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### Title

Essays on India's Economy: Perspectives on Policy Reform

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<https://escholarship.org/uc/item/1jm9h533>

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### Publication Date

2014-07-01

Peer reviewed

# Essays on India's Economy: Perspectives on Policy Reform

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July 2014

## Abstract

This is a collection of essays written for the *Financial Express*, an Indian financial daily. The common theme of these essays, which cover a period of almost four years, from June 2010 to March 2014, is the India's struggles with economic policy reform. The essays are organized into several broad topical groupings, and chronologically within each section. The first section considers overall development goals, followed by a group of essays on foreign investment in retailing, financial inclusion and tax reform. This is followed by a section on macroeconomics and international finance, including several discussions of inflation policy and exchange rate policy. Two short sections discuss aspects of the corporate sector and job creation. The last section covers several topics: water, food, intergovernmental transfers and rural road construction.

**Keywords:** competitiveness, development, economic opportunity, financial inclusion, tax reform, inflation, capital flows, water resources, food policy

## Goals

### Navigating the Next Crisis

*August 14, 2011*

Is a new economic crisis coming? Is it just a playing out of the financial crisis of 2008? What should India's policymakers do? These may seem like just a tough set of questions from a civil service exam. But they are real challenges that face India's leaders. Unlike their counterparts in the US, Europe and China, India's leaders actually have significant room to maneuver. What should they do, and why?

Let's recap where things stand. Finance is at the heart of capitalism. When it works, it channels resources from savers to productive investors, leading to growth and real returns for both sides, as well as the financial intermediaries. The 2008 crisis originated with Wall Street and the US government. Between them, they allowed financial intermediation to become unhinged from productive investment – Wall Street through greed, dishonesty and incompetence, and the government through poorly chosen fiscal and monetary policies and poorly enforced regulation. Of course, there were many other villains, from Irish and Icelandic banks to the governments of countries like Greece. Bailing out financial institutions that made bad lending and investment decisions, plus pumping up government spending to prevent a complete economic collapse, transferred some of the unsustainable private sector debt burdens to the already-stretched public sector.

So the latest crisis is partly fallout from 2008. Deteriorating public balance sheets are also hurting banks again. Assets that looked safe are again turning out to be risky – mortgage backed securities and other financial derivatives then, government bonds now. Just as saving and lending was earlier channeled into unproductive investment (the housing bubble), now it is connected to unsustainable transfer payments by governments. There is no quick or easy fix, and the global economy will go through more pain. Given that certainty, what should India's policymakers do?

In the short run, the increased uncertainty and dampened spirits surrounding the global economy suggest that the Reserve Bank of India should pause its tightening measures. Monetary policy works with a lag, and it makes sense to wait and see how the Indian economy and inflation are responding to the tightening already undertaken. If China also slows down, as seems more and more likely, pressure on commodity prices may lessen, and ease India's domestic inflation. Certainly, a slowing global economy is likely to put a lid on inflation expectations. Fiscal policy is already loose, so the prescription would be to stay the course there.

In the near-medium run, clearly the biggest positive policy step for India is implementing the goods and services tax (GST). A simple, well-functioning GST can solidify government revenues and streamline some aspects of doing business, while reducing the distortions that have plagued consumption taxes in India. Getting the GST in place soon is eminently feasible. More

generally, the government could strengthen the economy by paying attention to the World Bank's Ease of Doing Business Index, and making improvement in India's ranking a policy priority. If animal spirits are dampened in the rest of the world, giving Indian entrepreneurs positive signals and encouragement can do much to compensate for a foreign slowdown. One of the US economy's weak spots has been that small businesses are not creating jobs as they would in a normal recovery. Making business creation easier in India can boost employment and tax revenue, and start to ease supply constraints.

Small businesses in the US are also having trouble getting credit from banks that are repairing balance sheets and also meeting more stringent regulatory requirements. In India, the stock market and microfinance receive a great deal of attention, but finance for small and medium enterprises remains systemically weak. Fixing this may be a longer term project, since it will require legal reforms and improvements in managerial capacity and practices in the banking sector. In general, India has tremendous scope to expand its domestic finance sector in positive directions.

Parts of Europe and the US are also starting to reveal wider gaps between existing skill sets and what their economies need. India has faced this problem for a long time. If the 1950s and 60s saw a successful beginning in creating a modern education system in India, much of the more recent past has been retrogression. Meanwhile vocational training has never been put on a firm footing in India. Expanding the education sector (and FDI here might be more valuable than in the retail sector) is the best bet for India's long term future.

The second stage of the economic crisis of the US and Europe provides a clear set of lessons for India's policymakers. They should prepare for a softening of global demand, and make sure that domestic investment has a favorable operating environment and that it goes to productive ends. India is well-placed to do these things, if its leaders adjust policy quickly for the short run, and keep their focus on the medium and longer run.

## **How Competitive is India?**

*November 13, 2011*

The latest Global Competitiveness Report of the World Economic Forum ranks India 56<sup>th</sup> out of 142 countries. This is a much better rank than India get on the UN Human Development Index or the World Bank's Ease of Doing Business Index. Is this a good sign about the country's future growth potential? Probably not.

First, India's ranking here has actually been slipping. It was 51 out of 139 countries last year, and 49 out of 133 the year before that. That is not a good trend. More importantly, the index and the ranking it produces may flatter, and not reflect India's actual situation. Here's why.

On “basic requirements,” which make up 60% of the weighting of the index, India’s rank is only 91<sup>st</sup>. The four components of basic requirements are institutions, infrastructure, macroeconomic environment, and health and primary education. In the infrastructure category, the worst rankings come for telephone lines and quality of electricity supply. Thus, despite the rapid diffusion of mobile phones in India, it still has a long way to go. And power sector reform has not touched the political equilibrium that perpetuates theft of electric power, shortages of coal, and inefficient operations. Targets for additional generation capacity have routinely been missed, leaving the sector as probably the biggest single technical constraint on growth.

Inadequate infrastructure is also the main problematic factor identified by businesses surveyed for the report, followed by corruption and inefficient bureaucracy. Interestingly, labor market restrictions come much lower down the list of problems from the business perspective.

India appears to do a lot better in the category of “efficiency enhancers,” which have 35% weight in the index, and include higher education and training, goods and labor market efficiency, and technological readiness. Overall, India ranks 37<sup>th</sup> on this set of factors, but the reason for this is entirely the relative strength of its financial market development, and even more so, the country’s “market size.” Take these two factors away (and India does not really take advantage of its potential market size), and India would do much worse, since the other components have ranks ranging from 70<sup>th</sup> to 93<sup>rd</sup>.

Finally, India does relatively well on innovation and business sophistication, but these together have only 5% weight in the index. The real point to note, therefore, is that if one sets aside size and India’s relatively well-rated financial sector development (which may also be less successful than it appears), India’s relevant rank might be in the 80-90 range, rather than the actual rank of 56<sup>th</sup>.

Aside from suggesting that India’s competitiveness might be worse than we would think from its “official” WEF rank, is there any other use of the exercise? The competitiveness index is built up from over 100 components, organized into 12 categories. The simple aggregation of these components may be less instructive than a detailed look at each one of them. Even assuming that the aggregation is the right one, it is possible to explore variations. How competitive would India be according to this index, if it had China’s infrastructure, for example? The ranking and its sub-rankings provide benchmarks for identifying realistic improvements, and for gauging their possible impacts.

The approach being suggested to using these rankings is somewhat in the spirit of work by academics Ricardo Hausmann, Dani Rodrik and Andres Velasco. They have a technique called “growth diagnostics,” which tries to identify the binding constraints to growth for any economy, rather than pushing for across-the-board change. But their approach requires more judgment and it needs detailed knowledge of the economy being studied. Neither quality is to be undervalued,

but studying the various components of the competitiveness index may provide clues to where to look further for improvement, even without such knowledge and judgment skills.

In the past, I have also argued for an even simpler approach to policy-making and assessment of policy success. If one believes some variant of a Schumpeterian model of creative destruction, or even just in industrial capitalism as a driver of growth, perhaps the focus of policy should be just on moving up the rankings on the ease of doing business. If this improves, growth will follow. Or one might choose to combine this approach with targeting improvements in the Human Development Index, which was created precisely to give a more general measure of progress than per capita GDP.

Not using models with precise causality and cost-benefit calculations may offend intellectual purists, and may lead to mistakes of emphasis and focus, but there is something to be said for having simple targets that focus on the way stations to growth and human welfare improvements. Easy measurement, benchmarking and relative status seem to be good ways to guide policy-making and to test its success. The proliferation of global rankings and the measurements that underlie them should be put to better use than just being the subject of newspaper articles.

## **Development and Opportunity**

*December 11, 2011*

The furor over the attempt to open up FDI in multi-brand retail reminds us of several things about India. But the true lessons may not be the seemingly obvious ones. It is certainly possible that the government's handling of the policy change was not the best it could have been. On the other hand, those with long memories will recall numerous occasions where policies have been floated, reversed, modified or even transformed. At one time, all FDI and disinvestment were controversial – now the discussions are more nuanced (even if political rhetoric remains strident).

One might almost view the current situation as a necessary part of the process of reform in India's peculiar democratic system. Policy reforms require political bargaining, debate at different levels and in different forms, and a public search for a minimal consensus. Already, new ideas are being floated, for modifying the scope of the FDI liberalization (its application to sectors), its conditions (requirements for sourcing from small suppliers) and its degree (the percentage of foreign ownership). One only has to look at current mess of politics in Europe or the United States to form a more sanguine view of Indian policy making and politics than some of the most stringent critics of the government's handling of the issue.

So the first lesson is that India's process of reform may not be too bad. If that is optimistic, the second lesson is more sobering. One problem with India's political process is that it sucks up time and attention. Is FDI in multi-brand retail the best use of this scarce resource? Perhaps not.

If India's over-riding policy objective is inclusive growth, will multi-brand retail be a significant contributor to that objective, versus, say, forging ahead with labor-intensive manufacturing? What are the relative benefits in terms of employment, technology transfer, and organizational innovation? After all, much of the East Asian miracle was achieved with retail remaining a relatively "backward" sector, continuing to serve as a sponge for mom-and-pop enterprise.

The second lesson is that Indian policymaking still lacks prioritization, and prioritization is made more important by the costs of the process of reform in a heterogeneous coalition-based democracy. Perhaps the government's political capital should have been saved for reform of land acquisition, labor laws, enterprise zones and overall manufacturing policy, to spur new business creation in sectors with high growth potential. If the goal of opening up FDI in multi-brand retail was to improve the supply chain for agricultural products, perhaps there could have been more direct policy levers to achieve that.

The question of inclusive growth suggests a third, deeper lesson to extract from the current debate. What should our objectives be? Fortunately, John Roemer of Yale University recently provided some new thinking in a talk at the Delhi School of Economics "Winter School." Roemer operationalizes the idea of equality of opportunity as a primary development objective. This is reminiscent of Amartya Sen's earlier focus on capabilities. As Roemer points out, the Human Development Index broadened the measurement of outcomes to include more than just per capita income, but it still remained outcome based. Roemer suggests that inequality of effort and inequality of circumstances should be separated out, something that outcome-based objectives do not do. He offers a two-part objective, based on measuring the level and degree of opportunity inequality.

Skipping the technical details, circumstances include factors such as parental income and education, but also all outcomes for children. The logic is that children should not be treated as directly responsible for their effort choices, until they are mature enough. There is a broader point that Roemer makes about adjusting for the indirect impacts of circumstances on effort. Roemer is careful to acknowledge the limits of opportunity equalization, where it conflicts with meritocratic allocations. But the implications of his analysis seem clear: focus policy on equality of opportunity, especially in health and education, and especially for children.

This conclusion is not too different from some of the current policy thinking in the ruling party's advisors. It also suggests why people are unhappy with policies that seem to favor large firms, including multinationals – those policies act against equality of opportunity, which even the "aam aadmi" understands as embodying fairness, something that human beings value intrinsically.

The gap in policy thinking and policy making is in implementation. The government has not let go of the idea that policy objectives have to be achieved by direct government provision. Mobile phones are a good example of where letting go of a government monopoly allowed greater

equality of opportunity, in that case in communication. If the government could focus on creating similar playing fields in the (admittedly more challenging) areas of health and education, allowing private action with the right fiscal incentives (such as school vouchers and health insurance), it would be better from the perspective of process, priorities and development.

