

TATA TRUSTS

AUGUST 2026

HORIZONS



VOCATIONAL WAY

The case for mandatory vocational education in India's schooling system

HELP ON THE INSIDE

A collaborative effort delivers support and solace for inmates in Maharashtra's prison system

TRAIN AND GAIN

Building a high-quality workforce is the objective of an exceptional fellowship programme in Odisha

INTERVIEW

Social entrepreneur Harish Hande on the fuel needed to power India's transition to sustainable energy



EDITORIAL

Vocational education is on the cusp of getting its due as a subject in India's schooling system, and not a moment too soon. For all the advantages it delivers — from hands-on learning and career clarity to original thinking, skills enhancement and more — vocational education has lagged in India due to limited access, inadequate tutoring and sociocultural biases. That is poised to change as the recommendations of the National Education Policy, 2020, get closer to being implemented in right earnest. Our cover story examines what is at stake.

Starting early with vocational education is crucial in realising its benefits. The intent is to have this in place for students from grade 6 to higher secondary, but that's easier imagined than done. There are a host of challenges to be overcome before vocational education can become an integral part of India's schooling system. Addressing these challenges by creating a template for execution — that's the goal of two programmes being operationalised by the nonprofits Lend A Hand India and STARS Forum with support from the Tata Trusts.

This edition of *Horizons* also has a varied blend of articles that highlight the Trusts' range of social development initiatives. Two of these are from Maharashtra: a long-running collaborative effort to provide a safety net for inmates in the state's prison system, and a Pune-based endeavour that helps underprivileged children suffering from type-1 diabetes.

From Odisha, we have a unique fellowship programme that is building a high-quality workforce by tapping youth through skilling and entrepreneurship projects. And there's Antaran, the crafts-based livelihoods programme, which is enabling more than 3,000 handloom weavers from about 250 villages in four states to become entrepreneurs by providing them with the tools and the technology to reach far-flung markets.

In our interview section, we speak to social entrepreneur and Raman Magsaysay award winner Harish Hande, who has made it his life's mission to deliver solar power to underserved communities and to fuel social uplift through the use of sustainable energy. We have a mix of images and words to narrate the story of a bakery and a café in Uttarakhand, both managed by women, and thriving thanks to a signature ingredient: millets.

Wrapping it up are Valay Singh, incisive as always in his analysis of India's judicial edifice — with a piercing look, in this instance, at the legalities of everyday transactions — and educationist Akshay Saxena, who makes the case for providing children from lower-income backgrounds with the means to maximise their potential.

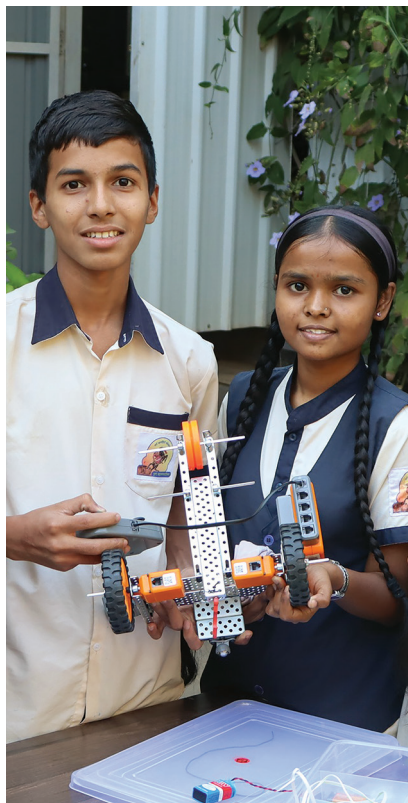
Christabelle Narasimha

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CONTENTS

VOL 9 | ISSUE 3 | AUGUST 2026

COVER STORY



6

A BOOSTER DOSE FOR HANDS-ON LEARNING

With a policy push that should lead to vocational education becoming mandatory in schools, India is on the cusp of a reform of far-reaching consequences

Cover image

A student from the Dr Vasantdada Patil Madhyamik Vidyaniketan in Pune during her class on vocational education

INTERVIEW



14

'INDIA CAN LEAD THE GLOBAL SOLAR REVOLUTION IF...'

Social entrepreneur and Ramon Magsaysay award winner Harish Hande on the fuel needed to power the country's transition to sustainable energy

FEATURE STORIES



19

SUPPORT AND SOLACE FOR THOSE LOCKED UP

A long-running collaborative effort has been a boon and a balm for inmates in Maharashtra's prison system

24

ADVANTAGE ARTISANS

Antaran is building a sustainable ecosystem for handloom weavers by combining tradition, enterprise and technology to enhance value

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FEATURE STORIES



29

TRAIN AND GAIN

An exceptional fellowship programme in Odisha is building a high-quality workforce by enabling local youth through skilling and entrepreneurship initiatives

33

NO SUGAR, NO SWEAT

The upshot is sweet for poor children with type-1 diabetes in a project that breaks new ground while covering more than 3,000 village families in Maharashtra

PHOTO FEATURE



37

A TREAT UNFOLDS

A bakery and a café in Uttarakhand deliver a tasty example of women-led enterprises securing success with ingredients blended to order

OPINION



43

INDIA'S LOST EINSTEINS

Children from lower-income backgrounds need a leg-up — and then some — to realise their potential and find a place in the academic sun

PERSPECTIVE

46

THE LEGALITIES OF EVERYDAY LIFE

The Consumer Justice Report 2026 is a reminder that justice is not confined to criminal law or the constitutional rights of citizens — it also exists in the ordinary transactions that govern our existence

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A booster dose for hands-on learning

With a policy push that should lead to vocational education becoming mandatory in schools, India is on the cusp of an exceptional reform of far-reaching consequences. By Philip Chacko

India's education ecosystem could surely use some good tidings, and this one centres on an idea whose time has finally — and formally — come. Vocational education being embedded in the country's schooling structure from grade 6 to higher secondary may not seem extraordinary at first sight, but there is no exaggerating its potential as a means of tutelage that can better prepare students for the world beyond the classroom.

There is nothing especially new about making vocational education a mandatory subject in schools, yet the concept has fared fitfully on the realisation scale in India. That is changing as the recommendations of the National Education Policy (NEP), 2020, and the National Curriculum Framework for School Education (NCFSE), 2023, on starting early with vocational education get closer to being implemented in right earnest.

There is no doubt about the manifold advantages of bringing vocational education into the school syllabus, and with marks for it as well. The tools and outcomes

of 'technical and vocational education and training' (TVET), to nail its global nomenclature, go the distance in moulding well-rounded students: hands-on learning, career clarity, self-confidence, original thinking, respect for labour, skills enhancement, practical knowledge and more.

Lagging behind

For all its positives, TVET has lagged in India for a range of reasons, from limited access and inadequate infrastructure to sociocultural biases and a general disdain for something perceived as only for the academically weak. That may explain why, according to a report by the Paris-based Organisation for Economic Co-operation and Development, India has only 1.9% of its upper secondary students enrolled for TVET, far behind countries such as Finland (67.1%) and Germany (47.4%).

"Vocational education in schools can be defined through three different applications," says Raj Gilda, the cofounder of Lend A Hand India (LAHI), a Pune-based nonprofit that the Tata Trusts are

collaborating with to bolster the TVET cause. "The first is getting students eligible and ready for the job market. The second is applied learning: do gardening and you understand botany better, do carpentry or electronics and the laws of physics become clearer. The third is overall life skills like teamwork, communication, creating more with less and customisation."

Considered in its entirety, TVET offers benefits that pave the way from schooling to employment and much else. Why then the hesitancy in embracing it? "There's been a narrow viewpoint [in India] on vocational education," adds Mr Gilda, "The widespread thinking is that this is not for my son or daughter, that it's for the economically poor or only for backbenchers who are not academically inclined."

There is a history to such thinking, says Yogesh Kulkarni, founder of STARS Forum, another nonprofit that the Tata Trusts are supporting to promote vocational education in schools. "The outlook of planners and politicians in newly independent India was that



Students get close to plants during a vocational education class at the Dr Vasantdada Patil Madhyamik Vidyaniketan in Pune

vocational education was a throwback to the past, a kind of baggage,” he says. “They wanted a ‘modern’ education system, learning through books, studying English and all that.”

This worked fine at that point, adds Mr Kulkarni, because jobs were available for those getting a mainstream education. “Then we started understanding the limitations of book-centred learning. Research on cognitive development came into the picture,

as did the importance of learning while doing, of giving school students exposure to, and the experience of, different vocations and hands-on training.”

