

Opening up exploration

New hydrocarbon policy to be welcomed, with caution

The decisions taken on hydrocarbon exploration and pricing by the Union Cabinet on Thursday are by and large welcome, in that they should encourage greater private sector investment in this vital activity. India is not well-served at the moment in terms of natural gas and petroleum resources; it has to import a vast majority of its requirement, leaving the country at the mercy of world prices and threatening the stability of its external account. This problem has been exacerbated of late by contractual disputes between the government and various licensees. Earlier contracts, based on production sharing after cost recovery between the government and the private sector contractor, have proved to be difficult to monitor and have led to disputes. Among other issues in these contracts, operators had an incentive to "gold plate" their costs, and thereby reduce the amount provided to the government. This has now been replaced by a revenue-sharing model, which is easier to administer. This is a welcome move.

It is possible that industry will be more pleased with other aspects of the policy. A new licensing system is now being introduced, which will mean that the concessionaire in a particular field will be able to explore for both conventional hydrocarbon resources like petroleum as well as unconventional ones like shale gas and shale oil. "Open acreage" is also promised, so that companies can bid to explore certain blocks and then the hydrocarbons regulator will subsequently examine their geological findings. This means that companies can start to look at blocks that have not already been put out for bidding by the government.

While there is much to welcome, it is important to remember that the cost recovery and production-sharing method had its advantages in minimising risk to the explorer. If investments are to fructify in the changed regime, it is necessary to ensure that other sources of risk are minimised — for example, companies should not be expected to specify profiles of their hydrocarbon discoveries in advance to their actual production, given geological uncertainties. But overall, several long-pending issues have been addressed.

Perhaps the most debatable of them is the grant of pricing freedom, subject to a cap, on deep-water and other hydrocarbon discoveries in difficult areas. This has been extended naturally to future discoveries — but also to reserves discovered under previous contracts which had not started producing at the beginning of this calendar year. Some will see this as a windfall gain to the concessionaires in question, including Reliance Industries Limited. However, the government has rightly included the caveat that the new regime will only be available if arbitration or other legal proceedings currently in progress are settled or withdrawn. It is notable that, on Thursday, Reliance's stock price did not trend upwards. The overall impact of the increase in gas price on downstream sectors will have to be watched. At present the gas price is \$3.82 per million metric British thermal units (mmBtu); what the new formula might take it up to is not yet clear. But the effects of such decisions on medium-term investment and on prices, however, remain to be seen.

Cyber security

Internet of Things creates new avenues for attacks

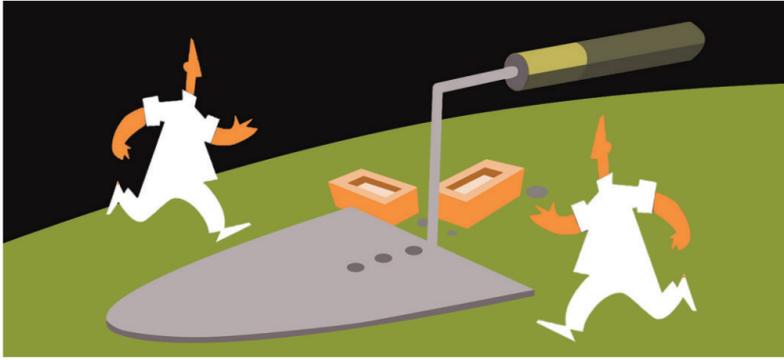
The cyber attack on the Ukrainian power grid in the recent past has drawn attention to the explosive growth of the Internet of Things, and consequent security questions. About six billion devices are now connected to the internet and many of these work without human supervision. All sorts of things from home appliances like smart fridges and futuristic smart cars to vast global banking networks, national taxation systems, and national power grids are hooked to the internet. But smarter systems are also more vulnerable to cyber assaults. As of now, critical infrastructure such as toll roads, telecom networks, railway and metro networks, power grids, port installations, and civil aviation navigation networks are all vulnerable to cyber attacks.

On December 23, 2015, at least six power companies in western Ukraine were targeted in concerted assaults. Their grid-management computers were taken over by malware. The hackers then remotely opened circuit breakers before erasing critical files and destroying the grid management system. The hackers simultaneously overloaded the call centres, preventing companies from even assessing damage via customer complaints. Consumers were blacked out for many hours. Technicians had to physically inspect sub-stations and manually flip switches to put the power on again. A Russian hacker group, Sandworm, is suspected of orchestrating the attack. This is the first time a power grid has been hit. But there have been earlier cyber assaults on physical infrastructure. The most famous of these was the Stuxnet worm, which specifically targeted Iran's nuclear infrastructure and reportedly caused severe damage to centrifuges.