## **Retailing, Finance and Taxes**

### **Retailing and Reform**

*December 23, 2011*

In my last column, I mused on India's economic reform process and inclusive growth, in the context of opening up multi-brand retail to FDI. I want to return to the question of political capital, and policy thinking about reform in the retail sector.

On using up political capital, I think ongoing events have proved me wrong. Opposition to opening up multi-brand retail has come from the same quarters as opposition to other reform measures, including the Pension Bill and Companies Bill. On all these, the government has openly looked for compromises that will lead to acceptance of the reforms. If that is the case, then moving on multiple fronts may give the government more chance of getting some changes through, not less. The government has also reset its approach to FDI in retail, marshaling interest groups that might benefit, and saying more to make the case for the positive consequences of the change. So even if it lost some political capital initially, it should recover it quickly.

All that said, the economic logic of the FDI decision still needs to be articulated more clearly. Much of the public discussion and the government case have focused on benefits to farmers by cutting out middlemen. However, it does not follow that replacing existing middlemen with other powerful buyers will increase the farmers' slice of the total pie. Other things equal, this would happen only if there is increased competition among their buyers. Indeed, this could result from new entry through FDI, but the issue needs to be highlighted more clearly, and incorporated into the policy. When the government's committee of secretaries cleared the proposal in July, news reports said that domestic firms were looking for partners or even buy-outs from foreign entrants: merely replacing large domestic retailers with foreign ones will not increase competition. Interestingly, the Boston Consulting Group – Confederation of Indian Industry report on organized retail never mentions the word "competition."

The aforementioned report focuses on organized retail, not FDI per se. The potential advantages of organized retail include greater efficiency of operations (including backwards through the supply chain), better working environments and training, and faster expansion leading to more job creation. But why can Indian firms not achieve these gains themselves? The argument is that global retailers will bring in expertise that is not always easily available in India, including for supply chain management and worker training. This is certainly believable. But foreign firms



often face their greatest challenges in the retail sector, because they are at the end of the supply chain, and because local knowledge of preferences matters most in retailing. So how well foreign entrants might do is a matter for conjecture until they are given a chance. And an argument that they may not succeed is at the opposite end of the spectrum from concerns that they might succeed too well.

The public discussion of FDI in multi-brand retail also seems to ignore the existing investment of foreign retail giants such as Walmart and Carrefour in wholesale stores. It would be useful to know how these ventures are performing, and whether they have brought about any improvements in the supply chain. Again, economic logic suggests that if the greatest problems are before the wholesale stage, then modern, efficient wholesaling is where policy leverage should be applied, rather than retailing. The BCG-CII report mentions that Bharti-Walmart stores have helped create vocational programs for potential employees, suggesting that training can be realized at this earlier stage of the value chain. And British retailer Tesco has shelved plans to open wholesale stores in India, preferring to focus on setting up warehouses and back-end infrastructure for Tata's Star Bazaar stores.

If one can realize the presumed benefits without opening up FDI to multi-brand retail, is there an economic case for the reform? The core benefits must be increased investment and increased competition. Everything else will flow from those two changes, if they follow the reform. Consumers will likely benefit as a result. Farmers may benefit, but they probably need a host of other policy reforms to happen as well, in order to realize any substantive gains. It seems disingenuous to claim that this single policy change is a panacea for what ails India's farm sector.

Of course, to take a more nuanced and cautious view of the benefits of a reform makes it more difficult to persuade those whose support is needed. On the other hand, perhaps the politicians could have said that opening up FDI in multi-brand retail will not make a huge difference in the short run, but will make a small contribution to improving the lives of many Indians. They could even have said that there are more important issues on its agenda, such as pension reforms and modernizing the laws governing companies, and made a public case for these bigger reforms. In that case, the FDI decision could have been seen in perspective, as a relatively small but positive change.

### **Reform: Rhetoric and Realities**

*April 6, 2012*

To start, I want to reaffirm that India needs economic reform, and lots of it. Reforms should strengthen governance institutions as well as the working of markets. An increased role for markets and competition will, on the whole, benefit the Indian economy. If reforms are done well, they can promote inclusive growth. With all that clearly stated, I want to question some of

the reform rhetoric around FDI in multi-brand retail, and argue for a making a different set of reforms a priority if we want to improve the supply chain, whether farm to fork (or fingers, really, for India), or for manufactured goods.

Certainly, Western retailers such as Walmart and Tesco can bring in knowledge that comes with vast experience, as well as large dollops of capital. If we can have McDonald's in India, bringing in new ideas, high standards of customer service and process efficiencies, why not foreign retailers too? Certainly, it will help to increase competition and innovation in retailing. But some of the arguments being made seem to have shaky foundations.

First, since wholesaling has already been opened up to FDI, why are we not seeing improvements in the supply chain? The greatest inefficiencies, especially in agriculture, are before the wholesale stage. Why have foreign entrants not made a big difference? It could be that they need scale economies at the retail stage to make it worthwhile to change the supply chain, but I haven't seen that argument articulated, let alone validated.

Second, is Walmart or Carrefour really going to want to change the agricultural supply chain and thereby benefit farmers? Fresh food is not necessarily a high margin category – grocery store margins in the West are wafer thin. There is more money to be made in packaged foods, and much more in non-food items, especially durable goods. If we are talking about processed foods, why haven't the big food processors already made significant efficiency improvements in the supply chain? What would Walmart add to their capabilities? If, as I suspect, the real impact will be in non-food items, that may be good for consumers if competition brings down prices, but then all the claims of helping farmers through FDI in multi-brand retail are irrelevant. Again, I am not saying that it is a bad idea, merely that the case has not been properly made: the rhetoric outstrips the reasoning.

Now let me offer an alternative reform. Let's start with the problem. Farming is inefficient. This has a lot to do with farmers being small: they face problems of liquidity, as well as risk and uncertainty. These problems are particularly severe for farming, given the long production cycles and vagaries of the weather. But they are universal problems of small business. Illiquidity and variability can bring down small businesses much more easily than large ones (unless the latter are like Lehman Brothers or AIG). Before small businesses can grow, they have to survive. Mechanisms to increase liquidity and reduce risk raise their chances.

Markets for providing these services to small businesses are therefore very important. They existed as long ago as 17<sup>th</sup> century London, laying the groundwork for the development of formal banking. In such markets, small businesses can borrow against, or sometimes sell, illiquid and uncertain assets such as accounts receivable and inventories. The intermediaries who provide these services have the scale that gives them greater liquidity and risk tolerance. They can smooth their returns over time as well as diversify risks.

The market for such services, called factoring services, is in its infancy in India. In December 2011, a bill was passed to regulate such services. It received little fanfare. As is often the case in India, there are elements of over-regulation in the new law. But it provides a clear legal framework for the industry. There is a reasoned debate on how to improve the new law, and reduce transaction costs further. New entrants are coming in. Some are arms of banks; some are partly backed by banks. But potentially factoring can be done by any firm, and often is, through mechanisms such as trade credit. The market needs to grow much more.

So here is my hypothesis. The problem of small business and small farmers in India is lack of financial services that enable them to manage their liquidity and risk efficiently. Now, these services are often provided by firms with market power, who squeeze the small producer (the old interlinked moneylender model). Even in prosperous states like Punjab, small farmers are subject to these pressures. If we want to improve the supply chain, or if we want inclusive growth by promoting small enterprises, why not intervene right at the source of the problem, rather than at the opposite end of the value chain? And why not do it directly? Keep building institutions that relax the financing constraints of small producers. Increase competition in this market to serve those producers. In that case, Walmart can wait.

## **Financial Inclusion**

*April 17, 2012*

In my last column, I argued that reforms to relax short term financing constraints for small producers can have a high payoff in terms of economic benefits. Directly improving the business environment for small firms seems more consistent with avowed goals of inclusive growth than letting in large multinationals, though the latter may provide a different set of benefits that come with size and global experience. I looked at the recent development of the factoring industry in India as something to be encouraged and widened.

The topic of financial inclusion is worth considering more broadly than just improving small businesses' short-term financing. Access to financial services is so limited in India that there are any number of areas for reform and expansion. As always with finance, the worry is that expansion will result in instability, but careful institutional reform can minimize the potential risks of reform. A look at some of the proposals for reform of financial sector components, as mentioned in the Union Budget last month, suggest that much is going on in terms of a detailed clean-up and modernization of legislation, some of which goes back to the 19<sup>th</sup> century. Besides individual legislative reforms, it is useful also to step back and think about how to serve the objective of inclusive financial sector development.

Perhaps the place to start is households rather than firms. The number of households is much larger than the number of firms, so addressing their needs should get to the core of inclusion goals. Household-level financial experience may also be a natural precursor and training ground

for entrepreneurs. In that sense, the focus of microfinance on potential entrepreneurs may be misguided. In fact, recent research by economists such as Abhijit Banerjee and Esther Duflo suggests that microfinance loans are more often for household needs than for business formation or expansion. It even turns out that poor people end up paying a lot for simple services such as having a mechanism for financial savings.

In some controlled experiments, if the rural poor are able to have savings in a bank it has a positive effect on expenditures on education and preventive health care. In other cases, the poor might spend more on consumer durables such as televisions, which sounds less virtuous. The general point is, however, that access to this most basic of financial services allows the poor to manage their lives better, even if it does not produce any Ambanis or Birlas. A further lesson is that financial inclusion should focus on simple, low-risk financial services for the poor, before trying to turn microfinance into an imitation of venture capital.

If there is an obvious demand, why is it not being met? In the case of lending to the poor (or to the rich, for that matter), there are risks which may not be easily measurable and manageable. But why don't banks do more to provide financial access? Why is India so woefully under banked? It seems that the "entry cost" for people who have no experience in financial services is quite high, as are other transaction costs of dealing with a bank. And for banks, the cost of adding such customers, as well as the cost of maintaining their accounts, makes them unattractive.

The government has tried to solve the problem by pushing for more public sector bank branches, and this has helped, but often just opening a branch does not solve the "last mile" problem for potential customers who are poor, and incentive structures within the public sector are not conducive to banks trying particularly hard to serve customers of many kinds (in a somewhat different context, what Rakesh Mohan termed "lazy banking").

Is there a solution? Several developments make one hopeful. In addition to the attention being given to financial sector legislative reforms, which can remove archaic rules and impediments to innovation, technological change can significantly reduce transaction costs. The ability to keep track of financial and personal information on smart cards lowers monitoring and management costs. Because India is large and heterogeneous, issues of security and interoperability have made technological solutions slow to take hold compared to countries such as Kenya, but clearly the obstacles can be overcome. The government can move things along by helping to create the needed technology platforms, rather than setting numerical targets that are difficult to monitor and enforce, and may be distortionary in any case.

One area where the government and the Reserve Bank of India should have more confidence is in increasing the level of competition. Competition can increase instability, but if it is transparent and well-regulated, this should not be a threat. The global financial crisis originated in parts of the financial sector where there was little competition, lack of transparency and poor regulation.

In the case of increasing access for the poor to financial services, the rewards seem to far outweigh the risks, suggesting the need for rapid reform.

## **The Virtues of Tax Reform**

*October 15, 2012*

Last month I introduced the idea of virtuous growth, which includes the fairness objective of inclusive growth as well as an additional goal of building positive human values. I gave the example of local government reform in India as a practical step towards virtuous growth. Giving people more responsibility over public spending at the local level has the potential to increase the quality and level of civic engagement.

The issue of local government reform in India actually requires a rethink of India's structure of tax authorities. Currently, the system in operation gives the Centre more tax authority than the states. Local governments have very little scope for taxing their constituents. These statements need to be qualified, of course. State and local governments in India actually tax less than their power to do so. One reason for this is that there is an elaborate system of sharing central tax revenue to the states, and state tax revenue to local governments. There is some justification for collecting taxes at higher levels of government – it can be more efficient, and less distorting of individual economic decisions. But transfers distort the revenue-raising decisions of the recipient governments.

One way to get the efficiency advantages of higher level government tax collection and the incentive advantages of lower level government tax authority is to allow piggybacking of lower level governments on the higher level government's taxes. This has not really been done in India. The Constitution of India assigned different tax bases to different levels of government. For example, the Centre was given the authority to tax non-agricultural income, while the States were given the authority to tax agricultural income. This was one of the worst features of India's tax system, since the States lacked the political will or capacity to tax farmers, even rich ones, and it also provided a route for disguising non-agricultural income and evading tax on that income.