The growing appreciation of vocational education’s value in the schooling environment has led to the NEP-NCFSE push, the clearest signal yet that a tipping point has been reached. “There was a time when we had to sell the idea of vocational education,” says Mr Gilda. “There were plenty of

questions about adding to an already crowded timetable, about overburdening the child, about making this a board exams subject.”

Having TVET as an essential component of the curriculum, rather than as another after-school activity, was always the objective, adds Mr Gilda. Getting there was not plain sailing. “Finding space in a school student’s timetable is akin to finding housing in Mumbai — extremely difficult — but now we have everyone on vocational

education's side: students and parents, school managements, policymakers and funders. There has been a huge shift in thinking."

Mr Kulkarni reckons that barriers remain in preventing vocational education from translating its potential into gains for students. "There are two principal challenges; one relates to implementation and the other to perception," he says. "The aim is not to turn a grade 6 class into a mini-ITI [Industrial Training Institute], but to develop competencies in children and to expand their horizons. This message has not percolated enough or been propagated enough."

"Vocational education has to be an integral part of schooling and it should ideally be supervised by the headmaster," explains Sunanda Mane, LAHI's cofounder, "and critically, the mindset of the teacher has to change. He or she should be able to convince the school

management, the principal and the parent of the need for this."

Vocational education is like an iceberg, adds Ms Mane. "One-eighth is what we see and make the child do; seven-eighths is about things like observation skills, communication skills, analytical skills, exposure to the outside world, what I like and what I don't like. That's what children require to make an informed choice about their future."

Closing the gap

NEP envisioned expanding access and exposure in vocational education to cover 50% of eligible students by 2025. NCFSE, meanwhile, has underscored the necessity of high-quality, age-appropriate and gender-equitable vocational education within schools. The 50% target is still far away and the cause is the distance between policy and on-the-ground implementation. The efforts of LAHI, STARS Forum and the Tata

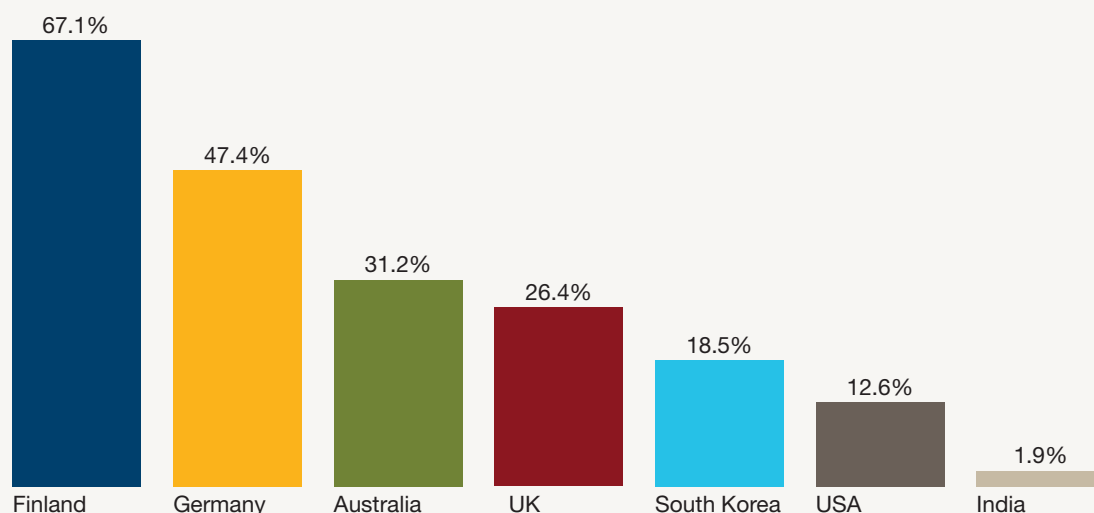
Trusts in vocational education are directed at bridging that distance.

It's going to take time and patience for vocational education to claim its deserved place in the school syllabus, says Ms Mane. "You cannot change the entire education system all of a sudden because it's gigantic and it's bureaucratic. And then there are these increasing demands on students: learn yoga, learn ethics, learn about climate change... And the burden here is on teachers as well.

"Also, several elements have to come together for vocational education to make an impact. Apart from the space for it, you need tools and equipment, raw material, customisation to suit local conditions, a connect with the local community or employer, and proper assessments. It's pretty complicated and resource-intensive."

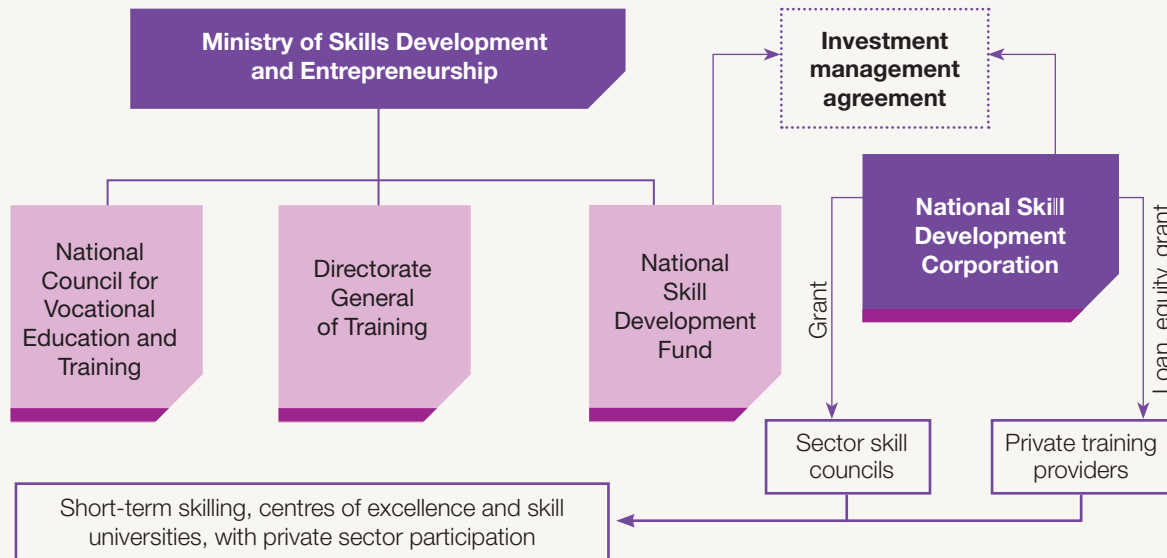
Mr Kulkarni, a member of the team that developed the NEP framework for vocational education, is convinced that even schools

Upper secondary vocational education enrollment by country



Source: OECD, Paris (2025)

Institutional mechanism for vocational education in India



Source: State of the Education Report for India 2020, UNESCO New Delhi

with moderate resources can make optimal use of it.

“The resources part will sort itself out once demand, from schools as much as parents, starts rising,” he says. “More importantly, NCERT [the National Council of Educational Research and Training], which sets the curriculum; the people in charge of funding and administration; the boards that conduct examinations; and the state and central governments — all of these entities have to be on the same page for vocational education in schools to take off.”

As and when that happens, one obvious benefit will be greater gender equity in India’s workplaces and within its formal workforce. “Offering gender-agnostic [TVET] modules in schools enables girls to get exposed to different vocations. For many of these girls it’s a novel

experience and they thoroughly enjoy it,” says Ms Mane. “What this will surely lead to is more women in the workforce, women who are vocal and who can negotiate well in life, women who have agency. That would be an outstanding outcome.”

Adoption agenda

For the Tata Trusts, being involved in India’s TVET journey sits perfectly with their mandate to help plug gaps in the education sector. “Vocational education is a key area of reform in secondary education, but its adoption and roll-out has been limited,” says Amrita Patwardhan, deputy head of programmes at the Trusts. “Very little experience or understanding exists among school educators on how to integrate vocational education into the curriculum. The Trusts are, therefore, proactively

identifying suitable partners to develop models, methodology and resources for vocational education in diverse settings.”

Supporting LAHI and STARS Forum is, in the context, an endorsement of their credentials. “Both these organisations can play a vital role in further developing vocational education in India,” adds Ms Patwardhan. “They are ahead of the curve, have the potential to emerge as hubs for vocational education, and can pilot interventions on the ground.”

