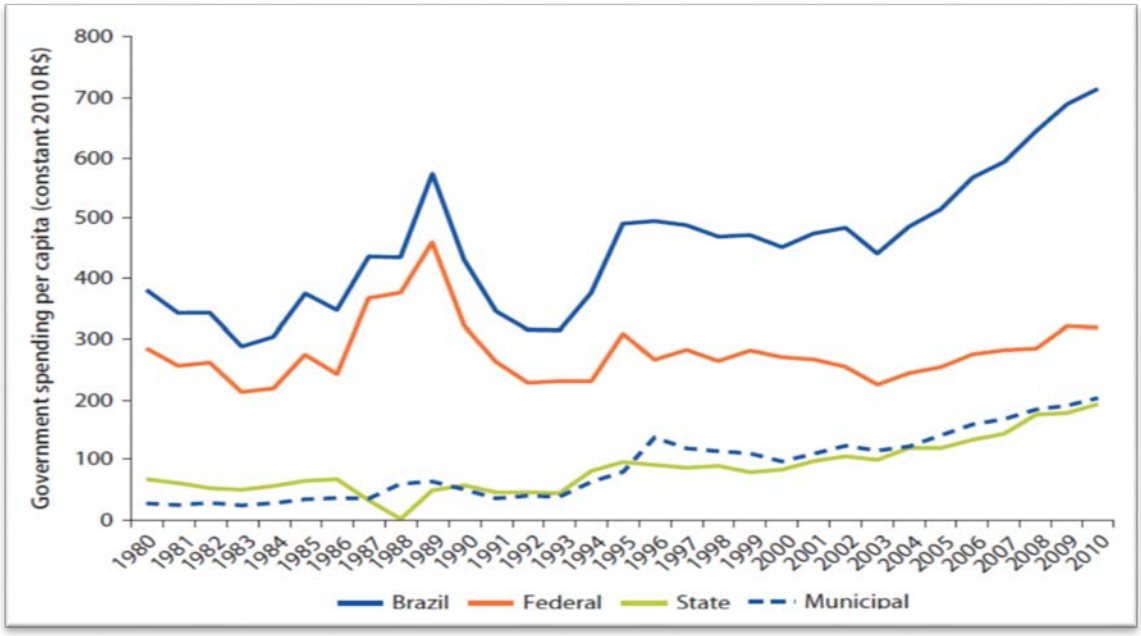
On the financing side, payment mechanisms evolved over time, both for intergovernmental transfers and for payments to providers. Transfers were initially made directly to providers based on service volume (outpatient and inpatient care). Starting in the early 1990s, they became conditional on a set of formal administrative and financial requirements, known as "SUS accreditation" of states and municipalities. Specific transfers were linked to specific programs in order to provide incentives for states and municipalities to implement or expand national policies and programs.

Table 3: Public spending by Federal, State and Municipalities from 2000-2010 (In Billion Real)

Year	Federal		State		Municipal		Total
	R$Billion	% of Total	R$Billion	% of Total	R$Billion	% of Total	R$Billion
2000	38.7	59.8	12.0	18.6	14.0	21.7	64.7
2001	40.0	56.1	14.7	20.7	16.6	23.2	71.3
2002	40.6	52.8	16.6	21.5	19.8	25.7	77.0
2003	38.9	51.1	17.5	23.0	19.7	25.9	76.1
2004	43.9	50.2	21.5	24.6	22.1	25.2	87.5
2005	46.7	49.7	21.7	23.1	25.5	27.2	93.9
2006	49.2	48.4	23.9	23.5	28.5	28.0	101.6
2007	51.6	47.5	26.3	24.2	30.8	28.3	108.7
2008	53.6	44.7	30.8	25.7	35.6	29.6	120.0
2009	61.2	46.9	33.0	25.3	36.3	27.8	130.5
2010	62.0	45.1	36.3	26.4	39.2	28.5	137.5

Source: Piola et.al. 2016

Figure 3: Per capita Public Expenditure on Health in Brazil, 1980-2010, by level of government



Source: Grangolati et.al. 2013

The second half of the 2000s saw a major change in transfer mechanisms when the National Primary Care Policy and the Basic Care Pact (Pacto do Atenção Basica) was negotiated in 2006 between the federal government, states and municipalities. It clarified the definition of responsibilities and fields of care for all levels and specifically devised comprehensive block grants to finance the expansion of primary care. Two parallel mechanisms were implemented: (1) the Basic Care Grant (Piso da Atenção Básica), based on a monthly amount per capita to finance most decentralized public health programs and activities, and (2) the payment mechanism to finance strategic primary health care programs, especially the PSF and the PACS.

To incentivize to implementation or expansion of specific programs, the Ministry of Health increased the number of payment mechanisms significantly. In 2002, more than 100 transfer mechanisms were in place making it extremely complex to effectively monitor outcomes. Since 2011, they have been grouped into five broad block grants: basic care, medium- and high-complexity care, health surveillance, pharmaceutical care, and SUS management.

However, a number of original payment mechanisms are still maintained in several of these grants, implying that the complexity of fiscal transfers has not decreased significantly (Gragnolati et.al. 2013).

The process of regulating the decentralization and regionalization of the health sector in Brazil has gone through several phases since the 1990s. Starting with predominantly a fee-for-service model with national level negotiations between providers and the federal government, it has progressively moved towards block grants for level of care, types of service, programs and functions, while at the same time defining financial commitments and responsibilities at each level of government (Gragnolati et.al. 2013). Prioritization and

commitment to national goals are ensured through bipartite and tripartite committees at the state and national levels respectively, with a set of 31 indicators forming the basis of monitoring, performance evaluation and auditing. This allows the federal government to provide effective policy and financing stewardship and ensure accountability of outcomes.

3.6 Key Lessons for India

Nearly three decades after its inception, Brazil's publicly funded health care delivery has become an important pillar of the country's social protection system. It offers lessons for countries such as India on how to leverage fiscal devolution for comprehensive health financing reform to improve allocations and outcomes both at national and subnational levels.

First, Brazil's Constitution recognizes health as a fundamental right, which the Indian Constitution does not. Establishing health as a legal right ensures that it is at the center of public policy, budgetary allocations and accountability mechanisms. Brazil's publicly funded Sistema Unico de Saude (SUS) was established following the enactment of the 1988 Constitution and has withstood economic crises and changes in government over nearly three decades. To comply with the consitutional mandate, allocations for health increased significantly, resulting in almost three times higher percapita expenditure in 2014 compared to the early 1990s. In India, on the other hand, public expenditure on health as a share of GDP has hardly increased in the last two decades and is one of the lowest among middle income countries.

Fiscal space for health depends greatly on the level of domestic resource mobilization and innovative mechanisms to earmark expenditure and transfers to subnational governments. Brazil's high tax-GDP ratio and the use of dedicated fiscal instruments such as the tax on financial transactions created the fiscal space to increase allocations for health. In the context of fiscal devolution, the federal government has the flexibility to allocate resources according to state-level needs and national goals, especially for primary care. This has not been the case for India, where the tax-GDP ratio remains low and there are no specific instruments to raise extra revenue for health. This leaves the central government with little headroom to allocate greater share of revenues for health, as the recent stagnation of National Health Mission budget suggests.

An important lesson for India in terms of delivery of services comes from how Brazil's federal government in prioritizing primary care through the country's family health initiative and the basic care pact with the support of the states. Performance-based fiscal transfers that are tied to measurable indicators and verifiable contracts increase accountability for financing and delivery on the part of both the federal and state governments. Brazil's multiple coordination mechanisms at the federal, state and municipal levels create the necessary structures to harmonize and implement policies in the pursuit of national goals. This experience provides guidance on how India could use the planning, allocation and public expenditure management tools developed through a decade of practice under the National Health Mission. Similar to Brazil, transfers from the central government to states, districts and local bodies can be made on the basis of formal 'pacts' under the National Health Mission and be allocated based on performance.

One concern that Brazil has overcome and India is still grappling with is the prioritization of health among subnational governments. In Brazil, the federal government has relied on Constitutional amendment to force states and municipalities to increase allocations for health from their own budgetary resources. Although India does not have a similar mandate, the center can still play a leadership role in how it structures transfers and what incentives it creates for states to mobilize resources and prioritize spending on health. There is a strong case to be made for transfers from the central government to be tied to allocation for and performance of heath sector in the states. Clear assignment of responsibility and performance incentives for primary and non-primary healthcare outcomes would enable India's states to compete for resources in the spirit of "cooperative federalism" following the 14th Finance Commission devolution.