In any case, the idea of different governments taxing the same base did take hold in India, using loopholes in the constitutional language. For example, state-level sales taxes and central excise duties were imposed on the same goods. This turned out to be very inefficient, since there was no coordination or transparency, and because one government's taxes were imposed on values that included taxes by another government. The Value Added Tax (VAT) system introduced in India a few years ago began to deal with this major inefficiency. The planned Goods and Services Tax (GST) will extend the efficiency principles of the VAT to a broader array of commodities, and include services as well.

The details of the GST still need to be worked out and bargained over. Since it replaces existing taxes, the State governments, in particular, are worried about losing revenue as tax rates and tax shares are adjusted. The Centre needs to do more to sort out these problems and create a winning coalition for reform. One feature retained by the GST is likely to be fixed tax rates for the central and state portions of the tax: the 13<sup>th</sup> Finance Commission follows the GST Task Force in recommending rates of 5% and 7% respectively.

A piggybacking approach would allow States the possibility of increasing their individual rates up to some maximum level. One state might choose a rate of 8%, another of 7.5%, for its GST portion. The GST structure easily allows for this possibility. Piggybacking can go further. Urban and rural local governments could be allowed to add their own surcharges, up to some maximum. For example, one city might choose an additional 0.25%, another 0.5%. The point of these surcharges is that the lower level government decides the rates. Surcharges can be determined by elected representatives or by referenda – the key idea is that, at the margin, the residents of a jurisdiction decide to tax themselves to finance public goods within their jurisdiction.

One could potentially extend piggybacking to the personal income tax, but the GST is an easier place to start, and the occasion of introducing something new like the GST can open the door for this additional innovation. The key idea is that piggybacking allows communities to make public revenue decisions at the margin, rather than relying only on transfers from a higher level government. Civic engagement should not be just about spending, but also about financing that spending. A modern information system for administering the GST would allow local surcharges to be collected and distributed. All of this is done in the United States, for example.

One of the big problems in India's governance is that individuals do not see the connection between the taxes they pay and the services the government provides. Individuals can see this connection better if they decide on taxing themselves at the margin, in small enough constituencies so that their decisions have weight. Piggybacking on a broad tax base avoids the problem of only being able to tax small activities, and reduces the cost of administering and collecting local taxes. It may even make it easier to get a consensus agreement on the GST, giving States more flexibility as well. Freedom combined with responsibility can be a virtue.

## **The Logic of Retail FDI**

*November 23, 2012*

With multi-brand retail FDI finally set to be allowed in India, it is useful to reflect on what we know and don't know. Reviewing various surveys, opinion pieces and expert reports, one finds copious statistics on various aspects of the retail market in India, the character of potential entrants (especially Walmart, of course) and long lists of possible negative and positive impacts. But we actually do not learn too much that will help us predict what exactly will happen. The

best we can do in this situation is try to clarify the logic of possible effects. Here is my attempt to take us forward in that direction. My goal is not to argue for or against retail FDI, but to sharpen the policy debate.

The primary case being made for FDI in retail is that it will increase efficiency. One source of this is improvements in the supply chain. In particular, this argument is applied to perishable agricultural produce. The claim is that increased investment will reduce wastage. Efficiency gains can potentially lead to gains for producers, intermediaries and consumers. There is some evidence that, starting out in the US, Walmart improved the efficiency of wholesale and retail distribution, and later of manufacturing, through its hub-and-spoke distribution system and use of information technology to link different stages of the supply chain. But the US story was not one of building an agricultural supply chain from scratch. In fact, groceries were a later addition to Walmart's offerings. This kind of history does not provide a solid base for the claim.

Turning to the recent Indian experience, Walmart and other foreign firms have been involved in the wholesale trade for some years. For example, the Bharti Walmart joint venture works with over 6,000 small farmers across six states. Indian corporations have tried to create retail chains without foreign help. What do these experiences teach us about the potential for transformation? In neither case has there been a huge change in the supply chain. Logically, either FDI in wholesale or domestic retail chains could have made investments to improve the efficiency of the supply chain. There have been small improvements, but no great transformation.

One can counter that domestic retail chains do not have either the capital or the managerial quality to do what needs to be done. But that excuse would not apply to a Walmart or Tesco operating at the wholesale level. In fact, after testing the wholesale waters, Tesco decided to avoid further physical investment and instead focus on providing expertise only. The question of why wholesale FDI isn't enough also raises a logical issue for another claim for retail FDI, that it will lead to more exporting from India, as firms like Walmart will get to know suppliers and source from the best for global markets.

The response to these objections can be that controlling the retail portion of the value chain is important for making investments at the scale required. Why could this be so? Why has Walmart not roared ahead with its entry into wholesaling in India? In fact, the typical argument that inefficiencies and market power of intermediaries hurt producers and consumers suggests that wholesaling should be where the potential profits lie. There are two possible efficiency-based arguments to counter this – one is that there are efficiencies to be gained at the retail stage through modernization and scale, and the other is that integrating wholesaling and retailing increases efficiencies. But domestic firms have had this option forever, and have not capitalized on it. Perhaps these potential efficiencies are not easy to come by in the current Indian situation, or at least have not been in the past.

One fear of those who oppose retail FDI is that, even if efficiencies do come about through this process, they will come at the cost of employment. Another fear is that large foreign entrants will lead to the traditional groups of powerful, profit-squeezing intermediaries being replaced by another, even more powerful. In this view, gains in efficiency, if any, will be swamped by losses through redistribution of the surplus generated in the value chain. Evidence for this fear is often drawn from the history of companies like Walmart in other countries.

In my opinion, the analogies used are often too loose and the conditions too different to allow for convincing logical claims, whether for or against retail FDI. Even claims about reductions in inflation are suspect, since they do not distinguish between one-time and continuing efficiency gains. Another logical gap is the focus on food and food products, without considering the experience of food processors or restaurant chains. Yet another is the neglect of any systematic discussion of non-food items, by different categories, including fast moving consumer goods as well as various consumer durables. Maybe I have missed something, but it seems to me that policy-making in such cases needs more data as well as better reasoning. It is not too late.

## **Financial Inclusion in India**

*March 26, 2014*

One of India's strengths has been the ability of its governance institutions to survive the vagaries of the political process. Whoever wins the next election, Raghuram Rajan will still be Governor of the Reserve Bank of India. His task may be made easier or harder by the new government, but he will remain in a position to shape some crucial aspects of India's economic future. Recently, he gave a speech on financial inclusion, drawing on the Nachiket Mor Committee report, where he outlined some fresh thinking. Financial inclusion is important for increasing financial savings and for improving the quality of financial intermediation.

Financial inclusion encompasses broadening access to financial services, deepening and improving the quality of services to those who have access, and increasing financial literacy and consumer protection. As is well known, there are informal sources of financial intermediation, but these can be costly and inefficient. One of Governor Rajan's main themes was that information technology can reduce the costs of financial services, allowing inefficient providers to be replaced, and increasing access in this manner.

Some costs are technological, and here information technology plays an obvious and direct role, allowing cumbersome paper-based and manual methods to be replaced by automated electronic mechanisms. But information technology also has a powerful indirect role to play by allowing the creation of reputations in the market for credit. Currently, such reputation mechanisms for creditworthiness are sorely underdeveloped in India. The problem is not just cost or technology. The transactions that would allow such reputation building to occur do not take place, or are hidden from view in informal markets.



What is required is a systemic approach to reform, and the RBI has a major role to play in this process. Till recently, the RBI has tended to put safety and stability ahead of financial development, but technology has made that a false tradeoff, and there is considerable catching up to be done. Governor Rajan highlighted several areas for progress. One is having more reasonable “know your customer” rules, to allow more initial entry into the formal financial system. Another is agreement and collaboration among a range of financial institutions (especially banks, but possibly new, specialized institutions) and telecoms operators for mobile-based financial transfers. The RBI can play an important role in helping disparate institutions jointly develop the needed infrastructure, not least by providing regulatory clarity.

Financial inclusion is often taken to refer to services for households, but perhaps the most important place to start is small business finance. In my Financial Express column of April 18, 2012, I had highlighted the importance of short-term borrowing for smaller firms. India has very poor markets for firms to borrow against, or sometimes sell, illiquid and uncertain assets such as accounts receivable and inventories. Governor Rajan proposes the creation of a Trade-receivables Exchange, and says the RBI is in discussions with market participants. Such a platform has the potential to transform business finance in India. Indeed, one can think of using this approach for slightly longer-term financing, and for securitization of trade credit, which is made up of idiosyncratic, heterogeneous assets.

Creating this new market should be an urgent priority, even though it is a difficult undertaking, because of the complexities of business finance. A key complement and supporting development to this market would be an information infrastructure allows firms to build credit reputations. A reputation mechanism would reward honest and competent firms, punish those that are not, and greatly improve the flow of credit. As Governor Rajan emphasizes, firms’ financial reputations can be built on a wide array of transactions, including utility payments, and not just trade credit.

Improved mechanisms for creating and maintaining financial reputations will help banks do their job better, but also make it possible for banks to be augmented by other sources of finance or financial intermediation. In the latter case, effective, streamlined regulation will be necessary, and the RBI and the government need to make sure that such regulation is put in place quickly.

There are two benefits from a new approach to financial intermediation that uses technology to reduce transaction costs and asymmetries of information. One is that existing borrowers can obtain funds more cheaply. The second is that those who were earlier excluded can now obtain finance. In the latter case, some new lenders may be able to put idle money to work. The losers will be current financial intermediaries that either operate inefficiently and uncompetitively in formal markets, or reap excess returns in informal markets.

Fixing small business finance is a great place to start improving financial inclusion. Issues of financial literacy are less of a concern. Reputations are potentially very valuable in this arena. Market structure and regulatory innovations can be road-tested and then adapted for other

markets, such as credit for farmers or households. The winners will far outnumber the losers. This is a reform that is overdue and should not wait.

## **Macroeconomics and International Finance**

### **India Beyond the Trilemma**

*July 6, 2010*

The policy Trilemma of international economics is the inability to simultaneously accomplish three objectives: monetary autonomy, exchange rate stability and unrestricted international capital flows. Choose any two and the third must be given up. Or one can try to achieve all three partially. Monetary autonomy is desirable for controlling inflation. Exchange rate stability may help increase or stabilize foreign trade. Capital flows can finance investment and growth. It is not obvious how policymakers should balance the different objectives.

For a long time, India, like most developing countries, chose a (mostly) fixed exchange rate and monetary autonomy, by having strict capital controls. Monetary policy was autonomous with respect to the rest of the world, not India's politicians, but that is another matter. Then India began to open up its economy, starting with trade, but then moving on to capital. Since there are still a lot of restrictions on movements of capital in and out of India, some calculations (in particular, the often-used Chinn-Ito index) suggest that capital controls in India are still very severe. Another exercise in turning complex rules into a single number, by Lekshmi Nair, suggests that India has been steadily liberalizing international capital flows.

The actual flows tell the same story. If one adds up credits and debits on the capital account (so looking at gross rather than net flows), and calculates the ratio to GDP, this number was almost never above 20 percent till 2000. Even then, after crossing that mark a few times, it fell back below until 2003, when it began a steady, then accelerated rise. In the second quarter of 2005-06, it jumped to 35 percent, and went as high as 85 percent in the last quarter of 2007-08. The ratio has since fallen back, but remains much higher than it was a decade ago. International capital flows are here to stay.

These increased capital flows have meant that the Reserve Bank of India has had to struggle to manage the money supply and the exchange rate. The "managed float" of the exchange rate has become more difficult in recent years, and sometimes the RBI's foreign exchange interventions have impacted its conduct of monetary policy. It seems that the Trilemma has been at work in India as well.

Joshua Aizenman has suggested that there is a fourth policy objective, that of financial stability. Such stability is easier to achieve in a world of capital controls, but financial integration means that money moves in and out of countries with speed and significant consequences. Financial

crises associated with instability of international capital flows can have very high costs in terms of lost output. Aizenman suggests that the need to achieve financial stability with capital account openness explains the increased use of an additional policy instrument.

Asian countries have been building up foreign exchange reserves, even as they have inched toward greater exchange rate flexibility. Reserves provide self-insurance against risks of sudden stops of capital or deleveraging that can accompany financial integration. In fact, Aizenman's work with Chinn and Ito suggests that building up foreign exchange reserves has allowed some Asian countries to soften the Trilemma – maintaining exchange rate stability and monetary autonomy while gradually increasing financial openness.