Mr Gilda believes India is on the cusp of a giant reform in school education with TVET. “We are the only country in the world where this is being made mandatory up to grade 10, and that’s a very progressive step. The government has provided the policy; it is up to civil society and citizens like us to make the best of it.” ■

Study time gets a long-due revision

There remain wrinkles to be ironed out, but vocational education is well on its way to becoming an integral part of India's schooling ecosystem



Students at the Hutatma Balveer Shirishkumar High School in Pune with products fashioned during their class on robotics

Sarika Gaikwad was apprehensive when she heard about a new subject being added to her school syllabus. “I was, like, one more subject? I didn’t know what vocational education was or what we were going to be taught,” says the 15-year-old grade 10 student at the Dr Vasantdada Patil Madhyamik Vidyaniketan, a government school in Shukrawar

Peth in Pune. “Then, after the first session — it was on electronics and electrical technology — I got a bit interested. This was something novel and I got more interested.”

For 14-year-old Aman Gupta, another grade 10 student from the same school, the vocational training period turned out to be an enlivening break from routine. “Our regular subjects are boring; all we do is listen and there’s so much

of mugging up involved,” he says. “Now we have classes on finance, gardening and mechatronics, which is my favourite. It has taught me how machines function.”

Having her own bank account, and knowing how to operate it without assistance from her parents, is what has got Pihal Gaikwad kicked about her vocational education class. “Finance is one of the topics taught and that led to

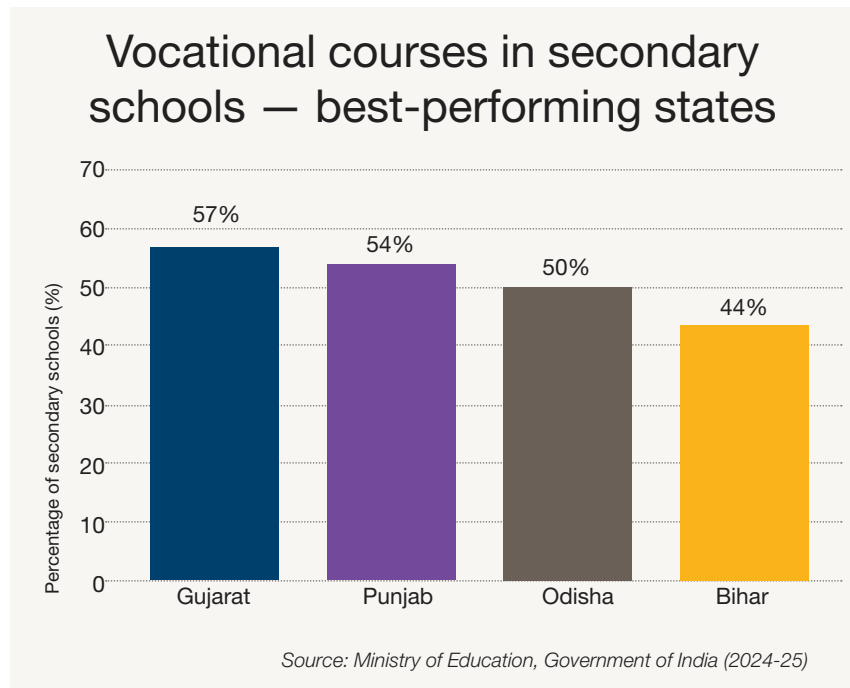
banking, saving, debit cards and opening a bank account,” says the 16-year-old grade 10 student at the government-run Hutatma Balveer Shirishkumar High School in Shivajinagar in Pune.

Kindling interest in subjects off the beaten schooling track sits right with the Maharashtra government’s effort to make vocational education an integral component of the school curriculum from grade 6 to higher secondary. Hands-on classwork, soft skills, practical knowledge and much more are on the learning menu, and the subjects are varied: agriculture and gardening, food and cooking, healthcare, finance, electronics and robotics. It’s a spread designed to enable and encourage students to explore the world around them and discover their place in it.

Unlike the usual

“Same as everyone in my class, I found these subjects stimulating,” says Aman. “They were unlike the usual stuff, maths and science and language, where we have to remember what to do next. Here you have to understand what to do next.” The mechatronics inclination has prompted Aman to consider studying computer engineering in the years ahead and aim for a career in the Indian Air Force. And he has a backup plan in place. “I have the option of joining my father in his carpentry trade.”

Exposure to vocational education has sparked Sarika’s curiosity about home automation. A visit to the fire station, she says, opened her eyes to safety issues and how to protect herself in an



emergency. As for gardening, “I never knew you could make a career in it,” she says.

“We learn by observing and doing, we have guest lectures, which are great fun, and our teachers, well, they are like our older brothers and sisters,” adds Sarika, who has set her mind on becoming a lawyer. “It is my childhood dream. There is a lot of injustice everywhere, especially with what’s being inflicted on girls and women. I will fight to have their voices heard.”

In its essence, vocational education expands the worldview of students, and starting with the theme early delivers a host of advantages that traditional classroom teaching does not and cannot. This flies in the face of received wisdom, which suggests that vocational training is only for those seeking immediate employment after higher secondary, or for students whose grades are not up to the mark.

That’s as far from the truth as blackboard learning in a classroom is from a field visit to a factory. The recommendations of the National Education Policy (NEP), 2020, and the National Curriculum Framework for School Education (NCFSE), 2023, reinforce the point, highlighting vocational education’s role in moulding the minds and futures of school students.

The Tata Trusts have taken this message to heart, building partnerships with seasoned nonprofits working to bring vocational education into the mainstream of India’s schooling ecosystem, and into the curriculum as a subject with scoring marks. Lend A Hand India (LAHI) and STARS Forum are two of the nonprofits being supported by the Trusts in this endeavour, which has the potential to reshape how students are tutored and what such tutoring can translate into.

The Pune-based LAHI

collaborates with government and government-aided schools to cement vocational education as a core component of the curriculum. This involves setting up labs with tools and equipment, recruiting and training teachers, and helping students with internships, assessments and certifications.

Founded in 2003, LAHI has nurtured 'technical and vocational education and training' (TVET) programmes in 24 states of India, reaching more than 1 million students in about 12,000 schools. The partnership initiative with the Trusts, stretching over three years, will see LAHI push the TVET envelope in 50 schools in Pune and four other districts (in the Vidarbha region). The objective is to cover 13,000-plus students, train 80-plus teachers, and test different vocational education models in diverse settings.

The expectation is that the initiative will, down the line, lead to innovative, inclusive and widely

applicable solutions, which can then be employed in schools elsewhere. "The NEP-NCFSE blueprint is in place, but it is not clear how their goals can be realised," says Akash Patki, a senior manager with LAHI. "We need to operationalise this on the ground and showcase what can be achieved in multiple types of schools."

STARS Forum, the second organisation being backed by the Trusts, is an offshoot of Vigyan Ashram, a nonprofit established by the late scientist-turned-educationist SS Kalbag in 1983. Based in Pabal near Pune, Vigyan Ashram applies Gandhian principles to a raft of rural development interventions and is rooted in the vocational education mantra of 'learning by doing'.

STARS stands for 'skills training for advancement in rural societies' and STARS Forum, set up in 2010, reflects the belief embedded in the acronym. Its objective is to find common cause with like-minded partners and

create a platform that advances vocational education in rural and tribal communities and with the urban poor. To this end, it has expanded to reach more than 2,300 schools across India.

The Tata Trusts are supporting STARS Forum in setting up a 'resource and innovation centre for the advancement of school-based vocational education' (RICVE) in an initiative that will be effected over three years.

Multiple elements

The project comprises a clutch of elements: implementation models; training for teachers and instructors; content curation; technical backing for allied organisations; and crafting a robust assessment structure.

The way it is envisioned, STARS Forum will have approximately 19,200 students (grades 6 to 10) from 40 schools in rural Maharashtra and Chhattisgarh under its vocational education umbrella. Also on the agenda are training for 160 instructors and the generation of teaching-learning resources.

"The challenges we face in [getting this programme right] are multifaceted," says Ranajit Shanbhag, a trustee at STARS Forum. "The first has to do with the mindsets of teachers, parents and school administrations. We are into the fifth generation of schooling by blackboards, books and memorisation — we are habituated to it — so when you say hands-on learning, which is what vocational education is about, it does not quite seem like an essential part of schooling. But it is, because we are



Two students from the Dr Vasantdada Patil Madhyamik Vidyaniketan in Pune creating a computer game during their vocational education period



Students from the Hutatma Balveer Shirishkumar High School during an exposure visit to a robotics laboratory

always ‘learning by doing’, in our homes, on the playground and while going about our lives.”

TVET is new for the teachers and administrators in India’s schooling system, which may explain their anxiety about what its arrival portends. Administrators worry about the resource factor — the money needed for infrastructure, tools and material — while teachers fret over taking on another subject.