4. China: Recentralizing Revenues and Decentralizing Expenditure to Finance Healthcare

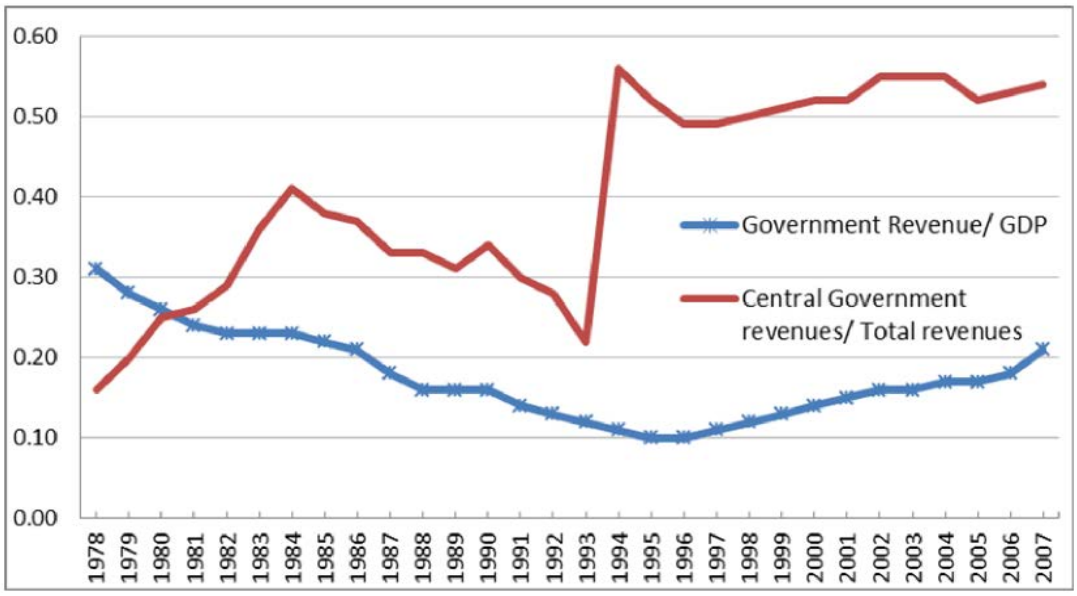
4.1 Pre-reform Context and Key Drivers of the Fiscal Devolution

China's transition from a centrally planned economy to a free market economy shaped the reform of its intergovernmental fiscal relations since the early 1980s. Although China remains a unitary political system, administrative functions and responsibilities have been progressively devolved to local governments at multiple levels—provinces and metropolitan areas; prefectures and municipalities; counties and urban districts; and finally townships and villages.

Fiscal reforms started at the same time as market reforms that were initiated in the early 1980s. At that time, there were there were major changes in revenue collection, the devolution mechanism and expenditure assignment between the central and subnational governments. Within a decade, China moved rapidly from a centralized economic system to one of the most decentralized structures of economic governance in the world. From a fiscal standpoint, the post-reform period can be divided into two distinct phases:

1. Ad-hoc decentralization period (1979-1993): The fiscal reforms in this period were aimed at promoting local economic development by increasing the responsibilities and autonomy of local governments to carry out fiscal functions while at the same time ensuring adequate degree of fiscal control by the central government. The central and provincial governments negotiated and signed revenue sharing contracts which formed the basis of transfers between higher and lower levels of government. Revenues were divided into three types: central fixed revenue, local fixed revenue and shared revenue. The bases and rates of all taxes were determined by the central government which also captured 80 percent of all shared revenue. The Contract Responsibility System (CRS) created significant disincentives for subnational governments to collect and remit taxes to the central government. Consequently, tax-GDP ratio fell from nearly 30 percent in 1978 to just over 10 percent in 1993. After a period of initial increase, the share of the Central government in total revenue declined from 40 percent to 20 percent between 1983 to 1993. This put a severe strain on its fiscal system and destabilized public expenditure, especially in social services such as health, education and social protection (Figure 4).

Figure 4: Total Government and Central Government Revenue shares, 1978—2007



Source: Jing and Liu, 2009

2. Fiscal devolution period (1994—present): Fiscal reform of 1994 recentralized revenue collection ending the dependence of the central government on transfers from provinces. It also put central-local revenue sharing on a more transparent and objective basis by replacing negotiated contracts with a rule-based system of tax devolution. There was an immediate impact on central government revenues, which increased from 22 percent of total revenues in 1993 to 56 percent in 1994 and has remained relatively constant thereafter (Figure 4). However, local governments were saddled with a heavy expenditure burden without adequate compensatory transfers, leading to higher unfunded mandates, especially for social services such as health, as we see below.

4.2 Nature of Intergovernmental Fiscal Transfer reform

China's current fiscal system was effectively built from its foundations as it transitioned from a centrally controlled economy to a market economy from 1978 onwards. After an initial period of experimentation with CRS where the provinces held significant power, changes in the taxation system and the introduction of formula-based transfers have given rise to a system of "federalism with Chinese characteristics" whereby the central government holds the balance of tax power with expenditure functions distributed among the lower tiers of government. Three key areas of reform merit greater attention:

1. Assignment of taxes between Central and Local governments: The 1994 fiscal reform formalized the system of tax sharing among the central and the various tiers of local governments, characterizing them as either central, local or shared taxes. It also stipulated the ratios by which the shared taxes would be distributed between the Centre and the provinces. The present taxation structure has two main features. First, the central government gets control over major shared taxes, collecting 75 percent of VAT and 60 percent each of corporate and personal income taxes, in addition to consumption tax and tariffs which is exclusively in its domain. Subnational taxes constitute 30 percent of total tax

revenue, which is supplemented by transfers from shared taxes to the extent of around 37 percent (Table 4). The revenue assignment therefore creates a significant vertical imbalance that is only partially mitigated by fiscal transfers through the institution of shared taxes between the centre and the states. Moreover, the distribution of taxes among the various tiers of subnational governments is skewed towards the upper tiers (provinces and prefectures) vis-à-vis counties and townships/municipalities thereby exacerbating the existing vertical imbalances in revenue assignment (Table 5).

Table 4: Share of Assigned Taxes in National and Local Revenue, 2011

	Central Revenue (%)	Subnational Revenue (%)	Total Revenue (%)
Central Tax	32.8	0.0	17.8
Shared Tax	66.5	36.9	53.0
Subnational Tax	0.7	63.1	29.3
Total	100.0	100.0	100.0

Source: Wang and Herd (2013)

Table 5: Distribution of Tax Sources by Level of Subnational Government, 2009

	Total Revenue (Billion RMB)	% of GDP	Provincial	Prefecture	County	Township	Total
VAT (s)	457	1.3	19.6	32.0	31.9	16.6	100.0
Corporate income Tax (s)	392	1.2	37.8	31.1	23.0	8.1	100.0
Personal Income Tax (s)	158	0.5	34.6	31.2	25.1	9.0	100.0
Business Tax	885	2.6	29.2	30.5	29.1	11.3	100.0
Urban Maintenance and Dev. Tax	142	0.4	6.4	44.5	36.1	13.0	100.0
Property Tax	34	0.1	8.0	37.9	39.7	14.5	100.0
Resource Tax	481	1.4	19.4	16.7	37.0	26.9	100.0
Other	49	0.1	6.3	32.2	40.7	20.7	100.0
All Taxes	2597	7.6	23.3	32.9	31.1	12.7	100.0

Source: Wang and Herd, 2013. Note: (s) denotes shared taxes

2. Devolving expenditure responsibilities to subnational governments: Since 1994, spending undertaken by subnational governments has increased considerably while expenditure by the central government has remained largely unchanged. Over 80 percent of public expenditure is in the domain of provinces, prefectures, counties and townships, including nearly all social services and social safety nets. Among the subnational units, counties spend over half of all public expenditure on education and health due to shifting of expenditure responsibilities from higher levels of government. In the absence of specific

central government guidelines, the division of expenditure responsibilities among sub-provincial governments is left to the discretion of each level of government. Therefore, there is a cascading effect of expenditure responsibility where provinces determine assignments to prefectures, prefectures to counties and in turn, counties to townships. However, given the limited administrative and fiscal capacity of the lowest levels, counties end up with the highest expenditure burden without commensurate transfers to finance the delivery of services. As we see from Table 6, the deficit between revenue and expenditure at the subnational level is 7.9 percent of GDP, out of which 3.2 percent is contributed by the imbalance at the county level. This has significant adverse consequences for key social services, including health.

Table 6: Subnational Unfunded Expenditure Mandate (RMB Billion)

	Revenue	Expenditure	Revenue Deficit	Deficit as % of Total Revenue	Deficit as % of GDP
Central	**3878**	**1814**	**2064**	**53**	**6.1**
Subnational	**5543**	**8220**	**-2677**	**-48**	**-7.9**
Provincial	1220	1736	-516	-42	-1.5
Prefecture	2063	2510	-447	-22	-1.3
District	957	1291	-334	-35	-1.0
County (city)	383	710	-327	-85	-1.0
County	**403**	**1498**	**-1094**	**-271**	**-3.2**
Township	410	458	-48	-11	-0.1

Source: Sen et.al. (2014)

3. Subnational off-budget and extra-budgetary finance: As a consequence of the tax sharing and expenditure mechanism, revenues generated through outside the budgetary system through fees and proceeds from land sales are a major instrument to help close the fiscal gap at the subnational level. Since 1994, the volume of extra budgetary resources collected has increased significantly constituting nearly 60 percent of subnational budgetary revenue in 2000. However, in a federal system, off-budget revenues often generate distortions in the tax and transfer mechanism, increase inequity, undermine transparency and incentivize corruption. Fees and user charges, the most common instruments for extra-budgetary finance, impedes access to services with particularly adverse consequences for the poor. Moreover, prefecture and county governments finance a significant portion of their budget deficit through the sale of agricultural land for industrial and urbanization projects—which is unsustainable in the long run. Given this, the need to reduce fiscal gaps through off-budget revenue generation may explain the significant rise in out-of-pocket expenditure to access health services and spatial inequality in rural-urban health outcomes in the 1990s (Fan, Kanbur and Zhang, 2011).