At the same time, Aizenman also argues that there are limits to what reserves can do – the global financial crisis of 2008-09 threatened to be much greater than what reserves could cover. Countries had to resort to reimposing temporary capital controls during the crisis. Swap lines and pooled reserves offer another line of defence beyond individual country reserves, but so far their scope is limited.

The analysis of Aizenman suggests that, as India continues to become more financially integrated with the rest of the world, it may need to build its reserves up more, or come up with alternatives. It can continue to manage the exchange rate to some extent but, even with exchange rate flexibility, reserves will have a role to play in dealing with volatility.

Alternatively, India can go back into the arms of the Trilemma, with increased capital controls, albeit perhaps more rationally designed than the current patchwork. To some extent, this latter option is part of the discussion on the global financial architecture and global rebalancing. More globally coordinated regulation of capital and the financial sector will throw sand in the wheels of massive international financial flows.

One optimistic scenario would be India growing fast enough, with improved domestic financial intermediation, so that international capital flows are less important, and restraining them less costly. It would have to do better than China, which has grown faster, but through massive saving and investment that has not always been very efficient. As with other tradeoffs, growth and efficiency improvements can also soften the tradeoffs inherent in the Trilemma.

## **Forecasting Inflation in India**

*July 22, 2010*

Inflation has recently been a headline issue in India. Spikes in inflation seem to have taken policymakers by surprise, and a full understanding of the drivers of inflation in the country is hard to come by. Difficulties in modelling the process that determines price rises are compounded by deficiencies in measurement. No inflation measure is perfect, but India uses

several measures, all of which have problems. One can quibble over the weights given to different commodities in the basket used to create an index of prices. There are also challenges to the way that changes in the index are used to create an inflation measure.

The headline inflation rate is constructed from the wholesale price index (WPI), which is calculated every week. The weekly inflation number is obtained by calculating the percentage change in the WPI from a year ago. This means that there is a lag in how changes in the inflation rate are reflected in the headline numbers. If inflation was high for nine months, but has moved sharply lower for three months after that, the reported inflation rate for the whole year will be higher than the most recent trend. Using the year-on-year measure of inflation as a guide to policymaking can lead to inadequate responses when the inflation rate changes suddenly.

One way that policymakers can get additional guidance, aside from looking at the history of inflation, is to find out what people expect inflation to be. If people expect inflation to be go higher, they may decide to spend more now, creating a self-fulfilling expectation. What matters for economic activity are expectations across the population. In the absence of large surveys (which can be expensive), one has to make do with smaller polls. Since 2007, the Reserve Bank of India (RBI) has conducted a quarterly poll of experts, asking them to forecast various aspects of overall economic activity, including annual WPI inflation, calculated on the basis of quarterly figures (e.g., from the first quarter of fiscal 2008-09 to the first quarter of fiscal 2009-10).

The RBI faithfully reports each round of forecasts, of which there have been eleven so far. The number of experts asked has increased from around 30 to closer to 50, while the number of responses has grown more slowly, from about 20 towards two dozen. Individual identities are not revealed, and it is not known how the set of respondents varies from quarter to quarter. Individual forecasts are also not reported, but the range, average and median (middle value) are all made public.

I decided to see how good the inflation forecasts are. To do this, I used the median forecasts for the last nine rounds, for which I could get the data. Forecasts are made for one to four quarters ahead in each round. Then I calculated the year-on-year WPI inflation for each quarter. My calculations may be a bit rough and ready, but they are revealing.

First I asked whether the one-quarter-ahead forecast did a good job of predicting the actual inflation rate. Since nine months of relevant data is already available in making a quarter-ahead forecast, the experts should do very well, knowing 75 percent of the result. But the forecasts explained only about 80 percent of the variation in the actual inflation rate over the eight quarters for which I estimated the relationship between forecast and actual. This is hardly above 75 percent. The differences between actual and forecast inflation rates were sometimes as large as 3 or 4 percentage points in particular quarters.

The results with the two-quarter-ahead inflation forecasts were even less encouraging. The half-year-forward prediction, with half the data already digested, explained less than 30 percent of the

variation in the actual inflation rate. Forecasting inflation two quarters ahead seems to be a chancy exercise. To be fair to the experts, their one-quarter-ahead forecasts did much better than simply using last period's inflation to forecast a quarter ahead. So they were clearly able to bring some useful information to bear on their predictions, beyond what the immediate past could tell us. But clearly they had trouble seeing a few months further ahead.

What does this all mean for policymakers? It could be that the period I've looked at was exceptionally unpredictable, with a global financial crisis to deal with. In general, forecasters can do nothing if what they are forecasting is mainly determined by random outside shocks. Here, we do not know how the forecasters came up with their own predictions. It would be nice if one could validate the accuracy of individual forecasters, and see if someone's model or judgment is consistently better. That is not possible to tell from the median forecast of a possibly changing set of unknown individuals. Policymakers can surely change the rules of the game to encourage more accurate forecasts – that could be useful all round.

## **Bond Markets and Inflation Forecasts**

*August 4, 2010*

In my last column, I looked at how well experts do in forecasting India's inflation rate. The RBI's surveys of experts are relatively recent, so there was not much data to go on. The exercise was motivated by the surge in inflation in India, and the apparent difficulty in predicting future price level rises. Ideally, one would have a detailed model of the economy which uses all kinds of information about markets and aggregate supply and demand to get the best forecasts. Perhaps the experts have their own models that they use to make the forecasts reported to and by the RBI.

Complex models require a lot of information that may not be available in time for making forecasts. It is therefore interesting to ask if one can do reasonably well using just very simple information. For example, this period's inflation might tell us what inflation will be in the next period. Another possibility is that what is happening in bond markets can give us some useful information.

Bonds provide returns that are fixed in nominal amounts. A bond that offers a rate of 10 percent will provide income of Rs. 10 annually for every Rs. 100 invested, until the bond matures, and the principal is paid off. If market interest rates fluctuate, the price of the bond may vary, so that the income provides a return equal to the market rate, or bond yield. Investors will also care about risks of not being paid, but this is not a problem for Indian government bonds, since there has never been a default. But inflation can erode the value of the income generated by a bond, so when inflation is expected to be high, bond holders may want a higher market interest rate to stay invested. Bond yields may therefore provide information on expected future inflation. For example, 10-year Treasury bond yields in the US are only about 3%, reflecting beliefs that inflation will stay low. If investors expect inflation to go up, they will demand higher yields to

maintain the same real rate of return. If inflation expectations are right on the whole, then they will be good forecasts of future inflation.

The calculations are complicated by all the other factors that can affect markets for bonds, including the expected performance of other financial assets, and beliefs about the future course of the real economy, which will affect the rewards that various financial assets provide. This brings us back to a complex model, though, which we may want to avoid. In the US, forecasters are able to extract information about inflation expectations from the overall pattern of returns on government securities of different maturities (the yield curve), as well as the relative returns on regular Treasury bonds and corresponding inflation-indexed bonds. The difference in those two returns should provide a good indicator of inflation expectations, or the market's forecast of future inflation. The "market" of course is an aggregator of various participants' beliefs, whether they are experts or not.

India does not have well-developed bond markets, and does not offer inflation-indexed bonds, though the idea has been discussed. Hence, one cannot perform a very sophisticated analysis of what relevant information bond market yields might provide for predicting inflation. Still, it is worth looking at the data we have easily available.

I took ten years' data covering 1999Q4 through 2009Q3, and calculated average (WPI) inflation and 10-year government bond yields for each quarter. Ideally, one should go to higher frequency data, but the exercise is illustrative. I first tried to see if bond yields could tell us anything about future inflation rates. They did not, whether looking 1, 2, 3, 4 or 8 quarters ahead. On the other hand, the inflation rate itself captured half the variance of the next quarter's inflation rate. Adding the bond yield did not increase the predictive power of the model. However, adding the change in the bond yield did make a small but significant difference. Increasing bond yields, according to this simple model, would be an indicator of higher inflation one quarter ahead.

Unfortunately, when one includes the inflation rate from two quarter's past as well as last quarter, the additional predictive power of the change in bond yields goes away. So this simple exercise is ultimately inconclusive. It could be that bond markets in India are underdeveloped or distorted in ways that make their behaviour of little or no use for forecasting inflation. Still, the idea that markets aggregate information relatively efficiently is appealing (recent bubbles and crashes notwithstanding), and it would be nice to see a more rigorous attempt to combine inflation history, market information and expert judgments in making inflation forecasts. And of course, deeper, more efficient bond markets are desirable irrespective of their contribution to forecasting inflation.

## **Good or Bad Capital Flows?**

*October 14, 2010*

There is an old story about US President Harry Truman, tired of getting “on the one hand...on the other hand” answers, asking for a one-handed economist. On the subject of capital flows into India, and the need for capital controls, economists seem to be only one-handed, on the side of raising the alarm about surging inflows. Given that the Indian government (with its own economists presumably advising in the background) is taking the opposite position, this is one instance where a two-handed perspective is called for.

First, what are the arguments against allowing the surge in capital inflows to continue unchecked? The direct concerns seem to be twofold: first, that the economy does not have the absorptive capacity for the inflows; second, that inflows can be suddenly reversed. In the first case, the capital coming in does not get used productively, merely creating asset price bubbles, or getting wasted on low-yielding investments, or even getting stolen or diverted, perhaps, as in Latin America, to offshore accounts. In the second case, the capital can be used well, but a sudden reversal creates havoc with ongoing investments and the real economy.

This is not the end of the apparent dangers. India is running a large current account deficit to match the capital account surplus. In the absence of capital inflows, the exchange rate would depreciate, favoring exports and restraining imports. This equilibration is prevented by the capital inflows. When other countries are doing their best to keep their currencies relatively undervalued, India is hurting its exports even more by allowing in foreign capital and pushing up its exchange rate, in this view. Losses of export markets may not be easily reversed, even if capital flows later change course and the exchange rate then depreciates.

On top of all this, it has been suggested that some of the potential capital inflows – coming from raising ceilings on foreign holdings of government debt – will make it easier for the government to avoid needed fiscal consolidation. Interestingly, this argument is that foreigners will be buying long term government bonds, along with their hot money going into Indian equities.

“On the other hand,” it is possible that foreign capital will find its way into productive investments in India, and that exporters will find ways to adjust to exchange rate appreciation. The larger ones may hedge against exchange rate movements. A higher rupee makes imports cheaper, and may help to reduce inflation, by bringing down its imported component. One can even argue that opening up sovereign debt markets places more discipline on the government, rather than less: the new market that it must satisfy will be more demanding than traditional domestic purchasers of government bonds.

In my view, this is a true two-handed situation. Economic theory does not give definite predictions, only multiple possibilities, in the case of capital inflows. Which possibilities come to pass depends on expectations and the evolution of the global economy, as well as what happens in India. It seems to me that the government is confident that it can step in when it needs to, if

there are signs of instability. Meanwhile, it is reasonable to take the stance that a pre-emptive strike against foreign capital is uncalled for.

This is not to say that the government cannot do more for exporters, for governance, or for more efficient financial intermediation. Microeconomic reforms can always help by improving efficiency and growth potential. But there is really no ironclad case for more controls on foreign capital, or abandoning the larger project of building a larger and more effective financial sector. Indian financial sector functioning has been so far from the frontier of craziness that led to the global crisis, that one cannot argue on the basis of the crisis that India must retrench. Nor is India's political economy like Latin America's (at least not yet), where foreign capital often financed a narrow and corrupt elite. Again, my sense is that India's business and government elites are not behaving in ways that involve collusion with greedy foreigners at the expense of the rest of the population.

Ultimately, which hand is holding the right cards needs to be decided through rigorous empirical analysis of the Indian economy, including its interaction with the rest of the world. The tricky part here, as the recent crisis did teach us, is that models can create a false sense of security. But, on the other hand, they can also be a guide to more efficient policymaking. On balance, one has to believe that Indian policymaking could benefit from reliable estimates of the impact of exchange rate changes on variables such as exports and inflation, and of the impact of capital flows on the exchange rate and various aspects of real economic activity. Until then, we are all making guesses, informed ones, but guesses nonetheless.