“Acceptance of vocational education by kids is almost immediate; for the teachers it could appear like being saddled with something extra,” says Mr Shanbhag. “There’s also the fear that their own subjects and their skill sets could be undermined and, consequently, their jobs threatened.”

Parents, a vital part of the matrix, are a special kettle of fish. “When we talk about project-based learning, about carpentry and plumbing, the feeling among

parents is, ‘I don’t see my child as a future plumber or electrician.’ But this is basically about life skills,” adds Mr Shanbhag. “Teachers, parents and administrators may not be direct beneficiaries, but they are a crucial part of the programme. We need to talk to them; we need to show them results.”

State-side support

Institutional support is an important determinant of how TVET fares on the ground. States that have bought into the concept, among them Gujarat, Punjab, Odisha and Maharashtra, have shown positive results, indicating the heft that such support lends to vocational education in schools.

“NCFSE has defined the flow and framework of vocational education in schools; now it is up to the states to adapt and adopt,” says Mr Patki. “There are six aspects that require attention: having proper

teachers; getting those teachers trained; setting up infrastructure with tools and equipment; making sure the relevant books are there; ensuring a delivery model that makes allowance for different kinds of schools; and assessment and certification. We have to operationalise all of these aspects.”

From the Tata Trusts’ perspective, the STARS Forum and LAHI programmes have a two-fold agenda. “In the short-term, this is about developing an exemplar; in the long-term, it’s about alignment with NEP to fully integrate school-based vocational education,” says Kishore Darak, manager, education programmes, with the Trusts. “The path to realising these goals is not linear. We need more such initiatives, more partners and more collaborative innovation.” ■

Philip Chacko

‘India can lead the global solar revolution if...’

For social entrepreneur and 2011 Ramon Magsaysay award winner **Harish Hande**, it was a field visit to the Dominican Republic during his years as a doctoral student at the University of Massachusetts, USA, that changed his outlook. Surprised to find poor Caribbean villagers using solar lighting, Mr Hande wondered why India’s rural folk couldn’t do the same. That thought would, in 1995, lead him to set up SELCO, a rural energy service company headquartered in Bengaluru.

Mr Hande’s objective, then and now, has been to deliver solar power to India’s underserved communities and to catalyse development outcomes through sustainable energy. In this interview with *Labonita Ghosh*, he advocates for innovation to create aspirational, energy-efficient machines, devices and even buildings. That, he believes, is the fuel needed to power the country’s transition to sustainable energy.

How does the right kind of delivery of sustainable energy to the poor enable improvements in their lives and livelihoods in the long term?

Sustainable energy is like adding salt to your food to make it tastier. The food, whether rice, *dal* (lentil) or *roti* (flatbread) — which in this case represents livelihoods, health, etc — is the most important thing; the salt improves it.

Let’s take the example of a large dairy. It includes cows, a cowshed, fodder, milk, a storage facility, and equipment for making milk products. Sustainable energy can help ease the way for every element here. With water shortage affecting fodder quality, we can have solar-powered hydroponics to grow feed. Heat stress in the cowshed, which makes cows produce less milk, can be managed with a design that allows for airflow, continuous lighting with solar and a cooler environment. Solar-powered milking machines can reduce the drudgery of the task, while solar-powered cold storage keeps the milk from spoiling. Sustainable energy plays an important role in all of these.

“Government policies for increasing livelihoods already exist. What we need is for more organisations and philanthropies to support projects on a long-term basis...”



How can you align the objective of long-term sustainability with eco-friendliness when advocating for alternative energy?

We don't use the phrase eco-friendly. We have worked with government ministries of rural development, housing and women and children to create savings from an energy perspective. There are three things to this. First is finding better market linkages for existing livelihoods. Second is to create and adopt more future-resilient livelihoods through technology and innovation. Third is improving the overall ecosystem for the incubation of enterprises to happen.

In the ginger trade, for instance, you need highly-efficient, solar-powered equipment to help with drying, slicing and dicing. Alongside this, you can have a small unit designed for optimal sunshine and airflow (to help with the packaging). Instead of using words such as 'environment' and 'sustainability', we want to work towards decreasing the dependence on diesel, electricity and other traditional sources of energy by automatically opting for climate- and eco-friendly interventions.

How do you also create an enabling and inclusive environment for the adoption of more sustainable energy sources? Is there enough investment in innovation, government support or even demand among farmers for this?

“The idea is not to depend only on the government or criticise it by saying nothing is being done; we have to look for alternative champions as well.”

Government policies for increasing livelihoods already exist. What we need is for more organisations and philanthropies to support projects on a long-term basis, rather than shorter-duration CSR [corporate social responsibility] funding. If we get flexible resources to experiment with, we can be more innovative. These innovations can then be scaled up using government funds.

To cite an example of our approach, we decided to undertake some 100-odd interventions, selected by gender, community marginalisation or livelihood, to launch innovations. It's like a relay race where SELCO is the first and second runner, while the third could be another organisation and the fourth is the government. When you know all the runners, you can design a programme accordingly. With CSR funds, we throw the baton away after the first leg and cannot finish the race. We fail with multiple projects because we have no clue who the other 'runners' [stakeholders] are.

Programmes need to be designed with the end goal in mind. If I make a 10-km railway line, will it get connected to the 2,000-km Bengaluru-Delhi line? That's what I have to keep in mind. If we take the livelihood missions available in different states, there's huge scope for innovation. The idea is not to depend only on the government or criticise it by saying nothing is being done; we have to look for alternative champions as well.

Given the recent global fuel crisis, do you think this is a good time to advocate for sustainable sources of energy?

The movement was always there. Today, electricity supplied by the state is highly subsidised, and the state is losing money on this. However, the issue is not about supply but about creating more energy-efficient machines and appliances. Our Indian Institutes of Technology, though, would rather work on the latest apps, which means we must look to foster and support our Industrial Training Institutes (ITIs) for this. The US and Germany have succeeded as innovation hubs mainly because of their vocational schools.

There are brilliant innovators everywhere, even in the smallest towns and villages. How do we bring this non-English-speaking innovation class to the fore? A *roti*-rolling machine inventor from the bylanes of Ahmedabad may not have the same access to design resources as a white goods company, but philanthropic capital might help him get his product out.

Do you find the government focusing more on renewables now?

We began working in the solar space in 1992-93, and every government since then has pushed for alternative energy sources. We are the first country to have a cabinet position for renewable energy. We have one of the largest programmes for individual solar use in the Prime Minister's Surya Ghar Yojana. Where we lack is in user-centric thinking. Where can a millet grinder from rural Karnataka get a grinding machine that runs on solar power? There's no research in industry for this, or even for things like efficient cookers, solar-powered sewing and silk-weaving machines.

We need to invest in incubation centres that will build machinery that



A solar panel being cleaned at a site near New Delhi

small-scale farmers can use for the next 20-25 years. And we need to design them to be aspirational and energy-efficient. When we introduced our *roti*-rolling machine, we never had to say it was solar-powered or environmentally friendly. The entrepreneurs who had invested in it with bank loans were able to pay them off in a short time by making 500 or more *rotis* in a day.

Has India realised its solar energy potential? And how do we compare with other countries in the sustainable energy space?

When it comes to China, with whom we usually liken our social and economic conditions, we are fighting the wrong battle. China is looking at the supply side, that is, how many solar panels it can manufacture. Instead of trying to compete on that front, we should be looking at how many people we can convert to using renewables. Our aim should not be so much to generate 700 gigawatt of solar energy but to get 700 million people to use it.

Also, these models are replicable in many other parts of the world. Sierra Leone can have a solar-powered health centre. The ginger processing plant will find takers in upper Ethiopia, while Tanzania would certainly benefit from having turmeric processing units in every rural home. If the solar technology we create for the women of Dharwad can be used in parts of Ethiopia, we — and not China — will be the leader in the global solar revolution.

If we can double or triple the incomes of rural families, or let the maternal mortality rates of women in Meghalaya drop because of a reliable and energy-efficient labour room, the conversation shifts. Now the World Health Organization is interested in knowing how we achieved this. That's the conversation India needs to be a part of; that's why we have to shift our focus from the supply side to the demand side.

“Hydro, biogas and even wind energy have huge, unrealised potential in our country. We have to incubate innovation and technology and look at fortifying the demand side.”

We’ve talked largely about solar energy. What about other forms of renewable energy? How is India doing on hydroelectric, biogas or even nuclear energy?