Table 7: Taxes and Non-tax revenue as share of GDP

		Central	All Sub-national	Provincial	Prefecture	County	Township
1	**Taxes**	**9.8**	**7.6**	**1.8**	**2.5**	**2.4**	**1.0**
2	**Non tax revenue**	**1.6**	**4.4**	**1.5**	**1.4**	**1.4**	**0.2**
	Fees and penalties	0.2	2.2	0.8	0.7	0.6	0.1
	Asset income	0.0	0.6	0.1	0.2	0.3	0.0
	Other	1.4	1.7	0.7	0.5	0.4	0.1
3	Land sales (net)	0.0	2.1	0.1	1.1	0.9	0.0
4	**Non tax + land sales [2+3]**	**1.6**	**6.5**	**1.7**	**2.5**	**2.2**	**0.2**
5	**Total revenue [1+4]**	**11.4**	**14.2**	**3.4**	**5.0**	**4.6**	**1.2**

Source: Wang and Herd (2013)

Apart from extra-budgetary resources, local governments have high levels of outstanding debts to the tune of $2.8 trillion, or nearly 60 percent of GDP. Most of this debt is owed to the central government at very high rates of interest that are well above the market rate. As a result, local governments are faced with significant debt servicing costs that limits fiscal space and constrains budgetary allocations in sectors such as health (The Economist, 2016).

4.3 Fiscal Reforms and Impact on Subnational Health Financing

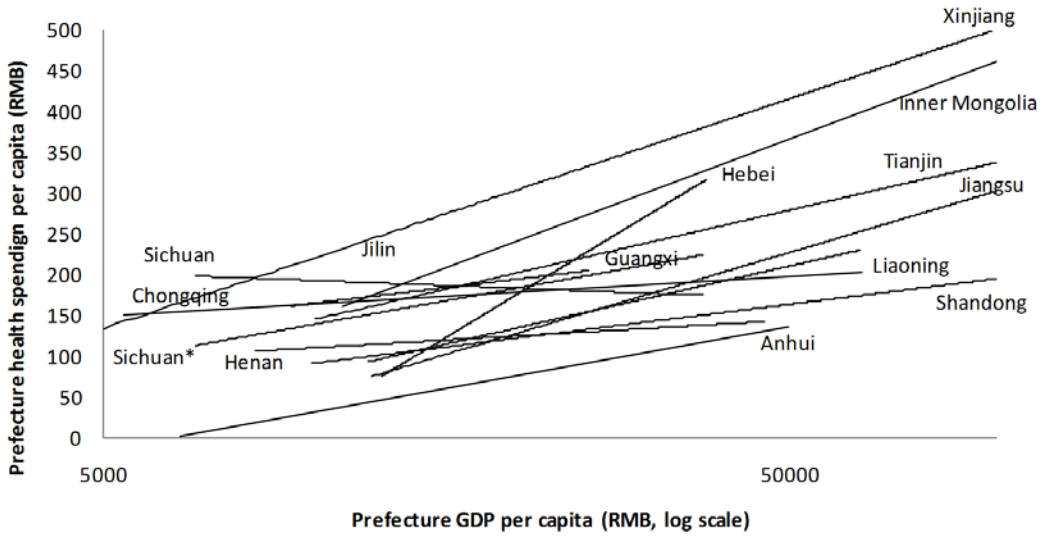
The goals of China's fiscal reforms in 1994 were to recentralize budgetary decision-making and enabling the central government to better control policy implementation across the country. The reforms devised a set of transfers to accommodate a substantial increase in the share of expenditure in areas where subnational governments had the major responsibility, such as health. The transfers were of three types: general transfers were introduced to lower disparities in fiscal space across provinces; compensation transfers were designed to reduce revenue loss from the introduction of VAT; and earmarked transfers were used to subsidize local public goods by filling expenditure gaps. Nearly 90 percent of transfers were either general or earmarked. Together, these three types of transfers were intended to address the inequality in fiscal capacity generated by the previous system of fiscal contracts that prevailed before 1994.

General purpose transfers do not address inequalities in health spending across sub national units as health indicators were not explicitly included in the equalization transfer formula. To implement national healthcare priorities, the central government has increasingly relied on vertical programs and earmarked special purpose transfers. From 2003 to 2010, the number of vertical public health programs increased from 10 to 44, making up nearly 95 percent of the central government's expenditure on health (Brixi et.al. 2012).

Earmarked transfers are conditional on cost-sharing by the subnational governments. This gives rise to two issues vis-à-vis subnational health financing: (i) it incentivizes provinces and prefectures to shift the expenditure burden on counties and townships, thereby increasing already large revenue gap; and (ii) it imposes direct and indirect costs of administration, delivery and monitoring due to the fragmented nature of the transfers thereby weakening accountability.

As a consequence of fiscal imbalances at the subnational level, the extent of inequality in per capita public spending on health across provinces has risen since 2001 (Brixi et.al. 2012). Moreover, expenditure on health is increasingly skewed towards urban areas that have higher household incomes. Evidence also suggests that inequity in spending on health has risen within provinces and prefectures, with a significantly positive relationship between prefectural GDP and per capita health expenditure (Figure 5).

Figure 5: Per capita public health expenditure and provincial GDP per capita, 2008



Source: Brixi et.al.2012; Primary data from China and Provincial Statistical Yearbook

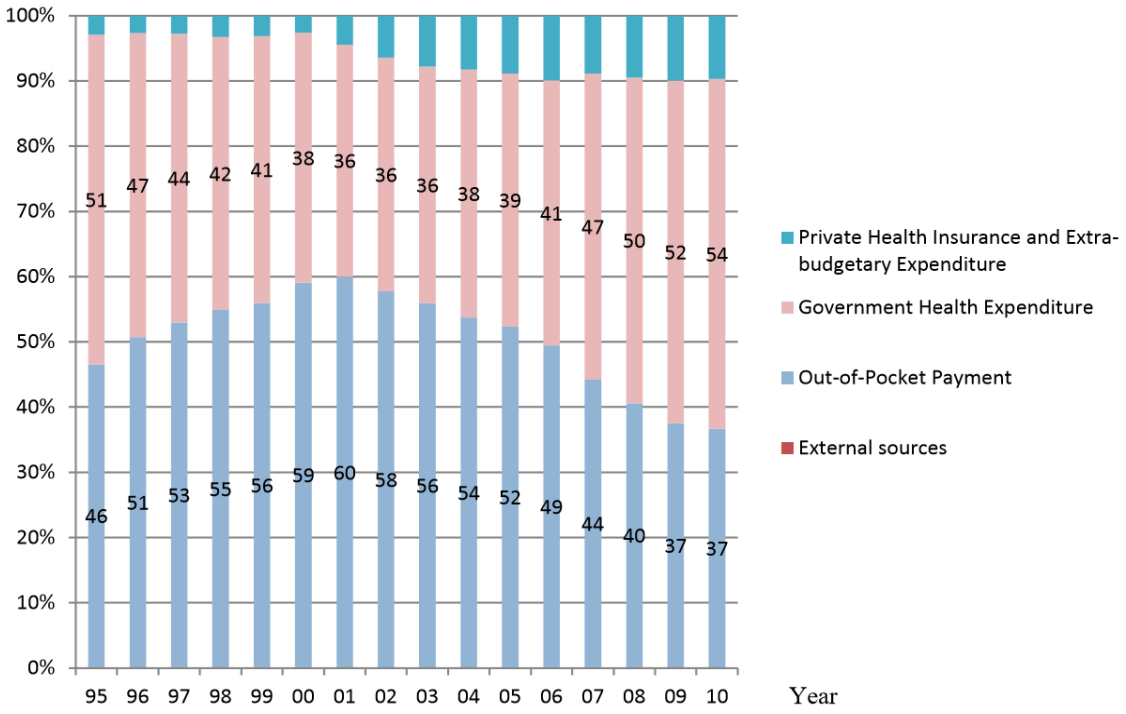
The other source of inequality in the post 1994 period stems from the rural-urban divide in health. China is a highly dualistic economy where urban and rural areas have different economic trajectories, fiscal conditions, and social outcomes. China's system of community health care and the so-called "barefoot doctors" were credited with providing almost universal access to basic public health services in rural areas before the market reforms were initiated in the late 1970s. However, the transformation of the rural economy to the household responsibility system broke up the communes and converted the barefoot doctors into private rural medical practitioners without the requisite skills for undertaking clinical care. Both quality and coverage of rural health services deteriorated, while the cost of health care continued to rise in China.