## **How Not to Defend the Rupee**

*July 9, 2012*

As India's economy has soured, its currency has plummeted. The response of the Reserve Bank of India has been confused and counter-productive. Why do I make that claim? First, the fundamental value of the Indian Rupee is determined by economic fundamentals. The Rupee will recover when India does two things: put its macroeconomic house in order by controlling the fiscal deficit and inflation, and restoring its growth story through microeconomic and institutional reforms. These have little or nothing to do with the RBI's management of the exchange rate.

There are two counters to this claim. First, in the short run, the exchange rate can overshoot, and this can have harmful impacts on the economy during that period. Second, increased volatility of the exchange rate, which can accompany uncertainty about its level, is also harmful. The harm is that economic agents within India, particularly domestic firms, will suffer losses due to the fluctuations in the exchange rate or sharp movements in its level.



The RBI has taken two types of actions to manage the Rupee's recent vulnerability. It has intervened in the foreign exchange market, and it has introduced new restrictions on trading in currency derivatives. Intervention is meant to directly counter private market participants' views, buying when they are selling, or selling when they are buying. Restrictions on derivatives trading are meant to reduce speculation in movements of the currency. These restrictions can also support the first objective, by raising the cost for private market participants to trade, and give the RBI more weight as a trader in the foreign exchange market.

The problem with foreign exchange intervention, as has been shown repeatedly across the globe in the past few decades, is that it has limited power in the face of global capital market sentiment. A large amount of trading of Rupee derivatives takes place offshore, and the value of the Rupee will be determined by large economic actors in global financial centres. Recently, Kaushik Basu has advanced an ingenious theoretical argument for effectiveness of intervention based on credible commitment by a central bank when other traders are a competitive fringe, but it has yet to be tested empirically. I think instead that the RBI has very limited scope to do much beyond managing day-to-day liquidity and unusually sharp short-term falls or spikes in the currency. Even if the Rupee is falling below its fundamental long run value, the RBI has to accept the limits of its power to influence the level of India's currency.

Restrictions on trading in currency derivatives are more problematic. Restrictions include those on who can trade, what can be traded, when trades can take place, and what net positions currency traders may hold. The RBI issued circulars in December 2011 and May of this year, substantially tightening existing restrictions. The ostensible goal is to reduce speculation, though a hidden objective may also be to thin out the market and give the RBI more clout. But large amounts of trading take place offshore, beyond the RBI's reach. Many of the restrictions simply hurt Indian financial institutions at the expense of foreign players.

The nature of the restrictions also makes it harder for Indian firms to hedge their currency exposures. As India has globalized, the need for managing currency risks of all kinds has increased dramatically. The RBI has taken retrograde steps that will make it more difficult for effective hedging opportunities to develop for India firms, especially smaller ones that do not have offshore liquid assets in their treasuries – larger firms with such resources can again operate globally to manage their risks.

The argument that currency derivatives caused problems for Indian firms in the past is like saying that a toddler fell because the parents did not clear the floor of obstacles, so now he should not be allowed out of the crib. The RBI's December 2011 restrictions on cancelling and rebooking forward contracts raise hedging costs for Indian firms, even for the simplest kinds of forward contracts. Such hedging has nothing to do with complex derivatives that were being peddled just before the financial crisis.

Indian firms, and India's economy, would be better off with an approach to regulation that moves away from piecemeal, ad hoc measures that fragment markets, reduce liquidity and prevent learning. Transparent exchange trading of basic currency derivatives such as plain vanilla forward contracts, without arbitrary restrictions on contracting or net positions, would allow Indian firms to develop effective hedging strategies. The onus of risk management at the firm level would be on corporate boards, which would also learn how to do their job. None of this prevents the RBI from regulating to avoid systemic risks, such as dangerously large aggregate currency exposures for the economy. Making sure that the playing field of currency markets is level and visible to all participants is also an important regulatory job. Good regulation is difficult – bad regulation is easy.

### **India's Inflation Puzzle**

*February 9, 2013*

India has been struggling with high inflation for over two years. The Reserve Bank of India gradually raised its policy interest rate and has held it relatively firm, with only two small cuts coming recently. Meanwhile, economic growth has slowed dramatically. It has been asserted that the RBI's policy has contributed significantly to the growth slowdown. It has also been argued that monetary policy is ineffective in India, given structural rigidities and incomplete markets in the country's economy. Fiscal policy and commodity prices have also been under the spotlight. What do we really know?

A couple of weeks ago, Deepak Mohanty, and Executive Director of the RBI, gave a speech in which he tackled India's inflation puzzle. I will outline what he said, and then assess the arguments. Mr. Mohanty first pointed out that India's recent inflation surge and its persistence did not line up well with either its own history or what has been happening contemporaneously in the rest of the world. World inflation rose somewhat with the recovery from the Great Recession, but then moderated, while India's inflation climbed to double digits. In India, moreover, a sharp growth slowdown seemed to do nothing to bring inflation down.

Mr. Mohanty traces the start of India's inflation spike to rises in the global prices of food, crude oil and other commodities. He refers to an unidentified analysis that pass-through of global price shocks to domestic prices increased in this recent period, and notes that corporate finance data are consistent with this increased pass-through. The depreciation of the Rupee made the pass-through of external inflation that much worse. Mr. Mohanty goes on to note the substantial increase in demand for higher-protein foods. He further documents the rise in real wages in rural India. He highlights the fiscal stimulus that coincided with the recession, and asserts that "Higher fiscal expansion also impedes efficacy of monetary policy transmission." Finally, Mr. Mohanty emphasizes that long-term inflation expectations rose in this period.

In examining the conduct of monetary policy as inflation spiked, Mr. Mohanty emphasizes that rises in interest rates trailed inflation, so that, starting from historically low interest rates, the real policy rate remained negative: “Thus, monetary policy was still accommodative though the extent of accommodation was gradually closing.” While all the other points made by Mr. Mohanty have been widely recognized and detailed, it seems to me that this feature of recent monetary policy conduct has not received enough attention. Another important point that he highlights is that the RBI’s estimate of India’s potential output growth rate has been reduced from 8.5 percent to 7 percent.

The story above is plausible, and draws on many analysts’ judgments. I have not been able to identify a publicly available structural model of the Indian economy that would allow one to say that the explanations above are the right ones, or to quantify their different contributions to India’s recent inflation experience. Formal, comprehensive empirical modeling is always a nice check on judgments that are necessarily fragmented and somewhat subjective. In the absence of a model, let me offer some additional thoughts, which may undercut the notion that India’s recent inflation experience should have been puzzling.

First, the monetary policy tightening was actually slow and even hesitant. There may have been good political and economic reasons for this, including fears about derailing an uncertain recovery, but the RBI was neither choking off inflation nor growth in an assertive manner. Furthermore, the RBI was not doing a good job of managing inflation expectations – interest rate rises sometimes came with statements doubting if they would be effective. Sharper, faster interest rate hikes and confident statements would have worked. There is no puzzle in the experience.

Second, focusing on rising individual prices or on accommodative fiscal policy are both misleading. Yes, there can be short-term cost-push effects, and government deficits add to aggregate demand. But economic theory tells us that inflation is fundamentally a monetary phenomenon, having to do with the aggregate price level. The so-called fiscal theory of the price level, according to the best theoretical economic research that I have found, can tell us something about transmission channels, but not about long-run inflation.

Third, the growth slowdown has more to do with domestic political events that started to destroy India’s growth potential, more than the RBI has estimated. The level of uncertainty for the private sector jumped. It is also true, I think, that government deficits have crowded out private investment directly. So fiscal policy has hurt potential growth. Global uncertainties and anemic recoveries, especially in Europe, but also in the United States, have also worked to reduce potential output growth in India.

In sum, monetary policy was too timid, and failed to use the power of the word to complement actions; domestic economic management was dysfunctional in ways that reduced potential growth, while failing to account for structural changes in the economy; and global economic

conditions exacerbated domestic policy shortcomings. This is a story with clear lessons and no puzzle.

## **Current Account Deficit Worries**

*February 19, 2013*

In recent weeks, the Governor of the Reserve Bank of India, Mr. Duvvuri Subbarao, has twice highlighted the nation's current account deficit (CAD) as a cause for concern. The CAD is basically the difference between what is earned on selling goods and services to foreigners and what India pays for foreign goods and services, and it has recently hit record levels – over 5 percent of GDP. The CAD is typically offset by foreign capital coming into India. Why should a high CAD be cause for worry?

The RBI Governor highlighted several concerns. At the G20 Finance Ministers' meeting, he said, "There are number of risk factors for inflation. The most important is the current account deficit." A few days earlier, he had stated, "We would not worry if the widening CAD is on account of import of capital goods, but here it is high on account of import of oil and gold. The other concern is the way we are financing it. We are financing our CAD through increasingly volatile flows. Instead, we should ideally be getting as much of FDI as possible to finance the CAD."

What is the possible reasoning behind the Governor's statements? It is useful to begin with some basic accounting. Macroeconomic balances imply that the CAD is equal to the difference between domestic savings and investment plus the government deficit. Hence, an increasing CAD can reflect a higher fiscal deficit, an increasing shortfall of domestic savings, or both. In India's case, it has been both. Domestic private savings have fallen as a percentage of GDP, and the fiscal deficit has gone up. It is important to realize that the CAD is a symptom of more basic factors that deserve attention. A high CAD is not bad in itself: it just signals possible underlying problems.

The problems are poorly managed government spending and taxes, high inflation (and high inflation expectations), and a strong perception that government policies are unfavorable for future growth. The last is based on policy inaction as well as evidence of corruption. These problems deserve focus, not the CAD per se.

Turning to the RBI Governor's statements, why should the CAD be a risk factor for inflation? If the economy were overheating, and pulling in foreign investment for that reason, this statement might make sense – again, the CAD would be a symptom not a cause. But that does not seem to be the problem, unless India's potential growth rate has fallen more than policymakers admit. If foreigners were unwilling to finance the CAD, and the Indian rupee had to depreciate, pushing up the domestic price of inelastic imports such as oil, that could fuel inflation in the short run

(though not in the long run, unless the RBI made a monetary accommodation). But interestingly, after a temporary pause, foreign investment into India has been strong.

Mr. Subbarao's second point was that foreign investment is of the wrong kind, "volatile" portfolio flows instead of FDI. A related concern was that the CAD itself is of poor quality – fueled by imports of gold and oil rather than capital goods. This leads back to poor inflation management (people are buying gold as an inflation hedge) and poor economic management (lack of an effective energy policy and lack of confidence for private industrial investment in India). His main point, though, seemed to be that portfolio flows are volatile and therefore bad.

To the extent that portfolio flows bring in foreign capital, they are as good as FDI – domestic firms receiving foreign portfolio flows may be encouraged or enabled to make real investments themselves. If this link is absent, it points again to poor domestic economic conditions. Foreign portfolio flows could be contributing to an asset bubble, but volatility seems to be a red herring. My ongoing research with Ila Patnaik and Ajay Shah suggests that such flows do not create wild swings in the domestic stock market, or harm domestic investors at the expense of foreigners. Separately, I have not seen concrete evidence that domestic stock market movements have much impact on India's real economy.

In fact, any kind of equity investment involves risk sharing, and in that sense it is good for the recipient. At worst, foreigners exit and the currency depreciates: India can still pay its bills. Problems arise much more if the CAD is financed by borrowing on terms fixed in foreign currency, especially at short maturities – that can create a crisis. The real issue, therefore, is what is happening to India's external debt stock, and its maturity composition. This is where the RBI should be focusing, in addition to domestic monetary policy. Unnecessarily worrying about volatility of portfolio flows (or of the exchange rate) is just a distraction. Meanwhile, the biggest problems lie beyond the RBI's control: in the government's management of revenue raising, spending, and the conditions for private sector investment. FDI is good, but so is domestic investment. The national government needs to do its job better. If it does, the CAD will take care of itself.

## **Taming Inflation in India**

*February 3, 2014*

Inflation in India has remained stubbornly high. Late in January, the RBI raised interest rates again. Some have complained that high interest rates have been choking growth. Others have argued that interest rate policy is ineffective in the current Indian context, where other factors are driving inflation. I argue here that the RBI is doing things better than it ever has before. Not only is it being clear in its objectives, but it is also moving toward a consistent policy framework that has often been absent in the past: it seems that the days of ad hoc and even muddled monetary policy responses are coming to an end.