We can do much better in the micro-hydro space. Micro-hydro sites have immense potential in the Northeast and the Himalayan region. But here, too, financing gets in the way of innovation. Entrepreneurs who want to set up a pico or micro grid must bear the costs of transmission and distribution lines. If the capital expenditure for the entire system gets subsidised by the government or industry, it will increase the successful adoption of these energy sources.

With biogas, we have to transform its image in India. We associate biogas with just cow dung, but many new developments have taken place over the years (there are 10 different products in the biogas space with improved mechanisms). Gender has played a role here as well: the women of the house were the ones to collect the cow dung and use it to generate biogas, and then clean up after. In my uncle’s village in rural Karnataka, a lot of men were not able to find wives because people refused to get their daughters married into a household that ran on biogas.

A home with two cows will need a certain kind of biogas unit as opposed to an ashram with a full cowshed that intends to draw its entire energy for cooking from biogas. The dairy cooperative Amul, along with its 18 member unions, is planning to set up 30 large, compressed biogas units across Gujarat. It also intends to roll out 10,000 household-level biogas units to reduce farmers’ dependence on fossil fuels and boost their incomes. All of this has come about because of a whole ecosystem of project-based thinking.

Hydro, biogas and even wind energy have huge, unrealised potential in our country. We have to incubate innovation and technology and look at fortifying the demand side. If the demand for them increases, so will the prevalence of these other forms of sustainable energy.

How are different states in India faring as far as the adoption of renewable energy is concerned? Which states are doing better, and which ones need to do more?

When it comes to solar usage by individuals, bigger states like Maharashtra, Karnataka and Rajasthan are doing well. In the last 15-20 years, Maharashtra has operationalised the use of solar in the health sector, while Karnataka has drawn on this to improve livelihoods. Odisha and West Bengal need to do better with utilisation.

In Odisha, where poverty levels are high, the adoption of renewables would have a great impact. In West Bengal, there will be an immediate transformation if sustainable energy is decentralised and used for livelihood enhancement, with the capex for the interventions being shared by multiple owners who can collectively benefit from a bump in their household incomes. But I believe that the next level of decentralised, end-user growth will take place in the Northeastern states. ■



Support and solace for those locked up

A long-running collaborative programme has been a boon and a balm for inmates in Maharashtra's prison system

When Raghav Shankar arrived at Thane Central Prison in Maharashtra 10 years ago, he was a healthy, self-assured man with a thriving business. Charged with murdering his wife of 20 years — Mr Shankar claims he was framed — incarceration has broken his back and his spirit.

Now 72, Mr Shankar has a permanent hobble, diabetes, prostate problems and very few teeth. His two children abandoned him years ago, and with no family to speak of, where will he go after his release? "I'll live on the streets if necessary," he says, tearfully. "But if I don't get bail [pending his appeal], I will die in here."

Mr Shankar is a convict, with an appeal against his conviction pending in the High

Court, and in that sense he is an undertrial — a term with a particularly subcontinental connotation — which means he is imprisoned in limbo as his case winds its way through India's criminal justice system.

Raju Yadav, a 38-year-old migrant worker from Bihar, is also an undertrial, and he has a stranger story to tell. Mr Yadav did manage to get out of jail, but he fell victim to an administrative error.

Mr Yadav had moved to Punjab 12 years ago to work as a farmhand, taking his family along. In 2016, he was arrested for killing a coworker in an altercation. During the Covid pandemic, he was granted a furlough and asked to report back after 45 days. When he did so at the local police station, they turned him away,

saying it was not yet time. The police had miscalculated.

Mr Yadav’s furlough was indeed up and soon a team from Mumbai arrived in Punjab to bring him back. “I could have easily run away and disappeared, but I didn’t do that,” says Mr Yadav. “I want a fair trial. But now, thanks to a police mix-up, I’m viewed as a jailbreaker. This will definitely affect my chances of release.”

Mr Shankar and Mr Yadav are victims of a system that is caving in under its own weight, being punished on account of delays by the courts. “I have served more than my time,” says a bitter Mr Yadav. “Why am I still here?”

With nearly 4,000 inmates at the Thane Central Prison, well beyond its official capacity of 1,111 prisoners, it would be easy to forget about people like Mr Shankar and Mr Yadav. But the social workers of Prayas — a field action project of the Centre for Criminology and Justice at the Tata Institute of Social Sciences (TISS) that is being supported by the Tata Trusts — won’t allow that.

In search of bail

“We have put in several applications for legal aid for both men,” says Amar Sawant, a social worker with Prayas. “But, in all these years, their appeals have been heard only once or twice, and their government-appointed lawyers are long gone. We will continue to push for them to get a lawyer who can at least get them out on bail.”

Under Prayas, 13 trained social workers, Mr Sawant among them, have been deployed to five central prisons of Maharashtra (Thane, Pune, Nagpur, Nashik and Chhatrapati Sambhaji Nagar) and the borstal school at Nashik, a reformatory institution for young male adults convicted in serious offences.

The Prayas team works with undertrial and convicted prisoners and their families, women rescued from sexual exploitation and/or housed in shelter homes, children in conflict with the law, and poor people who need assistance in navigating the court system.

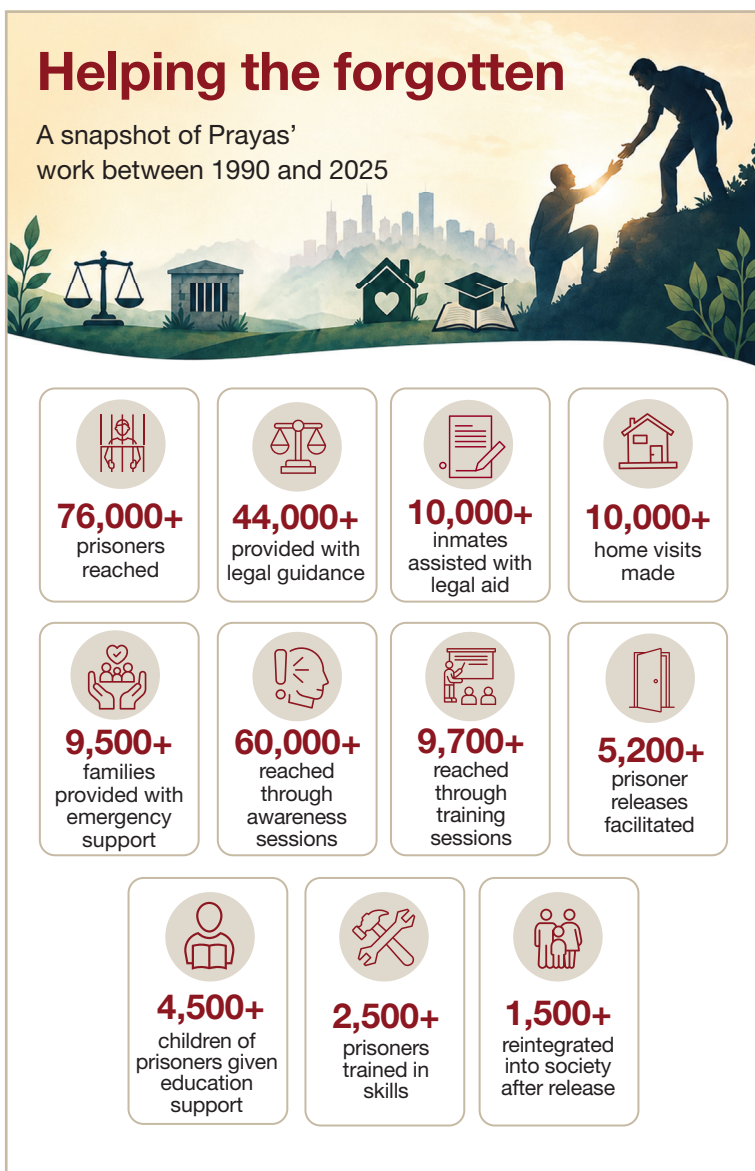
The team provides legal aid, supports *mulakat* (family visitation) services, and works closely with inmates’ children to secure quality education for them. In cases of extreme hardship, Prayas also offers temporary monetary assistance.

Additionally, it coordinates with partners to provide creche facilities for children whose parents are in prison, offers mental health support through therapy, legal aid and counselling, and organises health camps, awareness sessions, and skills development and vocational training for prisoners.

By coordinating these services and

Helping the forgotten

A snapshot of Prayas’ work between 1990 and 2025





maintaining continuity of support, Prayas serves as a vital bridge between the prison system, inmates, and their families. Its social workers act as mediators between the prison administration and the inmates, providing socio-legal and rehabilitative services.