Cyber assaults of this nature are likely to be used increasingly both by terrorists and criminals — but also by hackers working for governments. Cyber assaults are relatively cheap and easy to pull off and therefore very tempting in an era of asymmetric warfare. There are many soft targets. A high level of damage and disruption can be caused while maintaining deniability. The task of protecting infrastructure from cyber attacks is very difficult and likely to become even harder as more devices come online. Much of the infrastructure is in private hands and controlled by different companies. The hardware is often legacy and the software may be written for antiquated operating systems with many vulnerabilities. Ironically however, the cyber attack could have hurt even more if the Ukraine's power grid had been fully automated with no manual controls.

India, like every other nation, must find ways to harden its infrastructure against such assaults. As of now, whatever security exists is piecemeal. A programme is required for educating all classes of users about the need for basic security and also the deployment of disaster recovery processes across mission-critical systems. In addition, any serious cyber defence will involve developing offensive capacities since that may be the only way to shut down a hacker assault. So there is a serious need for a coherent national security architecture, with both defensive and offensive capacity as well as strong disaster-recovery mechanisms. Creating a specialised agency on the lines of the US National Security Agency, which plays both operational and advisory roles, may be worth consideration. Of course, such an agency would require carefully drafted legislation for due enabling and oversight, but it would be worth the effort. This is now an urgent requirement since the Ukraine assault is likely to inspire copycat efforts.

ILLUSTRATION BY BINAY SINHA



Local projects should get better exposure

Leveraging India's development cooperation experience in neighbouring countries

One of the more successful initiatives pursued by India in Nepal and then extended to Sri Lanka and Afghanistan has been the Small Development Projects (SDP) programme. This is a local, community-driven, small-budget but quick-yielding project assistance which enables the extension of tangible economic and social benefits to communities which have the greatest need.

When I arrived in Nepal in 2002 to take up my assignment as ambassador, I found that a sum of ₹80 crore had been sanctioned by the Indian government for small development projects but no criteria had been laid down for the selection of the projects. So we drew up a template for the use of these funds. For each project, we put a budgetary limit of ₹3 crore, but also stipulated that at least 10 per cent of the total cost must come as contribution from the local community, which could be in the form of funds, labour or materials. This was necessary in order to ensure that the community took ownership of the project. Our experience had shown that a project without some contribution from the community was rarely valued and its subsequent maintenance was left in doubt. We selected projects which could be completed in six months to a year. The SDP was demand driven, reflecting the priorities of the local community itself. The SDP proposals had to include the scope of the project, the benefits it would bring to the community, the local entity which would supervise project execution and details on how the project would be maintained after completion. Typically, the village or cluster of villages would set up a local committee for

the purpose. The village leader or the local political representative would assist in this regard.

At the very outset, we decided that we would take the Nepali government along in the implementation of the scheme, even if it was community driven. Here our approach was different from donor agencies or international financial institutions who typically worked through international or local non-governmental organisations, without the active participation of the host government. India signed a bilateral memorandum of understanding (MoU) with Nepal, setting out the main features of the SDP and respective responsibilities. Additionally, a trilateral MoU at the local level was envisaged, among the Embassy of India, the Local Development Officer (LDO) as the representative of the Nepal government and the local community organisation which had posed the project. The LDO would be involved in project formulation and execution and the prescribed audit and performance guidelines of the Nepal government, applicable to its own local development projects, would be followed.

The SDP programme has become extremely popular in Nepal and within one decade (2003-2013) the number of such projects rose from 16 to over 400.

The SDP covers an impressive range of projects. For example, in several villages in the Terai, constructing a separate toilet for girls in local schools, or constructing a protective wall around them, dramatically increased the enrolment of girls. In other areas, the SDP undertook clean drinking water proj-



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ects which led to significant health benefits. In remote areas, solar lighting projects were popular. The success of SDPs in Nepal and the template followed for their implementation led the scheme to be extended first to Sri Lanka and then to Afghanistan. It may be noted that in each case, these projects were successfully pursued despite operating in conflict-zones. The Embassy in Nepal did not hesitate to finance projects even in areas affected by the Maoist insurgency. These projects, enjoying local support, were never targeted. Several SDPs were located in northern and eastern Sri Lanka and Afghanistan, in zones affected by violence and conflict.

The amounts spent under the SDP programme may be modest but the outcomes are significant in promoting local development and community welfare. A lot of goodwill is generated for India and this also promotes people-to-people relations.

Indian development assistance, as a rule, does not carry any load on account of administrative and consultancy expenses. In the case of the SDPs in Nepal, the scheme was managed out of the Economic Wing of the Embassy. The monitoring of the projects was carried out through personal visits by Embassy officials. If consultancy was necessary, this was arranged at the expense of the Indian side and not imposed on the host government or the local community. Thus the ₹3 crore budget for individual projects may be regarded as pure grant.