The role of the new leadership at the RBI, which is manifesting itself in greater decisiveness and in organizational changes, is an obvious factor in shaping one's optimism about India's monetary policy. But there also seems to be an accumulation of technical experience and analysis that is helping to guide policymaking. As an example, consider the RBI working paper by Muneesh Kapur and Harendra Behera, published in 2012. This paper builds a small macro model (using quarterly data) to examine the interaction of monetary policy, inflation and growth. The authors consider all the possible factors that come up in media discussions of what has been driving inflation in India: oil prices, other commodity prices, minimum support prices (MSPs), the exchange rate, rainfall, and fiscal deficits.

Typical discussions of inflation in India focus on one or other factor, and make assertions rather than checking their claims against the data. Even when the data are analyzed, the exercise stops at observations of patterns or correlations. In fact, many of the potential culprits in the inflation process are themselves determined jointly with inflation and growth in a complex economic system replete with feedback loops. This is precisely what Kapur and Behera seek to model.

Of course, modelling a complex system means that the conclusions are not simple. But some things are easy to describe in broad terms. It seems that interest rate policy does have the expected impacts on inflation and output, albeit with estimated magnitudes that are relatively small. The model not only supports this conclusion, but it estimates the lags with which effects occur, and the magnitudes of effects in the short run and over longer periods. The model also suggests that higher MSPs feed inflation, but themselves may have been influenced by increases in overall price levels, in a vicious circle. Exchange rate changes also play a role in stoking or soothing inflation (though the model is missing the crucial feedback loop to the exchange rate itself). Fiscal deficits actually do give a temporary boost to growth, but their longer run impact is negative because of crowding out.

The foregoing gives a flavour of what the model tells us. There are many nuances and caveats I have missed, which the authors are careful to include. No doubt the model can and will be improved on. But here I want to stress the positives: this exercise has emerged from the RBI, it is public, it can be replicated and improved on by any interested researcher, it is informed by global best practice with respect to empirical methodology and theoretical concepts, it includes robustness checks and sensitivity analyses, and it acknowledges and builds on quite a few previous analyses by Indian researchers on Indian monetary policy and inflation dynamics (as well as by many global researchers for a wide range of economies). These characteristics may seem obvious ones, but in my view they contrast with past approaches in which India was exceptional, so it could not be compared to or learn from other countries, and where both policy and structure were in constant flux, so that searching for empirical regularities was considered to be futile.

Perhaps I am exaggerating the change in perspective on policymaking, but what I have described as "past approaches" to monetary policy formulation may still fit many other contexts of

economic policymaking in India. So my claims can be tested more broadly. Indeed, one lesson I drew from Kapur and Behera's model is that the major causes of India's recent growth slowdown have to be found elsewhere than in the conduct of monetary policy. If there is a comparable model that provides insight into the problem of slowing growth, I have not seen it. Of course, it could be that the problem is simply the political uncertainty and policy paralysis that has gripped India's national government, and it may be impossible to model that underlying cause, but one can still seek the empirical regularities in investment and saving behaviour, and their impacts on growth.

I should also admit that I do not know if the analysis performed by Kapur and Behera has directly influenced any subsequent decision making at the RBI. I do know, however, that the current governor and other key decision makers would have no difficulty in absorbing and assessing the kind of analysis I have described here. And that is all to the good.

## **Corporate Sector**

### **Stock Market Battles**

*July 1, 2011*

In 2009, MCX Stock Exchange (MCX-SX) "informed" the Competition Commission of India (CCI) that the National Stock Exchange of India (NSE) was acting anti-competitively in the nascent market for currency derivatives. Both NSE and MCX-SX provide platforms for trading instruments such as US Dollar-Indian Rupee currency futures of different maturities. MCX-SX essentially complained that NSE was using predatory pricing to drive its competitor out of the market, using its dominant overall position in providing trading platforms for financial instruments (especially equities), and resulting deep pockets.

The CCI ruled heavily in favor of the "Informant" and levied a penalty of over Rs. 500 million on NSE. There was a minority dissenting opinion, as well as an even harsher assessment against NSE in the initial investigation by CCI's Office of the Director General (DG). Anyone who reads the various reports will see that the attempted use of economic analysis is at a much higher level than in the old days of the Monopolies and Restrictive Trade Practices (MRTP) Commission. There is even considerable discussion of newer concepts such as network effects and their relation to liquidity creation. However, the end result is discouraging. The CCI ruling will likely lead to less competition and higher costs for customers. The core of the analysis relies on a knee-jerk reaction to "dominance" that is not dissimilar to the old MRTP approach. There are also critical problems with CCI's approach to defining the relevant market, and to measuring market power.

The DG's investigation provided a very confused discussion of market definition, ultimately going with one that makes no sense. It included all exchange-trading services for financial

instruments, based on some notion that these could be – and are – provided by the same suppliers, and could be – and are – purchased by the same demanders. This makes no sense, and was rejected by CCI’s own members. The CCI order therefore considered the market as being for currency derivatives – but only those traded on the domestic exchanges, and not the much bigger offshore over-the-counter (OTC) markets. Even the dissenting minority accepted this argument, based on legal restrictions on who can trade in the two arenas, as well as on the size and nature of trades. This, however, completely neglects the possibility that those who currently trade offshore or OTC could be attracted to the new domestic exchanges – if the terms were made attractive. If the larger market for currency derivatives had been considered, there would have been no basis for the ruling as it was made.

Using the narrow market definition, CCI then decided that NSE, by waiving transaction and membership fees, was forcing MCX-SX to match these zero prices, and incur losses that it could not sustain as long as the deep-pocketed NSE. CCI ruled that NSE was trying to drive MCX-SX out of the market, reducing long-run competition. But even with the (incorrect in my view) narrow market definition, the ruling completely distorted the facts, something brought out systematically in the minority dissent.

Indeed, NSE started out by waiving fees, for a market that was truly brand new for India, and when MCX-SX entered, it was forced to match. The zero fees continued as the market grew, and CCI claimed that the market was no longer nascent. Again, given the domestic growth potential and the large offshore trading volumes, this claim makes no sense. Furthermore, MCX-SX overtook NSE in market share after entering second. Even more contradictory of a claim of dominance and predation, a third entrant made a recent successful foray into this market, with a third trading platform. This entrant is United Stock Exchange, backed by a consortium of banks, themselves with deep pockets. NSE has continuously been losing market share in trading currency derivatives, and its greater market share in other segments of trading for financial instruments is of little relevance, though it was used in the CCI ruling to conclude that NSE was dominant and must be abusing that position.

There were other facets of the case, other nuances in the arguments, and some detailed economic analysis and legal precedents marshaled by both sides. Often, there were flaws and inconsistencies in the analysis on all sides. NSE certainly did not come out of the process as seeming perfect or pure in all its actions. But the simple logic of the case seems to me to be that NSE does not dominate the broad market for currency derivatives. There are three domestic competitors, each with roughly equal shares of the small domestic exchange-traded segment, and each with potential to grow and capture global market share. There was no evidence that NSE was driving out competitors – quite the opposite. This point was the basis of the minority dissent. All that the CCI ruling does is stunt domestic competition, favor one competitor, and raise prices for customers. That is not good economics or good interpretation of the law.



## **Corporate Virtue in India**

*December 22, 2012*

In previous columns, I discussed the concept of virtuous growth, which encompasses inclusive growth. Virtuous growth includes promoting fairness, but it also means avoiding societal change that corrupts and degrades positive human values. I discussed how virtuous growth might be promoted in practical terms, in the realms of governance and civil society. Here I want to discuss the role of business, specifically, large firms that are India's leading institutions of capitalism. What can and should their role be?

One idea of virtue is that of corporate social responsibility (CSR). This is fine as far as it goes, but it does not preclude a firm making large profits through unethical business behaviour and then allocating a small amount for superficial do-good efforts. Business tycoons also set up charitable foundations with their wealth, but, like CSR, these have no impact on the manner of doing business. The key desideratum is more ethical behaviour at the core of business practices.

One problem in effecting better business behaviour is that corruption is endemic in Indian society. The corruption scandals that are so common in government functioning also involve corruption by private sector firms. People in government demand bribes, and people in business supply them, in an unholy equilibrium. How can this equilibrium be changed? Kaushik Basu's proposal to decriminalize bribe-giving (but not bribe-taking) focused on situations in which individuals are entitled to a government service but are forced to make illegal payments to receive it. In the Delhi Economics Conclave earlier this month, Avinash Dixit of Princeton offered a different focus and proposal for reducing corporate corruption.

If corporations need government approvals, or are competing for government as a client, they may pay bribes to avoid being at a competitive disadvantage if "everyone else is doing it." Dixit proposes to address this problem through collective action mechanisms. In particular, he advocates self-regulation by the major industry associations, with clear codes of ethical conduct, explicit pledges, and mechanisms for punishing violations. The judicial system would have to create a framework for recognizing such extra-judicial mechanisms, just as it does in the case of special arbitration. Existing examples of such institutions are university and military honour codes, and the workings of local associations to manage common pool resources (studying which earned Elinor Ostrom an Economics "Nobel"). Implementing such mechanisms is not easy, nor are they ever perfect, but they can work.

Dixit's proposal is important as well as timely. Here I describe developments on the Indian institutional side, which complement his theoretical nuances. Interestingly, private sector bribery is not even a criminal offense in many cases. The government drafted a bill in 2011, and it is circulating for comments. Major industry associations such as the Confederation of Indian Industry (CII) and Federation of Indian Chambers of Commerce and Industry (FICCI), have come out in support of the bill. Changing the legal playing field is an important start to

institutional reform, and complements Dixit's ideas. Ideally, some of the practical monitoring and enforcement tasks would be assigned to an independent regulator, as they are in the US or UK.

Closer to Dixit's idea is last year's proposal by CII, of a Code of Business Ethics for its members. While the draft code is too vague and broad in many places, it is categorically against corruption, including all bribe-giving. B.S. Raghavan, in the Hindu Business Line, has made specific suggestions for increasing the specificity of the requirements of the code, and raising levels of transparency with respect to lobbying and influence activities. Dixit's proposal would strengthen this effort even further, with sanctions against violators. It is surprising that there has not been more public debate on this effort, and discussion of how to get it right. In fact, none of the other major industry associations appears to have followed CII's lead.

Also just a few months ago, the Global Compact Network India (GCNI), an arm of the United Nations Global Compact, released a report "*Raising the Bar Through Collective Action: Anti-Corruption Efforts in Action in India.*" The report release gained much attention, but there appears to have been no follow-up: the document is nowhere to be found on the Web. Press releases suggest that the report consists of a few case studies featuring transparency, monitoring and public standards of behaviour, together with advice for more collective action. Exactly!

In a sense, industry associations do not need GCNI's report – they know what they have to do. But public debate has to push them into moving forward, to enshrine the ethical best practices that some of India's iconic companies already have in place. In the short run, this will be difficult, as a critical mass of acceptance has to be reached. CII's effort has broken the ice, and the other industry associations should follow its lead, or even leapfrog it, in creating and enforcing anti-corruption codes. In the long run, raising standards of corporate behaviour on this front will benefit those firms that can do well by being more efficient or innovative, not by bribing. This will enhance growth in the long run and make it politically more sustainable.

## **Jobs and Education**

### **Entrepreneurship and Jobs**

*November 18, 2011*

India needs more jobs than it is creating. Without enough job creation, its demographic dividend – adding a million people to the workforce every month – will become a disaster. One possible source of job creation is entrepreneurship. Recently, Ejaz Ghani, William Kerr and Stephen O'Connell (GKO) have been systematically exploring this hypothesis for India, in several research articles. What do we learn from their work?

GKO start by clarifying the kind of entrepreneurship that matters. Self-employment alone is not enough. In India, much of self-employment is in the so-called informal sector, and does little to generate new jobs. Instead, it is new formal firms that make a difference. Silicon Valley, the acknowledged leader among US regions for entrepreneurship and innovation, has low rates of self-employment, but leads in creating new firms that grow and hire workers. GKO show that India's density of new business registration is below average, conditional on per capita GDP. So India lags in the kind of entrepreneurship that could help growth.

The next step is to establish the link from new business creation to employment growth. This comes from looking at India's annual manufacturing survey, which provides data on thousands of plants, including their age and their employment levels. Aggregating this data to the level of the states reveals a striking pattern. Those states which had higher levels of new business creation in 1989 had faster manufacturing employment growth over the subsequent 16-year period, 1989-2005. The major state with the worst performance on both dimensions was West Bengal. Among the states with the best record was Tamil Nadu. A partial exception to an otherwise strong relationship between business creation and subsequent employment growth was Uttar Pradesh, which did well in setting up new plants, but lagged badly in job creation.