“As the police or prison administration, there are limitations to what we can do,” says Kailash Bhavar, senior jailor at the Thane Central Prison. “We can look to the well-being of our inmates, but we can’t help with legal aid or family matters. For these and many other tasks, we need social workers, and Prayas’ staff are doing exemplary work.”

Providing any kind of assistance is a challenge because of the sheer numbers. Maharashtra’s prisons, with 143% occupancy across 60 jails, have the fifth-highest occupancy rate in India. [The national average is 112% and Delhi tops the list at 194%, states the Prisons Statistics India Report, 2024] Approximately 80% of these people are undertrials, many of them low-risk cases who might benefit much more from being released.

“The overcrowding has worsened over the years in Maharashtra’s prisons,” says Vijay Raghavan, project director at Prayas. “An increasing crime rate has brought about a corresponding increase in the prison population. Also, many undertrial prisoners are either unable to get bail or remain in custody despite getting bail on account of a lack of suitable sureties or the ability to pay the bail amount.”

Losing out legally

The absence of competent legal representation for those from poor and marginalised communities means their cases drag on, and irregular contact with families exacerbates the delays. “In this context, the role of social workers and legal aid bodies becomes very important,” adds Mr Raghavan. “Social workers can provide a range of socio-legal and psycho-social services, including arranging legal aid.”

Legal aid is the most sought-after service. “Social workers identify undertrial and convicted prisoners in need of legal aid when they accompany the superintendent

Inmates queue for a health check up at the Chhatrapati Sambhaji Nagar Prison in Aurangabad



Inmates of Nagpur Central Prison hone their carpentry skills

on their daily rounds,” says Kalpana Katare, project coordinator with Prayas. “The superintendent refers cases to them based on requests from prisoners.”

This certainly helps people like 23-year-old Maya Bose, who is from West Bengal and is currently lodged in a Mumbai prison. During a recent round by the superintendent and Prayas staff, Ms Bose approached them to “sort out” her bail matter so that she and her four-year-old daughter could return home.

Ms Bose was arrested eight months ago when her husband defrauded a person while using her bank details. “I still don’t understand what happened or how I got trapped,” she says. “When the Mumbai Crime Branch transferred us here, I had to bring my daughter along because there was no one to leave her with. Now she thinks this jail is her home. I feel terrible about that; neither of us deserves to be here.”

Ms Bose has been granted bail — thanks in part to Prayas — but can’t provide the ₹25,000 surety. She wants help to convert this into a cash payment instead, a step that will require another round of court

hearings and applications to authorities, says Reshma Bhoite, the Prayas social worker managing her case.

It has become easier now, says Ms Bhoite. When Prayas first began its work in prisons more than three decades ago, government-appointed lawyers were paid poorly. Till 2023, a legal aid lawyer received an honorarium of ₹750 per hearing, subject to a maximum of ₹7,500 per case. “With such a meagre amount, you can hardly find good lawyers who were committed to helping people, especially those from the margins,” adds Mr Raghavan.

In 2023, the National Legal Services Authority (NALSA) — the statutory body formed to ensure free legal aid for those who need it — established the Legal Aid Defence Counsel (LADC) system, whereby public defenders are paid a regular salary upwards of ₹45,000 per month.

The improved pay has brought in better lawyers, who are mandated to visit prisons and connect directly with inmates. “This has reduced the burden on Prayas’ social workers as far as arranging lawyers and following up on cases is concerned,”

adds Mr Raghavan. “Now we act as the link between the undertrial and LADC.”

In 2025, the state passed the Maharashtra Prisons and Correctional Services Act, which has a provision for setting up a prison development board and further facilitating the process of legal aid, aftercare and rehabilitation of prisoners. Advocacy by Prayas has been a help here.

The programme has a sound post-release support structure. Once the prisoner is out, the social worker follows up on their requirements, arranging temporary shelter, and helping with access to healthcare, immediate relief in terms of travel expenses to go home, ration subsistence, house repairs, clothes, etc.

Livelihoods and counselling

When this phase is over, the focus shifts to long-term livelihood issues, like vocational training, seed money to start a venture, as well as counselling to readjust to family life. Sometimes, cases are referred by prison authorities, especially in instances of mentally disturbed or elderly released prisoners who have weak family support.

The Tata Trusts-Prayas partnership began in 1991 and continued until 2019. The Trusts’ latest support effort, which kicked off in 2025, looks to develop Prayas into a centre of excellence.

“Over the years, we have supported Prayas in various interventions in different prisons,” says Anirudh Menon, manager, institutions portfolio, with the Trusts. “Now the focus is on building this centre of excellence that can embed social and rehabilitative work into India’s prison systems. This way, legal aid, rehabilitation and jail reforms can be fortified.

“Prayas aims to expand its field interventions, research, training and policy advocacy. It now has the potential to take on a leadership role by institutionalising its work, mentoring new organisations,



mobilising resources, and leveraging technology for a more structured approach to criminal justice reform. By becoming a centre of excellence, it will enhance policy engagement, drive systemic change, and build a sustainable model for rehabilitation and social reintegration.”

Prayas has plans, too. “We aim to institutionalise the role of social workers across prisons in Maharashtra,” says Mr Raghavan. “If realised, this would be the first endeavour in India targeting prisoner welfare and rehabilitation at scale. Maharashtra has 36 prisons — 60, if you count the open prisons — and we want to put social workers in all of them.” While Prayas will continue to hire and train social workers, it is hoping that their wages will be paid by the government (rather than philanthropic partners).

Prayas has been approached by other states to conduct a similar programme for their prisons. “If our work is to be sustainable, we need government support,” says Mr Raghavan. “We have kept a structure for expansion ready; we’re just waiting for the right time to roll it out.” ■

Labonita Ghosh

Names of prisoners have been changed to protect their identity.

A mental health session for women inmates at the Thane Central Prison



Bikash Mahapatra, a weaver from Maniabandha in Odisha's Cuttack district, dyes the cotton yarn that will go into creating an exquisite fabric

Advantage artisans

Antaran is building a sustainable ecosystem for handloom weavers by combining tradition, enterprise and high-end technology to enhance authenticity and value

It seems incongruous to see a QR code on fabric woven with a handloom in one of India's remote villages. This digital identifier is adding authenticity to the craft of India's traditional handloom weavers, helping artisans like Sudhanshu Mohan Das build their business.

Mr Das, who hails from Maniabandha in Odisha's Cuttack district, is a master of the single-weft Ikat technique, a weave specific to handlooms and not easy to replicate on power looms. Lending Mr Das and his compatriots a hand is Antaran, the crafts-themed livelihoods programme of the Tata Trusts.

Launched in 2018, Antaran enables and encourages artisans to become entrepreneurs, providing them with the tools and the technology to reach far-flung markets.

The initiative covers six handloom clusters across nearly 250 villages in four states, benefiting more than 3,000 artisans, in its first phase, through capacity building and ecosystem development interventions delivered through incubation and design centres in each cluster. The ongoing second phase aims to reach 7,500 artisans across 10 clusters through a similar approach.

Assam's Eri silk, Nagaland's loin-loom weaves, Odisha's Tussars and Maniabandha Ikats, and Andhra Pradesh's Venkatgiri silks and Kalamkari hand-painted sarees are among the exquisite fabrics that these artisans fashion, and they have Antaran to bank on to keep their pre-loom, on-loom and post-loom processes in fine fettle.

Digital marketing provides an example of how Antaran has rejigged the field for those in the programme. Mr Das uses Instagram to draw customers to his traditional Nuapatna weft Ikat silk sarees. "The Antaran sessions taught me to photograph my products in different ways to make my sarees stand out," he says.

Antaran has paid particular attention to the entrepreneurship component in the

programme, the objective being to groom 750 artisan-entrepreneurs. Its team works on aspects such as design support, market linkages and business education, while strengthening the craft ecosystems to support artisans in navigating the modern marketplace.

The Hyderabad-based International School of Business and the Indian Institute of Technology, Guwahati, were roped in to fine-tune educational inputs for Antaran's grassroots entrepreneurship development model. Improving incomes, driven by artisan-led enterprises and creativity, is the goal of the model.

Income boost

Before the Antaran intervention, weavers in the initiative tended to work for local traders, earning an average of about ₹70,000 a year. Today, these weavers engage directly with buyers across the country, with premium retail brands such as Taneira, Nalli Silks, Reliance Swadesh, Taj Khazana, Fabindia, and iTokri, and leading designers as well, enabling stronger market linkages and greater value realisation.

