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September 1, 2011

Scanning 2.4 Billion Eyes, India Tries to Connect Poor to Growth

By **LYDIA POLGREEN**

KALDARI, India — Ankaji Bhai Gangar, a 49-year-old subsistence farmer, stood in line in this remote village until, for the first time in his life, he squinted into the soft glow of a computer screen.

His name, year of birth and address were recorded. A worker guided Mr. Gangar's rough fingers to the glowing green surface of a scanner to record his fingerprints. He peered into an iris scanner shaped like binoculars that captured the unique patterns of his eyes.

With that, Mr. Gangar would be assigned a 12-digit number, the first official proof that he exists. He can use the number, along with a thumbprint, to identify himself anywhere in the country. It will allow him to gain access to welfare benefits, open a bank account or get a cellphone far from his home village, something that is still impossible for many people in India.

"Maybe we will get some help," Mr. Gangar said.

Across this sprawling, chaotic nation, workers are creating what will be the world's largest biometric database, a mind-bogglingly complex collection of 1.2 billion identities. But even more radical than its size is the scale of its ambition: to reduce the inequality corroding India's economic rise by digitally linking every one of India's people to the country's growth juggernaut.

For decades, India's sprawling and inefficient bureaucracy has spent billions of dollars to try to drag the poor out of poverty. But much of the money is wasted or simply ends up trapping the poor in villages like Kaldari, in a remote corner of the western state of Maharashtra, dependent on local handouts that they can lose if they leave home.

So now it is trying something different. Using the same powerful technology that transformed the country's private economy, the Indian government has created a tiny start-up of skilled administrators and programmers to help transform — or circumvent — the crippling bureaucracy that is a legacy of its socialist past.

“What we are creating is as important as a road,” said Nandan M. Nilekani, the billionaire software mogul whom [the government has tapped to create India’s identity database](#). “It is a road that in some sense connects every individual to the state.”

For its proponents, the 12-digit ID is an ingenious solution to a particularly bedeviling problem. Most of India’s poorest citizens are trapped in a system of village-based identity proof that has had the perverse effect of making migration, which is essential to any growing economy, much harder.

The ID project also has the potential to reduce the kind of corruption that has led millions of Indians to take to the streets in mass demonstrations in recent weeks, spurred on by the [hunger strike](#) of an anticorruption activist named [Anna Hazare](#). By allowing electronic transmission and verification of many government services, the identity system would make it much harder for corrupt bureaucrats to steal citizens’ benefits. India’s prime minister has frequently cited the new system in response to Mr. Hazare’s demands.

The new number-based system, known as [Aadhaar](#), or foundation, would be used to verify the identity of any Indian anywhere in the country within eight seconds, using inexpensive hand-held devices linked to the mobile phone network.

It would also serve as a shortcut to building real citizenship in a society where identity is almost always mediated through a group — caste, kin and religion. Aadhaar would for the first time identify each Indian as an individual.

The identity project is, in a way, an acknowledgment that India has failed to bring its poor along the path to prosperity. India may be the world’s second-fastest-growing economy, but more than 400 million Indians live in poverty, according to government figures. Nearly half of children younger than 5 are underweight.

India’s expensive public welfare systems are so inefficient that warehouses overflow with rotting grain despite malnutrition rates that rival those of sub-Saharan Africa, and much of it is siphoned off to the private market long before it reaches hungry mouths. The government builds sturdy classrooms but fails to punish well-paid teachers who do not show up for work. These systems fail to connect citizens’ most basic needs with help that is readily available, either through government handouts or the marketplace.

Technology, its supporters believe, could solve these problems because it would provide people with a way to interact with the state without depending on local officials who are now the main gatekeepers of government services.

“One cannot improve human beings,” said [Ram Sevak Sharma](#), the director general of the identity program. “But one can certainly improve systems. And the same flawed human beings with a better system will be able to produce better results.”

To build the database, the Indian government has created a highly unusual hybrid institution: a small team of elite bureaucrats who are working with veterans of Silicon Valley start-ups and Bangalore’s most-respected technology companies. Despite the scale of its task, the organization has deliberately been kept small. At its peak, no more than a few hundred people will work on the project, and private contractors will do much of the work of enrolling citizens. It costs the program about \$3 to issue each Aadhaar number, Mr. Nilekani said, and more than 30 million have been issued so far. The process is free and voluntary.