GKO show that the same pattern is evident, perhaps even more strongly, when one disaggregates to region-industry clusters. It could be that the same factors are driving both patterns. State-level policies that encourage entrepreneurship may also make it easier for new firms to grow and hire more workers. State-level policies may encourage the creation of regional industry clusters, which attract new firms and make it easier for those firms to grow. For example, GKO find that just being in West Bengal accounts for the lower average rate of entry in that region.

There are other initial conditions that matter, beyond ones that might plausibly be conjectured to arise directly from governance or policy. Certain industries are more likely to grow faster, and attract entry. But even controlling for such factors, the pattern of new business creation leading to subsequent periods of higher employment growth is still evident. Other channels of influence also emerge from GKO's analysis of the data. The rate of entrepreneurship in organized manufacturing is positively affected by the share of population with a graduate education, and by closeness to a city. The strength of local supplier networks also is a plus for setting up new establishments. On the other hand, the stringency of local labor laws has a negative impact on entrepreneurship.

In looking at the factors influencing start-up rates, GKO also analyze other data sets, for unorganized manufacturing and for services. For unorganized manufacturing, higher education and labor laws are not significant, as one might expect, but the demographic dividend shows a positive impact, and so do local infrastructure quality and the household banking environment. For services, higher education, infrastructure, banking, labor laws and the demographic dividend all matter with the expected direction of effects.

Taking stock of all these results, there are clear policy implications. Development is certainly about more than just growth. And inclusiveness of growth through income transfers and other welfare schemes is important both from a welfare perspective and a pragmatic one of preserving social harmony. But inclusive growth is ultimately about creating jobs. The most jobs and the “best” jobs do not come from microenterprises, but from new, small, formal firms that have the potential to grow big. This suggests a policy focus on enabling the factors that allow this to happen. In India, it is not happening enough.

The factors that matter are labor laws, infrastructure, education, access to credit, and access to markets. Even when there is a lack of these factors, the government’s instincts have been to provide everything itself. This has not worked in many cases, because the government is spread too thin – it has neither the capacity nor the resources. Instead, governments in India can focus on creating better enabling environments for some of these variables, thereby creating an enabling environment for entrepreneurship. Of course, some of the enabling factors are ones that governments are best placed to provide – basic education, public infrastructure like local roads, and so on. In other cases, public-private partnerships might work best. The bottom line is that priorities need to be established and policies refocused. The opportunity to make “inclusive growth” a meaningful goal lies in enabling entrepreneurship and job creation.

### **Demographic Dividend or Disaster?**

*July 20, 2012*

India’s demographic trends could lead to a dividend of higher growth, as the working age population bulges. Two things have to happen for this dividend to be realized. If they don’t, the possible alternative is demographic disaster, and social unrest. First, India has to create more jobs across the board. In a previous column (Entrepreneurship and Jobs, November 28, 2011) I discussed this side of the equation. Second, India has to give its people skills to work at jobs productively. In this column, I want to look at the basics of India’s education policy.

There are serious problems with Indian higher education. These include a shortage of high quality faculty, poor incentive structures, lack of good regulation (which would promote competition and transparency, rather than defending a dismal status quo), and artificial constraints on supply of educational services. I have often argued that allowing much more foreign entry in higher education would be a good solution to these problems.

As bad as Indian higher education is, the worst problems are in primary education. After all, without a good foundation, subsequent education cannot happen easily and effectively. This is true even for vocational training, not just elite education for the advantaged and talented. At the primary level, there are also serious problems with health and nutrition that impact the effectiveness of education and the capacity for learning, but let us set those aside and focus on the education sector, government-provided primary education in particular.

A large amount of empirical research has been done on this subject in the last decade. We now know much more than we did a few years ago. Karthik Muralidharan, a major contributor to this research program, has recently summarized what we know, and drawn out the policy implications. There is a large gap between what we know and what policy makers are saying and doing. If policy making and implementation do not respond quickly to the latest lessons, India's youth will be poorly prepared for productive participation in the economy.

What does Muralidharan's survey (presented at the recent India Policy Forum) teach us? The following is my own interpretation. First, many kinds of school inputs do not translate into improved learning outcomes. This includes toilets, electricity, computers, mid-day meals, student grants, more teachers and better-trained teachers. This does not imply that these measures are bad, just that they are not enough. On the other hand, certain kinds of incentives linking teachers' rewards to performance do work. These incentives may be monetary or non-monetary, small or large, positive or negative. The best mix can be context dependent and subtle. One important example of incentives is that contract teachers do better than those who are tenured government bureaucrats, even when paid much less. But even regular teachers do better when their rewards are linked to performance, which can include showing up to teach as well as having their students do better on tests.

The implication of all the studies is that education policy makers are focusing on the wrong things. Muralidharan notes that the Ministry of Human Resource Development's central policy document, while discussing access, equity, quality and departmental processes, has "*no mention of learning outcomes.*" Quality is just about improved inputs, not outcomes. Certainly, just changing this mindset would be a start toward reform of educational policy. Muralidharan acknowledges the political and institutional difficulties, even as he discusses possible reforms of curricula, organizations and governance.

My own take on the current situation is that change from within will come too slowly for India. A disruptive, radical solution is needed. A clue to where to look comes from the reported research which shows that remedial instruction actually does improve learning. My guess is that the key feature is that this instruction is targeted, individualized, and has a quick and clear feedback loop. Apparently, computer remedial programs do better than teachers, but cost more. This differs from research that computers alone are useless. I think the problem is with the way digital technology is used. Computers are not needed to teach basic reading and mathematics skills. Very cheap specialized devices for playing educational games, with preloaded software that allows students to move up levels by answering problems or recognizing words, and to compete with each other, can combine low cost with strong learning incentives.

This is a far cry from elaborate textbooks and curricula, and will outrage most professional educators as debasing education. But it will work, and will not need to wait for massive institutional reform. Children have to get hooked on learning. They have to get quick rewards for achieving small learning outcomes, with continual progress. They have to be able to measure

themselves against their peers. This can all be done with simple software and cheap dedicated devices. Once a start is made, more sophisticated tools can be developed for older children and higher learning, even ones for teachers. Educational computer games can be the first step towards reaping the demographic dividend.

## **Water, Food, Transfers, Roads**

### **The Water of India**

*June 22, 2010*

When I was a young boy, my parents took me to see the great Indian magician, P. C. Sorcar, Sr. I remember the show as dazzling, with mystifying disappearances, appearances and other illusions. But the one illusion that has always remained in my mind was the “Water of India,” where Sorcar seemed to fill large numbers of vessels with water from a tiny pitcher. India’s water was abundant; it was mystical; it was the thread running through the show and the country.

Perhaps no more. A report, “Charting Our Water Future,” by the 2030 Water Resources Group, suggests that India is the most vulnerable country in a global future where water will be crushingly scarce – unless the right actions begin to be taken now. The core of the report is an economic methodology for ranking alternative measures to close looming demand-supply gaps. If nothing is done, the potential global gap will be 40% of current projections of accessible, reliable and environmentally sustainable supply. India will have by far the worst shortage, with demand projected to be double the supply in 2030. This could be compounded if climate change accelerates the melting of Himalayan glaciers: the long run flow decrease could be 30-50% of current levels of water flow.

Of course one way to close gaps is through rationing demand, which will affect narrow economic growth as well as broader human wellbeing. Avoiding these costs makes sense if the costs of investment in water are lower. Interestingly, India has the greatest opportunities as well as the greatest threats. The largest increase in India’s water demand will come from agriculture, and the solutions will also have to be found in the minutiae of that sector’s operations.

The Water Future report develops the idea of a water-marginal cost curve, which orders different possible actions according to their incremental costs, as well as showing their potential impacts on closing the demand-supply gap. Not surprisingly, supply augmentation measures like desalination, the National River Linking Project and large dams are among the most costly. But so are rainwater harvesting and smaller dams. In fact, none of these costly measures are necessary in the next twenty years.

The most cost-effective actions for water availability include changing farming methods (using no-till farming where possible), reducing over-irrigation, balancing fertilizer and water use

better, integrated plant stress management, and using drip irrigation. Improvements in infrastructure (rehabilitation and extension) are most cost-effective at the last mile. The lesson is clear: fix things at the farm level, rather than embarking on large, grandiose projects.

But farm-level solutions require actions to be scaled in a different way, at the system level. Introducing new methods of farming may require changes in crop patterns, in supply chains and in distribution chains for farm produce. It will certainly require education and training, something India's moribund agricultural extension system is ill-equipped to provide. Unfortunately, the resources that should be available to state governments for providing complementary infrastructure and extension activities have been used to provide free water and electric power (the latter used to pump up groundwater from ever-increasing depths). Thus, India's agriculture is probably as inefficient as it could be in its use of water.

The irony is that farmers are not the main beneficiaries of the current political-economic equilibrium. Take the case of Punjab, where water-intensive crops such as rice and sugar cane are being grown, where historically neither made economic sense (and still would not except for insanely extreme subsidies of water and power). Sugar cane requires mills to be close by. It is the mill owners who are powerful, and determine policy. The sellers of fertilizer and pesticides also wield political power. Punjab's farmers have only the illusion of political clout. They are not poor, but neither are they getting richer. They are stuck in the 1970s.

The Water Future report admits that it provides just a partial analysis. The complexities of political economy and institutional reform are beyond its scope. But it shows what might be achieved with the right kinds of investments, if political logjams and institutional inertia can somehow be overcome. Achieving this is not magic; it just requires attention to the details of specific agricultural systems, technologies and incentives.

If the political equilibrium in individual states prevents action, the central government can play a role, just as it has done for education and health. There is now a National Policy for Farmers, as well as a National Mission for Sustainable Agriculture. But like other national policy statements, every action is listed as a possibility, without cost-benefit analysis or prioritization. This is where exercises such as the Water Future report can play a crucial role, at least as a starting point. The water of India must not be allowed to become only an illusion.

## **India's Food Future**

*February 19, 2011*

February has finally brought some relief in the rise in India's food prices. The government has some breathing room in this dimension – just as well when it is beset by multiple corruption scandals. It is easy to get excited about blatant corruption, or even mismanagement of a specific sporting event or allocation of spectrum. And of course it is justified. It is somewhat harder to

achieve the same level of concern about governance of an entire sector, food and agriculture – especially when there are so many possible external villains.

Food price inflation can always be blamed on the weather, on globalization, on evil speculators, and now also on faster growth in poorer countries. Some of these factors do matter, but they divert attention from past policy failures and from what needs to be done going forward. All of the usual suspects may not be guilty, and the others have been in plain view for some time, so policy making should have already taken them into account.

Economic theory suggests that “speculation” would typically stabilize prices, and recent empirical work (in particular, a 2009 paper by Scott Irwin, Dwight Sanders and Robert Merrin) supports this view for recent global commodity price rises. Similarly, globalization, in the form of increased trade, should smooth out local price fluctuations, to the extent that it allows food to move from places where it is relatively abundant to where it is scarce. Of course, abundance and scarcity depend on purchasing power, but then the policy response should be to make sure that the poor can afford to purchase enough food, which is different from just ensuring physical availability. India’s inefficient and wasteful system of procuring food grains, storing them, and distributing them to those in need is much more to blame for food price inflation than speculation or trade.

Climate change, in the form of more variable weather patterns, and global economic growth are more plausible causes of global food price inflation, but these are two factors which we have known about for years, and which should have been planned for by Indian policy makers. The fact that agriculture in India has been stagnating suggests that whatever attention has been given to it has been inadequate and ineffective. The failure to reform and innovate in the agricultural sector is squarely behind Indian food price inflation, and the problems will get worse if action is not taken.

Here are the problems with Indian agriculture that have been caused by faulty policies. Fertilizer, water and electricity (used for pumping water) are subsidized in ways that lead to significant waste, as well as to poor choices of crops. There is insufficient investment in irrigation infrastructure and irrigation techniques, development of new crop varieties, innovation in farming methods, and in diffusing what knowledge already exists. On the financial side, credit is not provided efficiently, nor coupled with insurance against crop failures. Mechanisms for selling crops are costly and subject to the control of powerful intermediaries. Storage, transportation and distribution of many agricultural products are still primitive, because of lack of government investment, and failures to enable private investment in areas where it could be financially viable.