Decentralization of expenditure on social services to the rural county and township level combined with unfunded expenditure mandate led to differences between rural and urban health outcomes (Blumenthal and Hsiao, 2005). While the infant mortality rate has declined significantly in absolute terms from 58 to 17 in rural areas and from 17.3 to 6.2 in urban areas between 1991 and 2009, the difference is still significant. For maternal mortality rate, the gap is narrower, the difference being only 7.4 in 2009 compared to 65.6 in 1991. This reflects the focus on maternal health services and subsidy for hospital-based delivery from the central government.

At the household level, the impact of fiscal reform has mostly been felt in terms of the increase in out-of-pocket expenditure which followed the collapse of the state-funded system in the 1980s and 1990s. The share of out-of-pocket expenditure increased significantly from 46 percent in 1995 to 60 percent in 2001 (Figure 6). Although the out-of-pocket share subsequently fell to 37 percent in 2010 mainly due to the expansion of the rural and urban insurance schemes, expenditure on private health insurance and extra-budgetary

expenditure rose steadily during the same period. Taken together, health costs as a share of household income in China remains high compared to other OECD and upper middle income countries.

Figure 6: Government and out-of-pocket spending as a share of total health expenditure



Source: Liang and Langenbrunner (2012); Basic data: WHO National Health Accounts

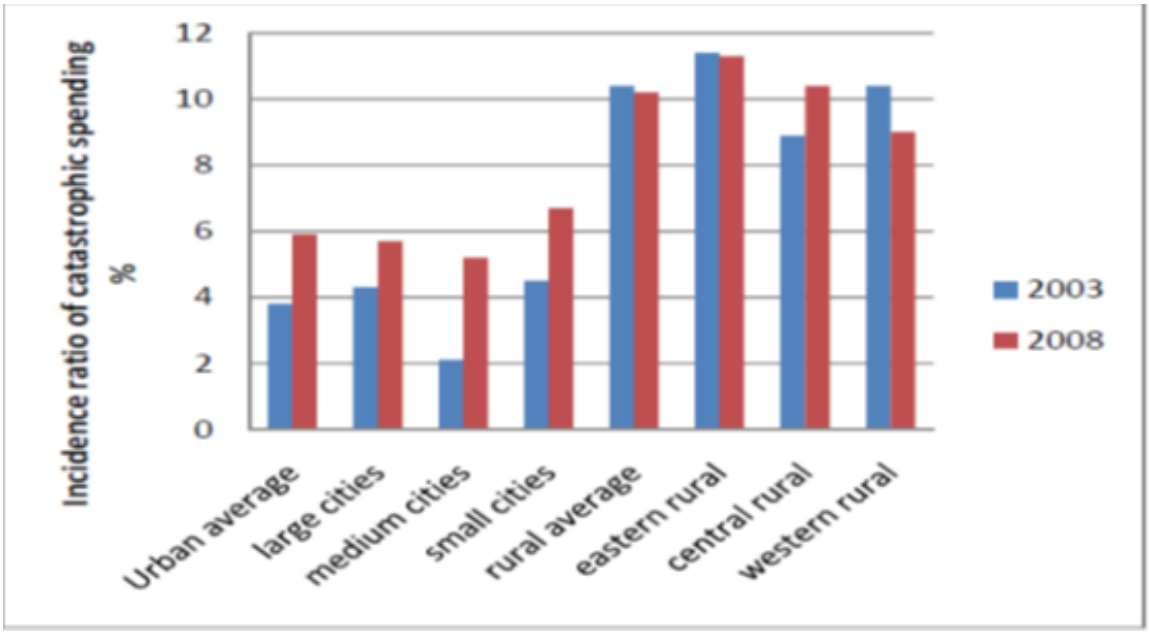
This is particularly true of catastrophic health expenditure among low-income households. In spite of an increase in government expenditure on health, over 10 percent of low income rural households reported catastrophic health expenditure, i.e., health spending exceeding 40 percent of annual household income. Interestingly, relatively richer areas of eastern China reported the highest rate of catastrophic health expenditure, compared to the relatively poorer western regions. Moreover, the largest increase in incidence is reported from urban areas, especially small and medium-sized cities. This is significant in the context of rapid urbanization in China, which seem to increase the chances of poorer households in newly urban areas being adversely affected by expenditure on healthcare (Figure 7).

4.4 Financing Responsibility of Central and Subnational governments

Nearly a decade after its inception, China's fiscal reforms entrenched existing inequities in public expenditure on health across regions, within provinces and among different levels of subnational government. The SARS pandemic in 2002 and growing public discontent with the cost of healthcare served as warnings to the Chinese political leadership on the dangers

of a dysfunctional health system both from an economic and social viewpoint. As the adverse consequences of fiscal stress on subnational healthcare delivery became clear, the central government decided to intervene directly to correct the inequities and deficiencies in subnational health expenditure creating the impetus for wide-ranging health system reform in China from the mid-2000s (Blumenthal and Hsiao, 2005).

Figure 7: Catastrophic health expenditure among low-income households, rural and urban



Source: Brixi et.al, 2012

Beginning in 2009, China started a massive reform of its health system, including the financing and delivery of health services in urban and rural areas. The basic rationale was to reinstate the government's role in healthcare, especially in the provision of public goods, ensuring financial protection and promoting equity—all in the context of the goal of 'building a harmonious society' (Wong 2013). The health system reform had five key components: increase and accelerate coverage of the basic health insurance system; establish a primary level health service system; promote the equalization of basic public health services; establish a national essential drugs list; and facilitate pilot reform programs in public hospitals. China has rapidly expanded insurance and achieved universal coverage within a short span of three years while working towards the long-term national health system reform goals (Yip et.al. 2012).

Among China's insurance schemes, the Urban Employed Basic Medical Insurance (UEBMI) replaced the previous employment-based mechanisms in 1998, but had limited coverage until the health sector reforms began in earnest in 2009. The New Rural Cooperative Medical Scheme (NCMS) was launched in 2003 to ensure financial protection for the rural population. It replaced the erstwhile Cooperative Medical Scheme started in the mid-1950s.

The Urban Resident Basic Medical Insurance (URBMI) came into effect in 2007 targeting children, the unemployed and the physically handicapped. In addition, the Medical Assurance program managed by the Civil Affairs Ministry, became responsible for paying the individual contributions of poor families thereby extending financial protection to the most vulnerable populations.

While a full assessment of China's health system reform is beyond the scope of this paper, a review of the literature suggests that its major success has been in the context of expanding coverage of the three basic insurance mechanisms described above. A summary of the schemes and the status of implementation is provided in Table 8. All the schemes achieved near universal enrolment by 2011, with the NCMS reaching nearly 850 million individuals across all of rural China. Both NCMS and URBMI are heavily subsidized by the government with a reimbursement ceiling of six times the annual income, both in rural and urban areas. By 2011, the government subsidy for each enrolment into NCMS and URBMI was RMB200, with the individual paying between RMB 30-50 (Yip 2012).

The division between central and subnational government is, however, not uniform. The central government pays half the enrolment subsidies for western and central regions and none for the eastern provinces. This may be one reason for the high catastrophic health expenditure by low income households in rural regions of the eastern provinces depicted in Figure 7. Moreover, the division between central, provincial and municipal/county funding varies significantly (Table 9). In Ningxia, an autonomous region in the northwest, the central government pays RMB124, provincial government RMB68 and the county government RMB8, implying that the subnational share is little under 40 percent of the total subsidy. By contrast, Shandong, the third richest province in China, does not receive any central subsidies. Enrolment costs are shared wholly between the province, prefectural and township governments, with the latter two contributing over 70 percent of the total subsidy (Yip 2012).

Table 8: Summary of China's three public insurance programs as of 2011

	UEBMI	URBMI	NCMS
Target Population	Urban employees	Urban children, students, unemployed, disabled	Rural residents
Enrolment rate (%)	92	93	97
Number of enrollees (Million)	252	221	832
As % of China's population	19	16	62
Unit of enrolment	Individuals	Individuals	Households
Risk pooling unit	City	City	County
Premium per person per year (US$)	240	21	24
Including government subsidy (US$)	0	18	18
Benefit Coverage			
Inpatient reimbursement rate (%)	68	48	44
% counties/cities covering general outpatient care	100	58	79
% counties/cities covering outpatient care for chronic illnesses	100	83	89
Annual reimbursement ceiling	Six times average wage of employee in the city	Six times disposable income of local residents	Six times income of local farmers

Source: Yu (2015)

Table 9: Cost sharing between Central and Subnational governments, Ningxia and Shandong

	NCMS (RMB200)				**Public Health and Primary Care (RMB25)**			
	Center	Province	Prefecture	County	Central	Province	Prefecture	County
Ningxia	124	68		8	20	4		1
Shandong	0	55	75	70	0	7.5	7.5	10

Source: Yip (2012)

A similar situation prevails in the capitation payments for public health and primary care, where the government provided RMB25 per capita to primary healthcare providers to deliver a defined package of public health services in their catchment areas. Taking the example of Ningxia and Shandong, the contribution of the central government was RMB20 in the former and no contribution for the latter. As in the case of the insurance subsidy, the burden on lower levels of subnational governments in Shandong is nearly 70 percent, while the provincial level contributes only 30 percent of the total cost of primary care delivery.