The operation’s tiny footprint and seemingly technical mission have kept the project from drawing much scrutiny so far. Just as the information technology industry grew stealthily beneath the nose of the bureaucracy that had traditionally smothered private enterprise, the identity database is quietly embedding itself in India’s bureaucratic fabric even as other efforts to reform India’s government and economy seem to have stalled.

Century-old labor and land laws stifle industry and mobility, making it hard to build factories and create jobs. Restrictions on foreign investment protect small shopkeepers and domestic industries but also hamper investment that could modernize agriculture. Yet efforts to change these rules often fail to overcome entrenched interests.

The identity database has so far met only muffled opposition. Privacy watchdogs [worry that the identity numbers will be abused](#) by a snooping state that cares little for civil liberties. Leftists fret that the database will lead to an erosion of the state’s role in helping the poor. But powerful and corrupt bureaucrats, politicians and businessmen who thrive on the current system’s opacity have yet to object publicly, though they almost certainly will once the challenge to the way they do business becomes evident.

India’s identity database will be an order of magnitude larger than the world’s largest existing biometric database, the [US-Visit](#) program for visas, which has data on about 100 million people. To register all 1.2 billion Indians, the system will need to collect 12 billion fingerprints and scan 2.4 billion irises. It is a project of epic proportions — not unlike the challenge of governing the world’s largest democracy.

A Start-Up in Spirit

With its grid of chest-high cubicles in cheerful colors, the suite of offices could belong to a

high-tech start-up like so many others in the booming city of Bangalore. On the second floor of the Touchstone Building, part of a nondescript technology office park off a traffic-choked ring road, the government's own start-up is at work.

In one glass-walled conference room, bankers on leave from their jobs in finance were planning how to use the Aadhaar and hand-held mobile technology to bring banking to India's 600,000 villages without laying a single brick.

In another, programmers worked out how Aadhaar's open software architecture could be used to build an ecosystem like the ones Google and Apple created, embedding the number in every aspect of life. That could eliminate trillions of pages of bureaucratic paperwork, remnants of the License Raj, the old system that governed India's closed economy. Indians face obstacles almost every time they ask anything of their government — a driver's license, subsidized grain, a birth certificate. Digitizing these systems would eliminate countless opportunities for graft.

A typical government office this is not. There are no peons in white Nehru caps shuffling between offices with bundles of dusty paper files tied with string. The standard uniform of the tech company employee — khaki trousers and polo shirt — is de rigueur.

The project resembles a start-up because the man in charge is Mr. Nilekani, a co-founder of India's most famous start-up. In 1981 he pooled 10,000 rupees in capital, or \$1,100 to \$1,200, with six colleagues to start [Infosys](#), the outsourcing giant. Infosys has grown into a \$30 billion company with more than 130,000 employees around the globe. Mr. Nilekani's path from son of a socialist textile mill manager to world-renowned billionaire inspires countless Indians.

Two years ago, when the government decided to create the identity database, Mr. Nilekani stepped down as chairman of Infosys to oversee the effort, forging an unusual path in Indian public life from business to government.

"I am an entrepreneur within the system," he explained in an interview in his office in New Delhi.

The very notion of a businessman in government was once unthinkable. Mr. Nilekani, 56, came of age in an era when almost all private industry in India was smothered under the License Raj's heavy blanket of government regulation. This meant entrepreneurship was almost impossible. For a young man in the 1970s with elite credentials, going abroad to work for a private company or getting a posting in the elite Indian Administrative Service were the two most attractive options.

Mr. Nilekani was a founding member of a second elite, the one created when a handful of brainy graduates of India's top technical schools set up companies in Bangalore in the 1980s.

Over time, India's technology elite has transformed not just India but the world, sending its brightest engineers to Silicon Valley and beyond. India has become the back office to the world, not only handling customer service calls and insurance claims, but also composing legal briefs and performing complex quantitative analysis for investment banks.

But even as it made global business more efficient and profitable, this technological class was cut out of India's political system.

In 2008 Mr. Nilekani published "**Imagining India**," a wonkish book that elucidated a set of ideas he thought could transform India. A best seller here, it was the type of policy book an American businessman might write if he aspired to high public office. But India's hurly-burly political system has no place for men like Mr. Nilekani.

"This was not the United States, where a Michael Bloomberg could be the C.E.O. of a large company one day and get elected as New York's mayor the next," Mr. Nilekani wrote. "Being an entrepreneur automatically made me a very long shot in Indian politics, and an easy target for populist rhetoric."