Once I had gone to a village in the Nepal Terai to inaugurate a clean drinking water project. This also served a cluster of adjacent villages. The project cost was kept within the ₹3-crore limit. In an area within the same general locality, an international aid agency was executing a similar project. When I exchanged notes with the local head of the agency, it transpired that the total cost of his project was multiples of our project cost. My interlocutor could not believe there could be such a huge gap in expenses. We did a detailed comparing of notes on various components of our respective schemes. The items missing from our list were: (i) cost of international consultant who not only had to be paid professional fees of nearly \$300 per day, but also a "hazard" allowance since he may be exposed to risk from Maoist insurgents; (ii) purchase and running of two SUVs, one for the Nepal government ministry concerned and one for the field staff; (iii) expenses on setting up and running a project office with four staff. So while the costs on account of the project itself were not significantly different, all the other components, which India does not include under development cooperation, added up to a very substantial amount.

The SDPs are only one dimension of India's development cooperation experience. The priority given to capacity building, the alignment with the priorities of the development partner, the active partnership with the host government, these are all important features of India's development cooperation policy which should be given much greater domestic and international exposure than has been the case so far.

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The rot in drug regulation

Dinesh Thakur, the whistleblower whose intervention led Ranbaxy to admit that it had falsified data while seeking the approval of the United States Food and Drug Administration, and pay penalty of \$500 million to close the case, has taken the Indian drug regulators to court, accusing them of failing to enforce drug safety rules.

Mr Thakur spent much of 2015 to file more than 100 public information requests on how the central and state authorities had responded to cases where the rules had been broken. The responses showed that they had not adequately investigated the issues, which made him take the health ministry, Drugs Consultative Committee and Central Drugs Standard Control Organisation to the Supreme Court. The matter is listed for Friday on the Supreme Court cause list. The suit would not result in penalties but clear the way for a framework for recalls and a commission to enquire improper approvals.

More interesting was the response by a senior Central Drugs Standard Control Organisation officer who said that whistleblowers were welcome but their "intentions should be genuine and nationalistic". There was nothing left to the imagination; this was not yet another attempt to deflect a charge by using a highly emotive issue. If you talk to Indian drug makers, they will privately agree with this view and insist it is a ploy to harm the prospects of India-made generic medicine in the world market.

It cannot be denied that the Indian pharmaceutical industry has caused much heartburn to Big Pharma with its inexpensive medicine and has had

to face roadblocks in the past.

It also cannot be denied that perceptions are vital in the pharmaceutical business. Any untoward observation can hurt. After the Ranbaxy controversy broke out, Mumbai's Jaslok Hospital had asked its doctors not to prescribe medicine made by the company to its patients. Apollo Pharmacy suspended procurement from Ranbaxy. Then the government had to intervene and come out with a statement that it considered all medicine made by Ranbaxy, and others, perfectly safe for consumption.

Apart from the potential damage to perception, the industry is worried that Mr Thakur's activism may go the clinical trial way, where NGOs took the matter to the courts, resulting in no approvals from the government for a period of three years.

Indeed, the issue that Mr Thakur is trying to highlight is fairly well known: there are substandard and spurious drugs out in the market, thanks to inadequate regulation. An International Policy Network report in 2010 found that seven per cent of drugs bought from wholesale traders were substandard, and 3.6 per cent of the drugs from traders contained no active ingredient whatsoever. Some of the spurious drugs contained chalk or talcum powder mixed with a pain reliever to trick and defraud the patient. As many as 92 per cent of pharmacists said they have been offered substandard or spurious drugs for cheaper prices.

None of this would have been possible if the regulators had been strict.

This systemic rot is well known and well docu-

mented. Mr Thakur himself had talked about the inadequacy of Indian regulation, vis-à-vis the US, in a blog in July 2013. "The frequency of reporting adverse events in India is significantly lower compared to the US," he wrote. He had also busted the myth that the Indian drug makers are in sync with the US FDA. "According to the Drug Controller General of India," he wrote, "there are 169 manufacturing facilities approved by US FDA, 160 by European regulators and approximately 1,300 by the World Health Organization. Overall, the DCGI estimates there to be 8,000 units across the country. Industry estimates put that number at as high as 20,000."

None of the industry's apprehensions takes away the need for tighter regulation — the point that Mr Thakur wants to make. To be fair, some steps have been taken in that direction, and notifications and guidelines to reduce personal contact have been issued. But a long distance still needs to be covered.

Unfortunately, resistance comes from the politically strong small-scale lobby which is not in favour of tighter regulation for obvious reasons. The Indian drug industry has a long tail — a few big players are followed by a very large number of mid-scale and small players. They have ensured that there is never enough political support for better regulation.