The cost of this wide-ranging reform is significant both in the short and the long term. On aggregate, expenditure on the health system reform increased the share of public expenditure on health from 0.9 percent to 1.4 percent of GDP within three years from 2009 to 2011. While the design of the reform has been a centralized process, the majority of its funding, implementation and monitoring depend heavily on subnational authorities (Meng, Xu and Zhang, 2012; Yip et.al. 2012, Wong 2013, Bloom 2011, Wagstaff et.al. 2009). Of the RMB850 billion three year health system reform allocation in 2009, only around 40 percent (RMB 331.8 billion) came from the central government. Local governments therefore bear around 60 percent of the short term cost of the reform, while its expenditure commitment in the long run is still unclear (Yip et.al. 2012).

4.5 Prioritization of Interventions and Achieving National Goals

China's unique political-economy has enabled it to mobilize all administrative units in the pursuit of national goals within a short time period. From Mao's "great leap forward" to Deng Xioping's "socialism with Chinese characteristics" and Hu Jintao's "harmonious society," political directives have often shaped the prioritization of sectors and strategies to achieve broad targets.

The equity principle in Hu Jintao's 'harmonious society' slogan was intended to address the social tensions created due to the disparity in education, health and social services between provinces and among rural and urban areas after the fiscal reforms of 1994. Public expenditure on health as a proportion of total health expenditure fell from 32 percent to 16

percent between 1978 and 2003, and out-of-pocket spending increased from 20 percent to 55 percent in the same period (Yip 2012, annex). At the same time, outbreaks of communicable diseases put public health and financial protection at the center of the policy debate, especially the role of local governments in the deficiency in financing and delivery of health services.

Given this environment, the health system reform was greeted enthusiastically by subnational governments as a way of contributing to the national objective of reducing health inequity. As a unique feature of China's health care reform, the central government required local governments to take both political and financial responsibilities for expanding coverage. The central government signed 'responsibility forms', i.e., political contracts with provincial governments, which further delegated tasks through contracts with municipal or county governments. The contract stipulated enrolment target of 90 percent by NCMS and URBMI as a performance evaluation criterion for provincial and local public officials. With delegated political responsibilities, local officials helped achieve the target of universal enrolment in less than three years (Yu 2015).

On the financial side, the enrolment targets were matched by strong incentives of central funding which subsidized almost 60 percent of the total cost in economically weaker regions of central and western China. For rural residents, the economic incentive to enroll is strong because of high government subsidies, complementing the economic and political incentive of local governments to expand coverage. For eastern provinces, however, the central component of the subsidy is non-existent, which implies that accountability through political contracts was the determining factor in subnational government effort to achieve national targets.

This discretionary method of allocating subsidies for mandated health insurance suffers from the same problems of disincentives and accountability as the wider fiscal devolution system. A major drawback of the financing mechanism is the large number (over 2800) of county level risk pools managed by NCMS offices throughout the country. There are multiple sources of inflows and outflows across all levels of government which makes the system administratively complex. Moreover, due to the disparity in health expenditure following the 1994 fiscal reforms, poorer counties often encounter difficulties in raising their share of the pool funds. This results in significant delays in receiving central government transfers and payments to providers with adverse consequences for quality of service delivery. To achieve long term equity, risk pools may be needed at higher levels of government, either provincial or prefectural (Liang and Langenbrunner 2013).

As China expands its ambit of the health system reform and sets ambitious universal health coverage goals for 2020, opaque fiscal transfers for health will lead to misallocation of resources and reduced equity in health financing at the subnational level. Fiscal cost to local governments to fulfill their responsibility in the new financing architecture will grow over the long term and will almost certainly necessitate further reform in intergovernmental fiscal transfers in general and for health in particular.

4.6 Key Lessons for India

China's experience underlines the critical role of a stable system of intergovernmental fiscal transfer system to achieve equitable financing for health at the subnational level. Health outcomes deteriorated significantly during the 1980s and 1990s as China undertook market reforms, drastically restructured subnational revenue and expenditure assignments and reduced public expenditure for health. The current health system reform partially addresses the underlying inequities in fiscal transfers for health generated through years of decline in public expenditure on health. There is, however, considerable uncertainty on the implications of the massive and sudden expansion in health coverage from 2009 and the long term fiscal burden at the subnational level.

While the institutional basis of fiscal transfers through Finance Commission in India is comparatively more predictable than the political economy of fiscal transfers in China, there is still considerable uncertainty of states' fiscal space under the current devolution scenario. China's fiscal reform experience suggest that this policy uncertainty is not conducive to increasing states' commitment to increase allocation for health.

Unfunded mandates pose significant challenges to improve the equity and efficiency of fiscal transfers for health. This problem is especially serious in China but the lessons are relevant for India too. Decentralization of expenditure and service delivery to lower levels of subnational governments such as districts, municipalities and rural local bodies will create financing inefficiencies and capacity bottlenecks. Devolving responsibility for delivery without adequate fiscal capacity must be avoided as India restructures its financing of the National Health Mission in the coming years. Moreover, as we have seen in western China, intra-state disparities in expenditure and outcomes may significantly increase, especially in relatively poorer regions within a state if these are not addressed effectively.

China's current health system reform also holds some lessons in the Indian context. China's move towards a mixed system of publicly funded primary care and publicly subsidized secondary and tertiary care is dependent on strong stewardship and financing by the central government. Fiscal transfers to states in China are ad-hoc and there are no clear guidelines on the nature and type of services covered under the insurance mechanisms, somewhat similar to India's current RSBY structure. This leaves significant discretionary powers with the service delivery units which becomes a challenge in the context of an already existing budget constraint. This underscores the critical role of equalizing transfers, incentives and performance-based payments to ensure equity in health services, especially for the poorer and more disadvantaged regions. The medium and long outcome of China's health service reform would be of considerable interest to India's own fiscal devolution and health financing reform currently underway.

5. Mexico: Achieving Universal Coverage through Transfers for Health Insurance

5.1 Pre-reform context and key drivers of fiscal reform

Mexico was the first country in Latin America to be inducted into the Organization of Economic Cooperation and Development (OECD) in 1994. With a population of 113 million and a per capita GDP of US$9009 in 2015, Mexico is one of the largest economies in the Latin America and the Caribbean (LAC) region and a member of the OECD.

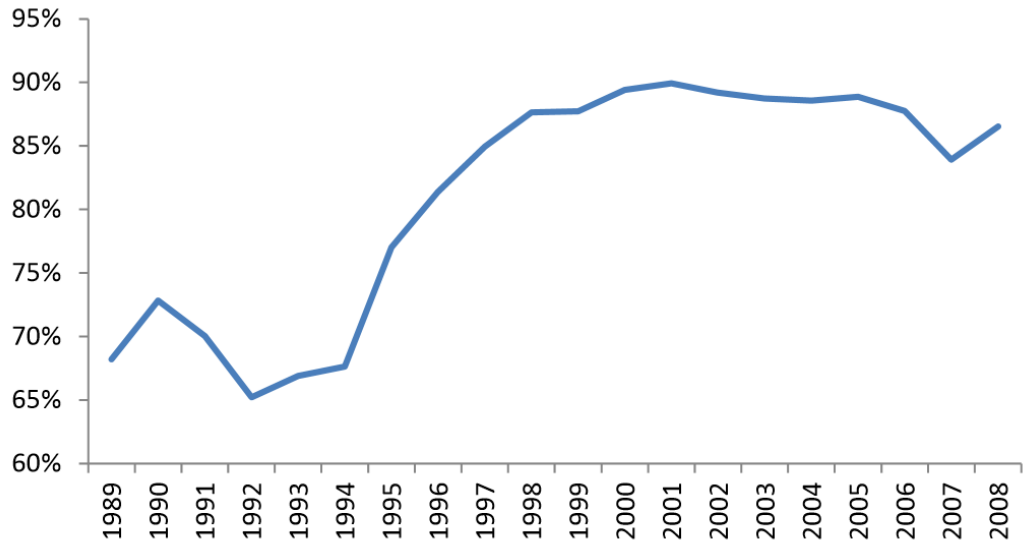
In terms of political organization, Mexico is a federal country with a three-tier government structure similar to Brazil, divided into 31 states and one federal district, with nearly 2500 municipalities that serve as the lowest tier of government. Compared to other large and diverse federal countries, states and municipalities are less fiscally autonomous and this degree of autonomy has in fact *reduced* over the last two decades.