Up to 80% of the artisans' products goes to institutional business-to-business buyers — and this pays for enhancing crafts-based livelihoods. Today, Antaran's weaver-turned-entrepreneurs manage their own teams and clock an average revenue of ₹1.16 million a year.

Antaran's latest phase is all about building a sustainable, sector-wide ecosystem with a wider base of weavers, the goal being to nurture 750 micro-enterprises and directly impact the lives of 7,500-plus artisans across 10 clusters.

Antaran has started showcasing products from these at clusters at leading trade platforms like Bharat Tex, India's largest textile trade fair, and seeding collaborative entrepreneurship models alongside individual artisan-owned



Arjun Pal, from Bidharpur village in Cuttack district, is an expert at weaving mulberry silk Ikat yarns

THE ANTARAN TAPESTRY



Launched in 2018, Antaran works in **6 village clusters** in Assam, Nagaland, Odisha and Andhra Pradesh

The initiative reaches **3,000+** beneficiaries in the handloom ecosystem and has enabled **300+ artisan entrepreneurs**

Phase 2 of the effort has a target of seeding **750 micro-enterprises** and **7,500 artisans** across 10 village clusters

organisations, on the lines of farmer-producer companies.

“Invigorating traditional crafts and restoring their relevance was only the first step,” says Pankaj Shah, mentor to the Antaran programme. “The larger vision is to transform the handloom sector by nurturing artisan-entrepreneurs and enabling creative artisans to build sustainable enterprises.

“Traditional techniques need to find new relevance in contemporary markets while retaining the integrity of the craft, enhancing their value and economic viability, so that the knowledge and creativity behind them are recognised.”

Art is about authenticity and that’s where the IoT-based QR coding project comes in. This is an Antaran pilot for loom-based tracking so that buyers can trace the fabric back to the artist. The tech



Ramakanta Tosh, a weaver from Maniabandha, working with cotton yarn; and (top) the QR code in the fabric that provides details of the product

partner is Kosha, a Bengaluru-based startup that uses patented IoT (internet of things) and AI technology for supply-chain transparency and authentication of handmade textile products.

The authenticity factor is crucial. India’s handloom sector has taken a hit on the credibility front due to a trust deficit: dupes sold as ‘genuine’ handmade textiles, power loom knockoffs, quality issues, etc.

Struggling to survive

“India’s weavers have been struggling to survive with their hand-woven craft,” explains Mr Shah. “A lot of handloom techniques have been copied on power looms, and this has been one of the biggest challenges that weavers have faced in the last seven-eight decades.”

In the collaboration with Kosha for IoT tagging, a sensor-activated device is embedded in the loom (this tracks who has woven it and when). The end product gets a tamper-proof label with a QR code that is woven into the fabric. Customers are not only privy to the individuals behind their fabrics, but also to the process.

The IoT project was piloted across three handloom clusters, Maniabandha (Ikat) and Gopalpur (Tussar) in Odisha and Venkatagiri (fine cotton, silk) in Andhra Pradesh. Technology benefits only if weavers see a bottom-line impact, and that is what Kosha has delivered. “The price difference between genuine and fake handloom products can be anywhere between 50% and 100% of the product cost,” says Vijaya Krishnappa, Kosha’s cofounder. “With this project, weavers are seeing an increase in demand and sales.”

The Antaran effort is unique for two reasons: artisans are trained to become entrepreneurs who have their own brands, and they operate the technology themselves. “The IoT tagging gives producers a greater sense of ownership in incorporating

authenticity credentials into their products,” adds Mr Krishnappa.

While the IoT tagging is a path-breaker, there is a larger objective here. According to Mr Shah, the future of genuine handloom products is going to be about verifiability and traceability. With Western markets becoming more sensitive to source traceability and carbon footprints, a product’s development must be completely transparent. A verifiably low carbon footprint gives early tech adopters in the handloom sector an edge over competitors.

Antaran believes the handloom sector can benefit from adopting the ‘digital product passport’ concept, giving every handloom product a unique digital identity embedded via a code or chip.

This provides traceability, documenting the origin and type of raw materials used, details about the weaver, dyer and finisher, the processes used, blockchain-verified authenticity, and essential warranty and care instructions.

“If we start to explore global markets for our products, we need to be prepared for compliance,” says Mr Shah. For artisans like Mr Das, that means using technology to market the singularity of his products and the sustainable production methods that go into their making.

Challenges aplenty

Practical, technical and market challenges remain. For instance, a standard warp length is about 60 metres; a single tag at the beginning of a roll will be lost once the fabric is cut into pieces for individual garments. Finding a tamper-proof way to weave tags at regular intervals without disrupting the fabric’s aesthetic is difficult.

Too much transparency can also be an issue. While direct-to-consumer buyers prefer the appeal of artisan stories, business-to-business buyers often hesitate to disclose their sourcing supply chains. Another



Akula Charan Nandi, also from Maniabandha, displays a cotton yarn home furnishing fabric that was made to order for a client

wrinkle: artisans fear that posting their work on social media will lead to their designs being copied.

“A significant barrier in online marketing is the apprehension of plagiarism,” says Anwesha Mohapatra, a programme officer working with the Maniabandha cluster. “Artisans view their

creations as unique art. They know that inferior copies of their work will negatively impact the valuation of their authentic products.”

That leaves modern marketplaces as a reality to be navigated. Artisans, equipped with smartphones, IoT sensors, and a direct line to their customers, will be able to get more visibility for their craft and, ultimately, a fairer price for their work.

Mr Das is happy that his craft is reaching a wider audience via his Instagram profile. “A customer from Pune who had

purchased two sarees from me was so happy that she sent me a handwritten note complimenting my work, along with a box of chocolates,” he recalls.

Stories of this kind validate what the Tata Trusts are seeking to do with Antaran. “There is a difference between wage-earners and *kalakaars*,” says Parwez Alam, who leads Antaran. “We are trying to, along every step of the way, bring back that *kalakaar* into the picture.” ■

Dhruv Nimbalkar

A device that makes sense

Kosha, the Bengaluru-based startup behind the traceability solution used for this pilot project, works with more than 1,100 artisan-weavers and some 150 buyer brands.

Kosha uses an IoT-enabled device called WeaveSENSE to map the process and more behind the creations of its artisan-weavers. The device tracks the motion of the handloom and its signals are then processed to identify various underlying signatures, including productivity and point of origin.

This captured data is integrated into a QR label (called WeaveProtect) that can be embedded into a fabric at the time of weaving. “The WeaveSENSE technology uses a combination of sensor-based IoT, cloud computing and decision models to achieve its functionality,” says Vijaya Krishnappa, cofounder of Kosha. The organisation also has another technology, FibreSENSE, which helps weavers source authentic raw material.

Kosha has been collaborating with Antaran to solve operational challenges. To address trackability in long rolls of fabric, where a single label may not work, QR tags are attached at predetermined intervals along the fabric.

The cost benefits of the IoT technology, especially from a weaver’s point of view, are

another issue that the project has addressed. For example, the IoT sensor initially came with a rechargeable battery that increased the device’s cost significantly.

“We reengineered the entire hardware and software to run on simple coin-cell batteries that weavers could easily afford,” says Mr Krishnappa. “Also, the platform subscription has been amended such that there is no fixed cost to weavers; they pay per label.”

For Kosha, the uphill task has been to demonstrate the need for this tech adoption. “Large brands and players still sell handloom and power-loom products together without differentiation, and they are hesitant to certify the authenticity of their products,” adds Mr Krishnappa. “For pure handloom brands or artisans, however, this is a brand differentiator. We have seen a high rate of adoption when the buyer brand mandates that weavers use them.”

Kosha believes its technology for authentication and traceability solutions can help the handloom sector better position its premium products. With changing customer buying dynamics and a shift towards more environmentally conscious consumption choices, authentication may be the tipping factor for the handloom sector to grow in the coming days. ■



Parashmoni Mahanta (centre), a fellow from Mayurbhanj district, with a family in Uthani Nuagaon village

Train and gain

An exceptional fellowship programme in Odisha is building a high-quality workforce by enabling local youth through skilling and entrepreneurship initiatives

Kandhamal district in Odisha has a unique transport service. It offers ‘migrant’ buses that ferry tribal villagers from designated places across the district to Kerala, Tamil Nadu and Andhra Pradesh. These villagers travel across state lines to work as farmhands and labourers, and they are an indicator of widespread migration.

Minati Khandual doesn’t blame the migrant workers. “About 80% of Kandhamal is covered by forests,” she says. “There is no industry and no social development projects here, which means there are no jobs. What are youngsters from the poor marginalised communities to do?”