A deep suspicion toward private enterprise, a result of decades of socialist politics, permeates public life. Political parties are intensely hierarchical and formed along family, religious and caste lines, making it all but impossible for an outsider like Mr. Nilekani to win an election.

Still, he pined to serve somehow, and his chance came when the Congress Party was re-elected and formed a strong coalition government in 2009. Rahul Gandhi, the tech-savvy scion of India's leading political family and the presumed prime minister in waiting, wanted Mr. Nilekani to join the government.

At first Mr. Gandhi asked Mr. Nilekani to transform the dysfunctional education bureaucracy, according to a senior government official familiar with Mr. Gandhi's thinking. But Sonia Gandhi, Mr. Gandhi's mother and the leader of the Congress Party, along with Prime Minister Manmohan Singh, concluded that such a move would cause too much of an uproar.

When the government decided to create the unique-identity system, Mr. Nilekani leapt at the chance to run it. Though he would hold cabinet rank, he would be in charge of a small and seemingly arcane government authority. No one would notice that he was working on a revolutionary project, the Gandhis and Mr. Singh concluded.

"People don't fully realize what can be done with this," said a senior government official working on the identity system, who requested anonymity because the scope of the project is a delicate

subject. “People who are not familiar with technology don’t understand how big this is.”

The Resistance

Unsurprisingly, some people see the idea of a centralized identity database as a dystopian nightmare. Privacy advocates contend that the government will use it to track citizens, a serious concern in a country where the government carries out extensive wiretapping and surveillance to track potential terrorists.

India lacks robust laws to protect privacy, though Mr. Nilekani and others have urged the passage of strict legislation to govern the use of information the government collects. The database has been designed to contain as little information as possible — only a name, date of birth, sex and address. When anyone tries to confirm a person’s identity using the number, the database will supply only a yes-or-no answer.

Many influential critics of the identity system argue that it is costly — \$326 million is budgeted for the next financial year, and the project will take a decade to complete — and unnecessary because there are easier ways to check corruption in antipoverty programs. Chhattisgarh State, in central India, has drastically reduced waste and fraud in its delivery of subsidized grain using a system of smart cards.

“This is a solution in search of a problem,” said [Usha Ramanathan](#), a lawyer who works on civil liberties.

Because Aadhaar will be linked instantly with a bank account, some social activists suspect that the government is seeking to replace its current system of in-kind benefits — like distributing grain and creating state-supported jobs — with direct cash transfers. Many on the left oppose such a shift because they think handing out cash from the public till would create a backlash and undercut support for poverty programs.

But the project has enjoyed an unusual degree of support from the highest officials in India. When the program was inaugurated, Prime Minister Singh and Mrs. Gandhi, the Congress Party’s left-leaning leader, attended the ceremony. Several influential members of the National Advisory Council, a kind of kitchen cabinet that advises Mrs. Gandhi on social policy, were deeply wary of the project, but she overruled them.

“Mrs. Gandhi normally consents to discussions on a number of issues we raise,” said Harsh Mander, an activist and member of the council. “But on this she said, ‘No, we are going ahead with the idea.’”

The Invisible Man

Under an overpass near the fetid bank of the Yamuna River, in the shadow of New Delhi, the homeless lined up to be counted.

Mohammed Jalil, a rickshaw puller dressed in his best shirt, hair freshly washed and neatly parted, sat uneasily behind a computer screen, waiting to be registered for an Aadhaar number.

Though he has lived in Delhi more than half his life, Mr. Jalil may as well not exist. He is homeless. For two decades he has worked as a rickshaw driver, delivering heavy loads of wooden furniture from a market to homes across the city, earning about \$100 a month. Labor is so cheap in India that it makes more sense to use a man as a pack horse than to expend fossil fuel.

He left his village in the impoverished state of Uttar Pradesh, hoping to find a better way to make a living than farming a scrap of land. But the lack of identity documents has been a fundamental hurdle. "When I first came to Delhi I thought I would earn big money, build a house in my village and educate my children," he said.

But he has no bank account, making it hard to save money. When one of his children got sick, he took a loan from a moneylender at an onerous interest rate. Poor people like him are entitled to subsidies for food, housing and health care, but he has no access to them.

Mr. Jalil hopes Aadhaar will allow him to open a bank account. He could get a driver's license and a cellphone.

"That will give me an identity," he said, gesturing at the computer station where he had just completed his enrollment. "It will show that I am a human being, that I am alive, that I live on this planet. It will prove I am an Indian."

Mr. Jalil's number has yet to arrive, but he is waiting.

Hari Kumar contributed reporting.