Intergovernmental relations in Mexico are characterized by huge vertical imbalance. For states, almost 90 percent of their total revenues are derived from federal transfers (Figure 8). Following changes to the fiscal coordination law in 1998, federal transfers to subnational governments rose from 6.8 percent of GDP to 8.1 percent in 2006, reflecting changes in the devolution formula and expenditure assignments (Ahmed et.al. 2007). These expenditures are not 'decentralized' in the true sense; rather, most are financed by special purpose transfers from the federal government without significant contribution from states' own resources.

Mexico employs three basic types of intergovernmental transfer instruments: general transfers (participaciones) that are in the nature of block grants, specific transfers (aportaciones) for sectors such as health, and revenue sharing from federal taxes that are administered and collected by the states. Taken together, general and specific transfers constitute 85 percent of state resources, which implies a very high level of vertical inequality between the federal government and the states. Since 1990, states have gone from raising 32 percent of their total resources to 10 percent on average (Figure 8).

From 1990, the expenditure responsibility of states has increased significantly as a share of total public expenditure. It rose from nearly 25 percent in 1989 to 50 percent in 1994, declined to less than 40 percent following the Mexican peso crisis of the mid 1990s, and has risen again to around 60 pecent in 2008 (Figure 9). Together with the reduced share of states' own revenue collection, Mexico's fiscal transfer system have undergone a structural transformation leading to increased reliance on federal-to-state transfers to finance social services at the subnational level.

Figure 8: Share of State Revenues from Federal Transfers, 1989—2008 (%)



Source: Instituto Mexicano de la Competitividad (IMCO), 2010

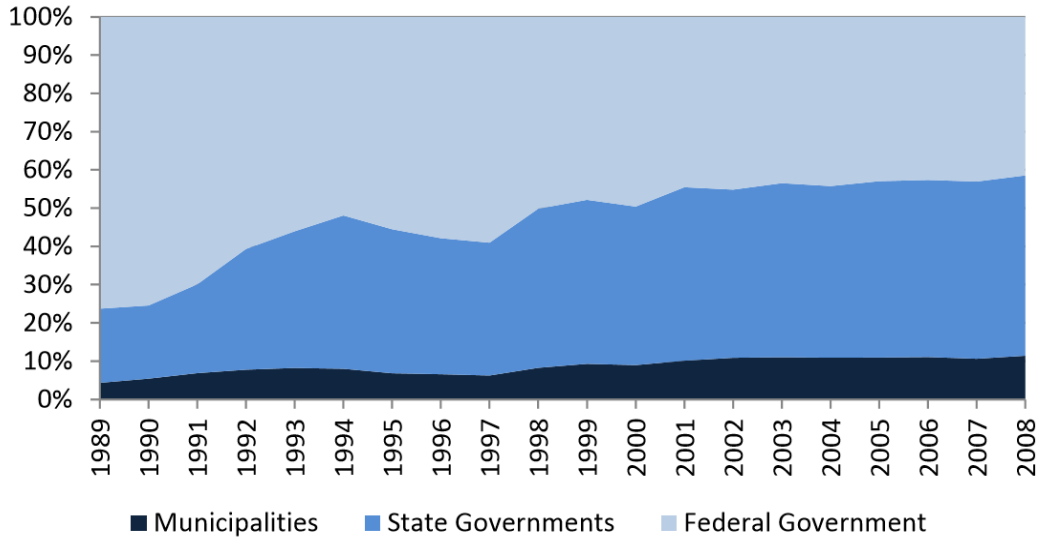
Table 10: Sub-national government's revenue sources, 2009

Sources of Revenue	Share in subnational revenue (%)	Share in GDP (%)
Federal Transfers	85	8.1
Non-earmarked transfers (Participaciones)	40	3.7
Earmarked transfers (Aportaciones)	38	3.8
Other transfers	7	0.6
Own Revenue	11	1.0
Debt Financing	4	0.4
Total	**100**	**9.5**

Source: OECD analysis, from Caldera Sanchez (2013)

This move towards greater centralization of revenue implies that states act as agents for delivery of services, such as health and education. Finances are devolved to states for specific uses on the basis of a centralized design and implementation framework. This also makes central oversight critical to achieve outcomes at the state level. However, this was often difficult due to the complexity of fiscal arrangements, use of discretionary transfers and the lack of transparency and comparability of subnational expenditure data. Fiscal reforms in 2007 reforms sought to correct these shortcomings, but have had only limited success (IMCO 2010).

Figure 9: Expenditure Assignment of Federal, State and Municipal governments, 1989—2008



Source: Castaneda and Pardinas (2012)

5.2 Nature of Intergovernmental Fiscal Transfer Reform

The primary objective of Mexico's public finance reform in 2007 was to strengthen its federal fiscal framework by devolving additional taxation power to states and reducing states' dependence on transfers. It also sought to address the issue of efficiency and transparency of public spending, which was one of the main drawbacks of the earlier fiscal transfer system. However, the reforms had limited impact on both counts and the fiscal structure has remained largely unchanged over the last decade.

1. Tax instruments to increase own revenue: The reform aimed to provide states with more options to generate revenue which they could use unconditionally. These included (i) a surcharge tax on the sales of a subset of goods including tobacco and alcohol which were federally taxed (IEPS), (ii) a new tax on gasoline and diesel collected and administered by the states with the base rate being set by the federal government, and (iii) the transfer of vehicle tax (tenencia) from the federal to the states' domain. These new taxes have relatively limited revenue raising capacity and are not sufficient to close the gap between own revenues and transfers at the state level. Moreover, few states have shown interest in using their new

taxation powers due to potentially adverse electoral consequences for state-level elected officials. Consequently, the share of own revenues in total subnational revenue has increased only moderately from 10 percent in 2007 to 10.5 percent in 2010 (OECD Fiscal Database).

2. Modifying the formula for unconditional transfers: The 2008 fiscal reform modified the allocation formula for the *Fondo General de Participaciones***,** the largest component of federal funds which is transferred directly to state budgets. Before 2007, the fund was distributed to the states on the basis of three components: an equal per capita transfer, shared revenue from federal taxes raised by states and a redistributive component for states with low tax base and population density. Under the previous system, the per capita transfer and shared revenues constituted 90 percent out of total transfers, leaving little fiscal space for redistributive transfers to correct horizontal imbalances across states.

Since 2008, the new formula links federal transfers directly to population size (60 percent), GDP growth (30 percent) and own tax collection effort (10 percent). States are therefore incentivized to put policies in place to stimulate economic activity and raise revenue. There is little evidence on whether this change in fiscal allocation rules has had the intended effect, with one study showing significant underperformance in revenue collection efforts both at the state and municipal levels (Castañeda and Pardinas, 2012).

The fiscal reforms in Mexico did not change the structure of intergovernmental transfer system and thus had little impact on reducing vertical or horizontal inequalities. Moreover, to ensure no state lost out from the reform, the transfers received by each state was fixed in nominal terms at the 2007 level and the new formula was applied to the devolution of marginal increase in post-reform transfers. In this context, structural reform to increase efficiency and improve equity of earmarked transfers (aportaciones) assumes significance, especially in health as we analyze below.

5.3 Fiscal Reforms and Impact on Health Financing

Mexico's health system reform which began in 2003 has received wide attention due to its success in achieving universal health coverage within a relatively short time-span of 10 years. This followed nearly two decades of decentralization of health services by the federal Ministry of Health to states starting in 1985. By early 2000, Mexico's health system consisted of three distinct parts. Access to healthcare with financial protection was offered by the Mexican Institute of Social Security (IMSS) and the Institute for Social Security and Services for Civil Servants (ISSTE) for formal private and public sector workers respectively to nearly 45 percent of the population. Coverage through private insurance covered an additional 4 percent, and just over half the population were uninsured who depended on publicly funded health services delivered by states.

The subnational health system was funded by earmarked transfers from the federal government budget allocation, known as *Ramo 33*, through the Fondo de Aportaciones para los Servicios de Salud (FASSA). Until 2003, the distribution of this federal transfer to provide health services for the uninsured population was largely based on historical costs of each state. The costs varied widely across states depending on the number of facilities and health professionals, rather than health needs of the population.

Moreover, public financing was highly inequitable across states favoring those covered by formal social security. In 1999, the median ratio of per capita public expenditure for insured versus uninsured was 2.3, with Distrito Federal, Guanajuato, Veracruz and Puebla spending over four times per capita on those covered by IMSS and ISSTE compared to those who were uninsured. Contribution by states from their own budget was also minimal. Half of the states contributed less than 10 percent of public expenditure for the uninsured, implying an overwhelming dependence on federal transfers for providing health services to over half the population. Given the problems of low revenue base and transfers linked to historical costs, this contributed to the perpetuation of regional disparities through much of the 1980s and 1990s

In the early 1990s, evidence from National Health Accounts suggested that more than 50 percent of health expenditure was out-of-pocket due mainly to insufficient and inefficient allocation of public expenditure on health. In 1993, Mexico spent 5.6 percent of GDP on health, out of which 2.5 percent was from public expenditure. By 2001, total expenditure on health increased to 6.3 percent of GDP, but the share of public expenditure was relatively unchanged at 2.6 percent. This implies an increase in the share of out-of-pocket expenditure throughout the 1990s and an over-reliance on inequitable point-of-service payments that exposed Mexican households, especially the poor and uninsured, to catastrophic and impoverishing public expenditure (Knaul, 2012).