The result of faulty policies is agricultural productivity that is much lower than it should be, and an equilibrium that is more fragile than it ought to be – dependent on wasteful use of water and fertilizer, growing crops that do not necessarily match emerging demands of consumers, and



unnecessarily vulnerable to weather and market shocks. All this is fixable without tackling the deeper problems of small and fragmented landholdings and lack of alternative employment through growth in labor-intensive manufacturing. But fixing faulty policies will require coordination between the center and the states, the latter having primary responsibility for agriculture. The center and states have worked out ways of coordinating sales taxes. National missions in health and education have also improved center-state coordination in those areas to some extent. But agriculture remains relatively backward, trapped in outmoded ways of thinking.

If agricultural policy reform, coordinated across the national and state levels, does not take place in India, the result will be worse than just the relative stagnation that has characterized the sector in recent years. Productivity will decline as water tables fall, river flows decline and soils are exhausted. Food will become like oil is now – an expensive import subject to the priorities of foreign producers and price rises driven by growing global demand. A food future of bread riots and falling governments will obviously have a severe impact on growth, and on basic social order.

Seen in the light of these risks, the debate about growth takes on a different cast. The need for reforms in other areas of the economy is not diminished: power, transport, manufacturing, land acquisition, competition policy, international trade and investment, all require attention for continued rapid growth. But without food (and water), none of them will matter.

### **Food and Nutrition: Right or Wrong**

*April 14, 2011*

India continues to struggle with how to achieve inclusive growth. A basic problem is that a large portion of the population does not possess the capabilities to participate productively in a modern market economy. A natural policy response is for the government to intervene directly: provide food, jobs, education and credit. India's problem is that the government's interventions are often ineffective. It is natural for a developing country government to lack capacity – India's governmental capacity is actually quite good for its level of development. Making good policy choices is often not about capacity, however, it is about clarity of thought and recognition of realities. The "right to food" campaign needs both.

It is true that hunger is still a problem in India. Providing cheap food to the hungry is a natural policy response. It has not worked perfectly in the past, but no policy is perfect. Attention has focused on fixing one weakness, the fact that often the cheap food goes to those who are neither poor nor hungry. Another idea is that it is better to give the poor cash to buy food (conditional cash transfers, in economics jargon) – this gives them more flexibility and it reduces the costs of running the program, the second major weakness. Smart cards are envisaged as a way to fix both weaknesses.

Hunger is important, but is it the problem that needs the most policy attention? Malnutrition in India is much more widespread, and perhaps much more pernicious in its long-term effects. Malnutrition has certainly been hitting the headlines. In February, the Prime Minister addressed a conference in Delhi on the role of farming in improved nutrition, and he noted the severity of the problem of malnutrition. But ultimately he talked about health and hygiene and food security as well. When problems get broadened, the solutions can escape policy makers. An emphasis on coordination and integration across a wide range of problems and policies often results in losing the ability to do what can actually be done. The unattainable best can be the enemy of the attainable good.

In the case of malnutrition, the important role of women is well-recognized. But often the policy prescription becomes a whole range of measures for improving the status of women. This is good and important in its own right. But it loses focus. Improving the food supply chain will also help improve nutrition, but again, it is a huge task that does not focus on nutrition per se. India has created ambitious national missions and schemes for education, health, employment and food. But the National Nutrition Policy was formulated as long ago as 1993. Periodic conferences and documents from think tanks or government agencies address the issues, but again, they often list all the things that need to be done, which amount to broad based social change and development. This is a Catch-22 situation, since malnutrition contributes to the lack of such inclusive development and social change.

I would suggest two things – laser-like focus on problems and on delivery mechanisms. Malnutrition is pervasive and persistent. But maybe it is not as complex to solve as we think. Maybe just the thinking has been wrong. First, breastfeeding is important. I have previously suggested focusing on a relatively short, critical period – pregnancy plus the first year of the child. The pivotal point here is birth, of course, so building on schemes that leverage the private sector for institutional deliveries is a natural place to focus on the health and nutrition of pregnant women, and the health of newborns, including breastfeeding. The ICDS and other direct government programs may be futile if pregnancy and postnatal care are not fixed.

The second point of intervention is even simpler, because it does not require behavioral changes. We know what people like to eat. We know the patterns of consumption at different income levels. We even know that they do not always go for calories, and they do not always optimize nutrition (think of the United States, with rampant poor nutritional choices). We know that a relatively few micronutrients are the ones that really matter. Mostly, we know how to fortify different foods to deliver these micronutrients across the board, without requiring people to eat what they do not want to buy. We have been talking about this for years, but doing little. What would be needed again, however, is a partnership with the private sector, not just big corporations, but numerous smaller businesses in the food processing sector. Collaboration with them, and an accompanying system of tax breaks, could be implemented more easily and at

lower cost than the planned improvements in the Public Distribution System. Fortified salt, sugar, milk, wheat and rice can all be used to deliver critical micronutrients. When a third of the richest 20% of India's children are malnourished, targeting becomes less of a concern. Focus on the critical problems and right delivery channels, and malnutrition can be conquered.

### **Who Should Get the Centre's Money?**

*October 1, 2013*

A government is ideally supposed to use tax revenue to provide public goods and services to its citizens, goods that the market cannot do a good job of providing. Tax revenue can also be redistributed to make poorer citizens relatively better off than before government intervention. In a federal country like India, there is the complication of different levels of government, each with its own responsibilities and loci of authority. Because the Centre is more efficient at raising tax revenue, there are provisions for sharing central tax revenue with the states. The 14<sup>th</sup> Finance Commission is now hard at work on making those sharing decisions. Like its predecessors, it will use a formula justified according to a mix of economic and political logic and of precedent. The Finance Commission is an explicit creature of India's Constitution.

Less firmly founded in constitutional directives, but more in the middle of political bargaining, the Planning Commission (along with various central ministries) also makes transfers to the states. These are based on more varied and discretionary criteria, with its own modified Gadgil formula playing a relatively small role. The Planning Commission introduced the concept of Special Category states, and has given them a healthy share of the pie that it disburses. These states have been, as a natural consequence of the criteria used, mountainous border states with populations whose ethnicity or religion are not part of the "mainstream" Indian identity. They were ostensibly compensated for having high cost structures for public good provision, but I have always thought of their shares of the pie partly as payments for sticking with the rest of the nation.

The Special Category designation has bothered the leaders of some bigger, poorer states, which have been demanding to be included in that classification, therefore getting more Central money. Many committees have looked into the criteria to be used for such transfers (which are broadly thought of as promoting "development") but not made much headway. Hence, a new committee, headed by the ubiquitous Raghuram Rajan, was formed, and has just given its report to the Finance Minister. This committee has created a new index of underdevelopment, combining 10 indicators into this index. In addition to the index, the report also suggested a classification based on levels of development. Indeed, Bihar and Odisha, left out of the Special Category pot, show up as the least developed. Headlines trumpeted the ranking of Gujarat as "less developed," despite its apparent economic success.

As anyone knows, and as a dissenting note in the committee report elucidates, the ranking can be very sensitive to how the index is constructed, and it is not clear that the committee has got everything right, from the point of view of what it was trying to achieve. A detailed conceptual discussion of the index is beyond my scope in this column, but I want to point out a couple of things about the report. First, the report is clear that it is not proposing to replace the entire current system of Centre-state transfers with the new formula, but to add another formula for making such transfers – presumably under the existing Planning Commission channel. To my mind, this just adds complexity to an already messy situation. Better to edge the Planning Commission out of this role, let ministries make explicit specific purpose transfers, and give the Finance Commission a bigger role. Better yet, allow states the freedom to piggyback on central taxes such as the individual income tax (this will need a constitutional amendment, of course).

Second, the report notes that Finance Commission transfers are only 54 percent of total Centre-state transfers (another source says 57 percent), but of the rest, only a small fraction is governed by the modified Gadgil formula and the boost for Special Category states. But the new index would give much less to the Special Category states, and more to the least developed states (see Table 2 in the report – look at Jammu and Kashmir, for example). If this new index is heavily used, it represents a big change. If it is not going to govern a major portion of transfers, then why all the effort? To my mind, the new index is trying to make a major conceptual change in how state shares of transfers are done, without adequate contextual positioning.

To sum up, I don't think the new index provides a superior guide for Finance Commission transfers (and is not meant to). But it is also not clearly the right way to go in guiding “developmental” transfers either. Those should be simpler, project-based, with measurement of concrete outcomes, not based on composite indices. Finance Commission transfers should do a better job of improving horizontal equity across states, but that also should be based on a small number of criteria – states like Bihar and Odisha would still benefit. And Special Category states should stay what they are – a politically sensitive group of smaller, mainly border states. For rethinking Centre-state transfers, I say, “back to the drawing board.”

## **A Road to Development**

*November 8, 2013*

How can government promote economic development? This is a perennial question, and it has not gone away with the collapse of the Soviet model 20-plus years ago. The debate often becomes acrimonious and ideological, but through it all, one can be hopeful about the accumulation of experience and understanding. The road from experience to understanding is not straightforward, and requires rigorous analysis of data. I want to illustrate that point with the example of rural roads in India.

India's government did not always seem to pay enough attention to the importance of connecting rural area with centres of economic activity. This seemed to change in the late 1980s, with programs to build rural roads. The Pradhan Mantri Gram Sadak Yojana (PMGSY), started in 2000, took this effort to a higher level, with an ambitious plan to connect India's smaller villages to nearby towns, all through the country. The Ministry of Rural Development has been in charge of the scheme, with the Planning Commission playing its usual role. An earmarked tax proved inadequate as a funding source, and the World Bank stepped in with loans at concessional rates.

By the account of the World Bank and the Ministry of Rural Development, the PMGSY has been a roaring success, improving agricultural practices, raising incomes and land prices and increasing literacy and access to health care. Some of these studies have tried to quantify the benefits in terms of social rates of return, which is rarely done for government spending in India. On closer examination, though, the claims of success are built on case studies that focus on a few selected rural roads or villages in a few selected districts. This makes it difficult to be confident about the overall, nationwide impact. One needs more rigorous quantitative analysis.

Some years ago, I had embarked on a project for the RBI's Development Research Group, in which I proposed to understand economic growth in India using the district as the basic unit of analysis. With my co-authors, I found that, using data for about 200 districts across nine states, there was clear evidence that the extent of a road network in a district in 1991 had a positive impact on growth over the following decade. Unsurprisingly, we also found that initial levels of literacy and access to credit also had positive effects on subsequent growth. But even this analysis did not trace a causal chain from government spending to outcomes. Doing that is the Holy Grail of economic policymaking.

Recently, a young UC Santa Cruz researcher has gone a long way to achieving that for the rural road scheme. Shilpa Aggarwal innovatively combines data on household consumption, schooling and employment with district level data on the spread of the rural road scheme. Her analysis is with nationwide data, so gives an all-important *overall* picture of how the scheme has impacted rural lives and livelihoods. By using econometric techniques that control for other fluctuations, she gives a true picture of the connection of spending and outcomes, and provides some surprises as well in her results.

Aggarwal's work verifies earlier case studies in finding that the PMGSY improved market access, reducing price dispersion for crops and leading to more technology adoption. Animal husbandry benefited in particular. We also learn brand new things. Village households were able to consume a greater variety of goods, which is a good thing, and employment opportunities increased. Surprisingly, though, the impacts on education were not all good: teenagers became more likely to skip school in favour of those new employment chances.

There is much more in the study, but let me summarize its benefits. We get a rigorous, unbiased picture of the nationwide impacts of the rural road scheme, but at the individual household level.

There is careful control of other variables, so we are quite confident that we are picking up the impacts of the new roads, and nothing else. And we learn things that might not have been obvious, which can help improve policy design. For example, villages with new roads may need some complementary scheme to keep girls in school, or rural schools themselves may need to be redesigned around new employment opportunities.

The existence of such studies – other examples are a well-publicized analysis of the benefits of enclosed toilets by Dean Spears and co-authors, and the impacts of the JSY scheme for subsidizing child birth in institutional settings rather than at home, done by another young UC Santa Cruz researcher, Ambrish Dongre – is heartening. These young economists are doing work that validates, questions, refines and shapes policymaking in India, pushing toward government spending that has significant positive benefits for the lives of its rural citizens and the poor across villages and towns. The weak links now in the road to development are the ways in which politicians and technical decision makers interact, how government money is allocated, and how its spending is monitored. But economists are doing their part of the job well.