Resistance also comes from the states. At the moment, both the Centre and the states approve drugs. For effective control, there has to be a unified approver. But the states are unwilling to give up this power. There has been some reform here and some products have been reserved for the centre, but this is a fight that will take long to resolve.

There is also merit in the industry's suggestion that India should join the Pharmaceutical Inspection Convention, based in Switzerland, which will help the country upgrade its regulatory processes.



WHITE KNIGHT
BHUPESH BHANDARI

Revisiting the global financial crisis



BOOK REVIEW

ISHAN BAKSHI

The failure of macroeconomists to predict the global financial crisis of 2008 has led to widespread disillusionment with the discipline of macroeconomics. Many influential voices within the profession have called for deep introspection.

Critics such as Olivier Blanchard, former chief economist at the International Monetary Fund, have argued for an in-depth interrogation of the models that have come to define the profession as well as the underlying assumptions they make about the economy and the behaviour of agents.

Many have argued that models used routinely by macroeconomists should be expanded to deal with events where a small shock, which in this case would be decrease in housing prices, could have a large effect on the economy. Mr Blanchard, among others, has also called for expanding the dynamic stochastic general equilibrium models used by monetary authorities to better recognise the role of the financial system.

Others such as Meghnad Desai, economist at the London School of Economics, have traced the origin of ideas that have become the bedrock of the mainstream macroeconomics discourse. Mr Desai proposes an alternate framework that relies on a blend — Schumpeter/Kondratieff's theory of long cycles, Wickell-Hayek's theory of short cycles, coupled with Karl Marx's ideas of the cycle of changing shares of labour and capital driven by demogra-

phy and technology.

The latest endeavour to look at the theories that have come to define the discipline is *Looking Back at Macroeconomics 101*. The author, Alok Sheel, an officer in the Indian Administrative Service (IAS) with over 30 years of public service and policy experience, attempts to look at the "anomalies in applying received wisdom or theories to the real world".

But the book is anything but new. It is a collection of the author's articles in leading Indian financial dailies over the years. The overarching theme of the book is to look at the financial crisis of 2008 and explore the policy debates that have shaped global discourse since then. The articles have been neatly slotted into eight themes that cover issues such as the savings glut, the dollar's hegemony, the financial crisis, the policy response of the G20 — issues that have received a lot

of academic interest.

But the problem with the practice of clubbing published articles into a book is that there is no underlying theme. Newspaper articles, which are constrained by a word limit, don't offer space to expound an alternate view in detail. Books, by contrast, afford writers the luxury of unlimited space to introspect in much greater detail. As such, a collection of articles is bound to be disappointing. This approach has become emblematic of academics wanting to add a book to their name without taking the trouble of carrying out original, insightful research.

To be fair, the author does acknowledge these shortcomings in the preface. He falls back on the usual explanations to defend this approach — that few people actually end up reading a book so a compilation is the simplest way of engaging the inattentive reader.

More attentive readers, however, will feel the lack of a theoretical framework underpinning the author's views. Unlike say Mr Desai's *Hubris*, Mr Sheel does not interrogate the underlying

assumptions that form the basis of modern macroeconomic thinking. Nor does he offer an alternate world view. Exploring the policy response to the crisis is undoubtedly a tall order. But given the ambitious title, one had hoped for more.

Chapters with an Indian orientation such as "How about a Taylor rule for India?" go nowhere. One was hoping for greater insight into the functioning of monetary policy in India — the supply side constraints under which monetary policy has to operate, the debate over measuring potential GDP, the shift to the inflation targeting regime. But rather than examining these issues Mr Sheel chooses to dwell more on monetary policy in developed economies.

Given that Mr Sheel was an interlocutor in the G20 deliberations during the global financial crisis, one looked forward to his insights on the deliberations during the tumultuous time. Instead, the author chooses to dwell largely on the G-20's response to the crisis by documenting the policy ini-

tiatives undertaken by various governments. There is almost no exposition of the behind-the-scenes negotiations. Admittedly, such revelations may be difficult for a bureaucrat while in harness, which raises hope for another book focused on this very critical period in recent global economic history when Mr Sheel retires.

A PhD in history, Mr Sheel does, however, provide a succinct historical backdrop against which some of the discourses are set in chapters like "For freedom and markets", "A brief history of inflation" and "Once old certainties collapse". These chapters would be invaluable for the uninitiated because of the writer's clear, explanatory style.

LOOKING BACK AT MACROECONOMICS 101

A Ringside view of the Global Financial Crisis from Asia in Real Time
Alok Sheel
Academic Foundation
424 pages; ₹1,295