5.4 Financing Responsibility of Central and Subnational Governments and Prioritization of Interventions

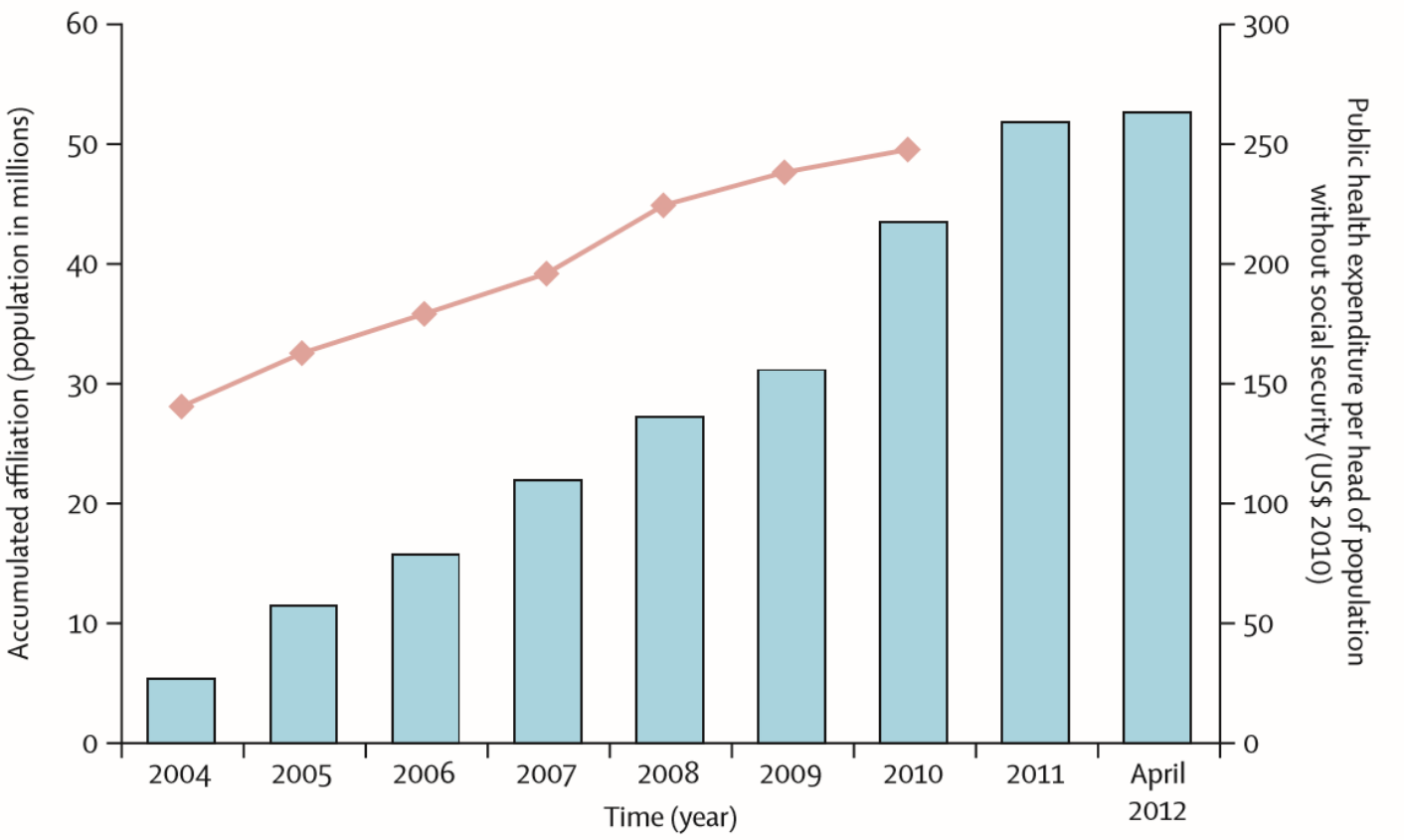
Increasing allocation, improving equity and ensuring financial protection for the uninsured population were key motivations for the health system reform in Mexico. In 2003, the Mexican government revised the General Health Law to create the System of Social Protection in Health (SSPH) and its main instrument, the *Seguro Popular* (Popular Health Insurance) with a legal mandate to extend coverage of health services to all uninsured population by 2010. This ambitious target was achieved in 2012 with the number of enrollees reaching 52.6 million. This extended financial protection for health to those in the poorest four income deciles and rural and indigenous communities who were left out of the earlier system. At the same time, public health expenditure per head of uninsured population increased from US$150 in 2004 to nearly US$250 in 2010, addressing one of the key objectives of the reform (Figure 10).

A full description and evaluation of Seguro Popular has been documented elsewhere and is beyond the scope of this paper (Bonilla-Cachin and Aguillera 2013, Knaul et.al. 2012, Frenk 2006, Gakidou et.al., 2006). Instead, we focus on the financing architecture of and innovations in federal-to-state transfers which have been a legacy of the 2003 health reforms in Mexico.

First, the SPSS and particularly Seguro Popular, replaced historical budgets transferred to states with actuarially calculated premiums. The premiums are calculated based on a defined package of health services for enrollees that are free of cost at the point of delivery. As of 2016, there are 284 primary and secondary care interventions that are included in the

Universal Health Service Catalogue or CAUSES. These interventions are included based on an evaluation of their cost-effectiveness and on the ability of the public system to fund the package. In 2010, the reimbursement unit for Seguro Popular was changed from household to individual, reducing the possibility of states over-reporting enrolments and simplifying the process of fiscal transfers to states for service provision and delivery.

Figure 10: Enrolment and expenditure per capita in Seguro Popular, 2004-2012



Source: Knaul, et.al., 2012

Second, the General Health Law of 2003 specified the relative magnitude of the contributions for both federal and state governments. The federal government is required to allocate a social contribution which corresponds to 3.92 percent of the minimum salary of the Federal District, indexed to inflation and revised periodically. This is augmented by two solidarity contributions. The federal and state solidarity contributions are set at 150 and 50 percent of the social contribution, respectively. Taken together, the current transfer per enrollee of Seguro Popular is around 3000 Mexican pesos (US$163). To address historical funding inequalities, the federal solidarity contribution is adjusted for each state by subtracting the sum of other federal commitments for health to the state, which are assumed to reflect historically unequal funding levels in favor of richer states and regions. Although there is a provision for contribution by Seguro Popular enrollees, nearly 97 percent are classified as poor and are exempt from payment.

Third, SSPH separated funding between personal health services and services that are in the nature of public goods. This had two immediate effects. First, it assigned responsibility for higher level functions such as stewardship, information systems, research and human resource development exclusively to federal government. Second, it created funds that were assigned for specific purposes, such as community health, protection against catastrophic expenditure and services for children below five not covered by the Seguro Popular system (Figure 10). This design enables earmarking of health transfers at the state level, although separate flows require greater monitoring of its use on the part of the federal government. At present, 89 percent of the total transfer is earmarked for Seguro Popular, eight percent for Fund for Catastrophic Health Expenditure, two percent for infrastructure investments and the remaining 1 percent as reserve. Funding for Medical Insurance for New Generation is on the basis of a top-up capitation amount from the federal government to the states for the provision of the package of services under this program.

Table 11: SSPH funds according to type of health good

	Funding Source
Public Goods	
Stewardship	Regular budget of the Federal Ministry of Health
Information, research, evaluation, human resource development	Regular budget of the Federal Ministry of Health
Community Health Services	Fund for Community Health Services
Personal Health Services	
Essential healthcare services (Seguro Popular)	Fund for Personal Health Services
Specialized and high-cost services	Fund for Protection against Catastrophic Health Expenditure
Healthcare services for children and newborn	Medical Insurance for New Generation

Source: Adapted from Frenk et.al.2006

Fourth, the resources transferred to the states is specified by the General Health Law. The main components are: a maximum of 40 percent of transferred resources to finance payroll; a maximum of 30 percent to pay for drugs for the Seguro Popular benefits package and diseases covered in the catastrophic health expenditure fund; a minimum of 20 percent to pay for promotion, prevention and public health activities; and a maximum of 6 percent for operation and administration. This leaves relatively little room for states to innovate on financing in terms of service delivery but protects allocations for public health, which is underinvested in states' own budgets.

Overall, Mexico's health financing reform seems to have been a qualified success. Comparing data from the initial phase of the reform in 2004 with the near-universal coverage achieved through Seguro Popular in 2010, Mexico has made significant improvements in allocative efficiency and in addressing inequity in public expenditure between insured and uninsured population as well as across states. The gap in per capita expenditure between those covered by social security and the uninsured—nearly two times in 2004—reduced to 1.2 in 2010. In terms of equity in intergovernmental transfers, the ratio of federal per capita expenditure on health between the highest and lowest recipient states fell from 4.3 in 2004 to 3.0 in 2010. Finally, the disparity in state-level allocation from own resources (proxied by the coefficient of variation) declined by 30 percent from 1.0 in 2004 to 0.7 in 2010 (Knaul 2012).

However, in spite of success in extending coverage through Seguro Popular, out-of-pocket share in total health expenditure reduced marginally from 51.7 percent in 2004 to 47.1 percent in 2010. This is higher than most countries in Latin America and other OECD countries with similar levels of per capita income as Mexico which underlines the difficulty in translating health financing reform into lesser burden of health expenditure at the household level. The differences in health expenditure across states, although declining, still remain high. Moreover, prioritization of health expenditure (as a share of total public expenditure) ranges from 3.4 percent in Campeche to 30 percent Jalisco, with half of Mexican states spending less than 20 percent on health, most of which is earmarked for SSPH. Furthermore, there are problems with fund flows between federal and state governments, as well as underspending, lack of transparency, accountability and managerial performance in the use of resources for health service delivery at the state level.

These challenges in fiscal management need to be addressed to ensure efficiency and equity of Mexico's social protection system for health in the coming years. It also holds lessons for countries such as India as they weigh options to reform health sector financing to achieve universal health coverage in the next decade.

5.5 Key Lessons for India

Mexico's experience with Seguro Popular provides a case study on extending publicly funded basic health services and financial protection for the segment of population not covered through formal social security mechanisms. The legal guarantee is based on a legislated comprehensive package of services which is funded publicly—unlike Brazil, China and India where such a defined package either does not exist or is unclear. This is particularly relevant

for India as it tries to extend financial protection through social insurance programs such as the Rashtriya Swastha Bima Yojana (RSBY). Following Seguro Popular, RSBY should incorporate outpatient services and provide cost-effective coverage of the major drivers of the disease burden in India.

Seguro Popular is part of a broader umbrella of the System of Social Protection in Health, which includes primary, maternal and child care as well as secondary and tertiary services. Mexico's reform underscores the importance of a broad-based approach with strong central government stewardship, separation of funding of primary from secondary and tertiary care, and segregation of funds for catastrophic health expenditure. India should view RSBY as one instrument for health financing reform, which would also include restructuring of the National Health Mission to focus on primary care with clear implementation guidelines and performance metrics for states to deliver. In addition, Mexico's experience with benchmarking state performance can be a useful example for India as it seeks to revise its financial allocation and improve accountability in subnational health expenditure.

One critical lesson is the importance of monitoring, assessment and evaluation based on a comprehensive information system that enables periodic revision of the benefits package and the funding envelope to deliver services equitably. In Mexico, fiscal transfers from the federal government to states are based on clear rules and cost-sharing of the Seguro Popular premium. This provides incentives for states to enroll uninsured individuals into the system. However, the federal government has to carefully monitor their compliance to ensure delivery of the package of services—another important issue India must address in the coming years.

6. Conclusion and Recommendations

Reform of a country's fiscal system creates policy space to reorganize intergovernmental transfers for health. As federal and state governments undertake a process of adjustment in their revenue and expenditure assignments, countries can use this opportunity to address inequities in allocation of resources, financing mechanism of healthcare delivery and incentives to achieve better outcomes.

The three cases in our review illustrate how Brazil, China and Mexico used the opportunity of fiscal reform to better organize financing and intergovernmental transfers for health. The pre-reform system in all the countries were characterized by a lack of clarity in the objectives, modalities and financing of healthcare delivery, leading to insufficient and inefficient public expenditure and high burden of cost of healthcare especially for the poor.

Post-reform, all these countries made significant progress in increasing allocation by both federal and subnational governments on priority health interventions, expanding access to primary healthcare services and targeting public resources to improve health equity, and extending financial protection through both public and private insurance mechanisms, thereby reducing out-of-pocket expenditure and improving outcomes.

The review of underscores the importance of stewardship by the central government to raise adequate revenues for health, determine subnational allocation formula and incentives, and generate evidence to evaluate outcomes. *India should rethink the role of the central ministry of health as an information hub, implementing a comprehensive management information system (similar to DataSUS for Brazil, for example) and conducting regular program evaluation through independent statutory bodies, such as CONEVAL in Mexico.* This will create a positive feedback loop into allocation and expenditure decisions enabling policymakers to achieve efficiency of public expenditure both at the central and subnational levels.

The countries in this review have been able to reduce the burden of out-of-pocket expenditure through effective prioritization of public health interventions and targeted extension of social insurance to ensure financial protection for the poor. *India should follow their lead and reform the National Health Mission to integrate primary care and social insurance especially targeted at those below poverty line in an overall framework of health system financing and delivery.* In this context, investment in data, information and surveillance systems is one of the key roles that the central government can play to harmonize fiscal resources and program design both at the national and subnational level.

The success of health financing reform, however, depends on the capacity of states to adapt to new fiscal transfer arrangements and manage the reorganization of service delivery. Drawing lessons from Brazil and Mexico*, we recommend that transfers from the central government to states, districts and local bodies be made on the basis of formal 'pacts' under the National Health Mission.* The allocations should on the basis of risk-weighted capitation payments based on subnational performance on a set of health indicators that are tracked, evaluated and benchmarked across states. This would reward both effort and performance, taking into account the fiscal needs and capacity gaps at the state level.

The review points to the fact that the increase revenue through mandated unconditional transfers may not necessarily be prioritized for health at the subnational level**.** While other countries have used legislative mandates to force states to increase public expenditure on health, India should seek to increase allocation by designing incentives for better prioritization of health at the subnational level. In this framework, additional non-Finance Commission transfers over and above the tax devolution grants from center to states could be based on their performance in financing and delivery of health services linked to achievement of outcomes that are evaluated and verified independently.

Our review highlights the challenges of coordinating financing of health between center and states in the context of devolution of fiscal powers and expenditure responsibilities. Greater untied fiscal devolution needs to be complemented by appropriate rules and incentives if states are to prioritize budgetary expenditure on health. Complex conditionalities and unclear objectives associated with fiscal transfers create uncertainty at the subnational level. Moreover, outcomes are better achieved when the incentives for fiscal transfers are stable over the medium and long term. This allows states to better assess their needs and set budgetary priorities to fulfil their responsibility for delivering better healthcare services to their constituents. In the end, that is the core objective of the policy reform agenda.

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Appendix: Summary of Health Expenditure and Outcomes—Brazil, China, Mexico, and India

Brazil	1995	2005	2014
Total Health Expenditure (% of GDP)	6.5	8.3	8.3
Government Health Exp (% Total Government Exp)	8.4	9.9	6.8
Government Health Exp (% Total Health Exp)	43.0	45.8	46.0
Private Health Exp.(% Total Health Exp)	57.0	56.2	54.0
Out-of-pocket Exp (% Total Health Exp)	38.7	36.7	25.5
Total Health Expenditure Per Capita (US$)	314.3	919.7	947.4
Infant Mortality Rate (per 1000 live births)	39.7	19.5	14.4
Immunization (DPT3) coverage of 1-year-olds	81	99	99
China			
Total Health Expenditure (% of GDP)	3.5	4.9	5.5
Government Health Exp (% Total Government Exp)	15.9	10.2	10.4
Government Health Exp (% Total Health Exp)	50.5	54.3	55.8
Private Health Exp.(% Total Health Exp)	49.5	45.7	44.2
Out-of-pocket Exp (% Total Health Exp)	46.4	35.5	32.0
Total Health Expenditure Per Capita (US$)	43.6	220.1	419.7
Infant Mortality Rate (per 1000 live births)	37.7	20.3	9.8
Immunization (DPT3) coverage of 1-year-olds	80	87	99

Mexico			
Total Health Expenditure (% of GDP)	5.0	6.0	6.3
Government Health Exp (% Total Government Exp)	10.5	11.5	11.6
Government Health Exp (% Total Health Exp)	46.6	48.5	51.8
Private Health Exp.(% Total Health Exp)	53.4	51.5	48.2
Out-of-pocket Exp (% Total Health Exp)	50.9	47.5	44.0
Total Health Expenditure Per Capita (US$)	322.1	591.7	677.2
Infant Mortality Rate (per 1000 live births)	28.8	16.7	11.9
Immunization (DPT3) coverage of 1-year-olds	91	98.0	99
India			
Total Health Expenditure (% of GDP)	4.3	4.3	4.7
Government Health Exp (% Total Government Exp)	4.4	4.3	5.0
Government Health Exp (% Total Health Exp)	26.1	27.1	30.0
Private Health Exp.(% Total Health Exp)	73.9	72.9	70.0
Out-of-pocket Exp (% Total Health Exp)	67.9	63.4	62.4
Total Health Expenditure Per Capita (US$)	19.6	59.2	75.0
Infant Mortality Rate (per 1000 live births)	77.5	55.8	39.3
Immunization (DPT3) coverage of 1-year-olds	71	65	83

Source: WHO Global Health Observatory