The 30-year-old Ms Khandual has been tasked with finding employment or

entrepreneurship opportunities for local people so that this distress migration is reduced, perhaps even reversed by attracting migrants back to Odisha.

Ms Khandual is a part of the Chief Minister’s Skill Development Fellowship (CMSDF) programme, a collaboration between the Odisha government and Tata STRIVE, an associate organisation of the Tata Trusts. The programme aims to equip the state’s youth through skills training and entrepreneurship development.

The inaugural batch of CMSDF fellows, deployed across all 30 districts of Odisha, graduated in July 2026 following two years of rigorous grassroots engagement. The fellows worked in close synergy with the ‘district skill development and employment



Fellows during a visit to the Hyderabad-based T-Works, which runs India's largest prototyping centre

officers' (DSDEOs) and local administrations to drive impactful initiatives on the ground.

The Tata STRIVE program management unit (PMU) serves as the programme's administrative backbone, ensuring seamless execution through standardised operating procedures, continuous monitoring, and governance. By facilitating regular field visits, structured mentorship, and strong stakeholder coordination, the PMU provides a strong support system.

Problem-solving skills

The fellowship is the highlight in the Indian School of Business' certificate course in public policy, equipping the fellows with evidence-based problem-solving skills for governance. This is bolstered through bi-annual academic forums that provide direct mentorship from senior bureaucrats and industry leaders.

There is a background to all of this. In 2016, the state set in motion its ambitious 'Skilled in Odisha' plan by establishing the Odisha Skill Development Authority to spearhead, implement, coordinate and oversee skilling programmes in the state.

Each district was assigned a DSDEO to

work on a 'district skill development mission'. The objective was to build a highly skilled workforce of professionals, trained to and aligned with international industry standards, to meet "local, national and global market demands". The CMSDF programme plugs right into this.

"CMSDF has been truly transformative," says Ameya Vanjari, the chief operating officer of Tata STRIVE. "The energy, enthusiasm, and fresh perspectives brought by the young fellows have been instrumental in strengthening Odisha's skilling ecosystem and driving meaningful change on the ground."

Some DSDEOs feel that while Odisha's youth are willing to pursue skills training for employment or even entrepreneurship, they often lack awareness, guidance and access to opportunities. Addressing this situation requires counselling, mobilisation, and follow-up support, all of which CMSDF provides.

"The fellows conduct their own surveys and analysis to understand the skill gap in their respective districts," says Tony Jacob, lead, ecosystem strengthening, Tata STRIVE. "They then implement certain projects based on their research. Working

closely with the district administration means that they can get funding and operational help for their projects.”

Each district has its own particular socioeconomic characteristics and challenges, and these affect the local workforce. While youth from the largely tribal Kandhamal district are forced to migrate for employment, people from Angul district don't want to leave their home base for jobs.

“In Angul, a large section of the population is engaged in agriculture,” says Biswajit Panda, the CMSD fellow stationed here. “The district is also a mining hub because of its rich mineral and coal resources. Companies setting up operations here are always looking for workers.”

Going local

Angul's native agrarian population would be ill-prepared to handle these typically heavy-industry jobs. That led Mr Panda and the Angul DSDEO team to design training programmes that teach locals to operate earth-moving machines, blast furnaces, aluminium moulding and fabrication, or even become site and factory floor supervisors.

While companies in Angul are constantly seeking staff, many of them would rather hire labour from outside the state to avoid locals forming unions and creating unrest. That has sparked an influx of people from Bihar, Uttar Pradesh and South India. “To tackle this problem, we sign agreements with the companies to identify and train people,” says Mr Panda.

Hrishikesh Wakhare, a fellow working in neighbouring Dhenkanal district, has faced a similar situation. “There are 11 big companies operating in Dhenkanal and they currently have more than 1,300 job vacancies,” he says. “But they don't want to hire from the district.”

Mr Wakhare adds that there are



alternatives for the district's youth. Dhenkanal, he points out, is the largest producer of cashews in Odisha, but there are no cooperatives to manage this, and no processing plants either. “We could establish an entire cashew production-processing-distribution value chain run by locals and sell the cashews.”

Mr Wakhare also believes there is a market for the traditional metalwork craft of Odisha, known as *dhokra*, which is extensively practised in Dhenkanal and could do with a structured skills push.

While the men may want to stay, the young women of Dhenkanal have no qualms about pursuing opportunities outside the state. “There are a lot of school dropouts among young women in Dhenkanal, and that got us to set up a skills centre where they were taught about smartphone assembly,” says Mr Wakhare. “Now many of them have moved to Bengaluru to work in smartphone production plants.”

Some 1,000 of these women who

The fellows with teams from Tata STRIVE and the Indian School of Business at the latter's campus in Hyderabad



Sneha Gawai (centre), a fellow, interacts with students from the Government High School in Sodamal in Jharsuguda district after a counselling session on choosing the right career

trained as sewing machine operators are currently employed in the apparel industry of Tirupur in Tamil Nadu.

Tattwomasi Mohapatra, the DSDEO in Dhenkanal, cites other areas of impact. “Between 2024 and 2026, the number of short-term trainees grew by 96% and placements rose by 24%,” he says. “Importantly, the female trainee base grew by 126%. This is a measurable expansion of women in the formal workforce.”

Dhenkanal has adopted a ‘skills registry’ of 6,638 verified candidates, each mapped by residence, qualification and aspired job role. “The governing principle is simple: if a candidate is not in the registry, he is not in the [overall skills] plan,” says Mr Mohapatra.

Beyond job placements, there is the Nano Unicorn scheme, an initiative that fosters entrepreneurship among youth by guiding them and offering training, funding and market access. Each year, the programme supports about 400 entrepreneurs, providing them up to ₹100,000 as seed capital from the Odisha Skill Development Authority.

“Everybody wants a secure government

job; it’s hard to explain to young people how competitive these are,” says Ms Khandual. “They might be better off starting a business by taking advantage of the benefits their district has to offer.”

Ms Khandual has mentored 40 entrepreneurs from Kandhamal in the last year to open shops and pursue small trades, while nudging them away from the pitfalls of unplanned entrepreneurship.

In Dhenkanal, 20 women have been funded through Nano Unicorn to set up salons and tailoring shops, engage in mushroom cultivation and snacks manufacturing. These are home-based (or closer-to-home) ventures that ensure a sustainable income.

Says Smruti Ranjan Tripathy, the DSDEO of Gajapati district: “The fellowship programme has contributed considerably to strengthening the skilling and employment ecosystem in Gajapati. It has reinforced the importance of convergence among stakeholders and the need for localised approaches to skilling and livelihood promotion.” ■

Labonita Ghosh

No sugar, no sweat

The upshot is sweet for poor children with type-1 diabetes in an initiative that breaks new ground while covering more than 3,000 village families in Maharashtra

Saie Pawar has vivid memories of the time when she was, at age 10, diagnosed with diabetes. “I was on a spiritual trip with my grandmother and her friends,” the now 20-year-old Ms Pawar recalls. “I was the youngest in the group but I had to go to the washroom often, and I became tired very quickly. It was embarrassing.”

Blood tests on her return home showed she had type-1 diabetes, an autoimmune disorder distinct from lifestyle-linked type-2 diabetes. It changed Ms Pawar’s life. Now she had to cope with the mandatory insulin injections, thrice-daily pricks to measure

her blood glucose, dietary restrictions, social stigma and emotional distress.

Ms Pawar is no longer the scared little girl traumatised by her disease. Now studying to be a physiotherapist in Pune, she is articulate and confident about the future. The transformation was made possible by the holistic care provided by Sweetlings, a nonprofit that supports underprivileged children with type-1 diabetes from birth to age 21.

Sweetlings is the brainchild of paediatrician Anuradha Khadilkar and her husband, paediatric endocrinologist Vaman Khadilkar. The spark for the initiative was

Through drawing and colouring activities, children at the Sweetlings centre in Pune express their emotions, build confidence and enjoy moments of learning and friendship





A birthday celebration at the Sweetlings centre in Pune

a tragic incident in 2008 that claimed the lives of two young girls from a poor family.

Recalls Dr Anuradha: “The family had absolutely no money, so we funded insulin injections for the girls while looking for formal funding.” A week later the two children died in a drowning accident. “One way or the other, we lost those two girls. It left a mark on us.”

Support for the poor

The incident prompted the Khadilkars to set up Sweetlings in 2010 as a type-1 diabetes clinic for underprivileged children under the Hirabai Cowasji Jehangir Medical Research Institute at Jehangir Hospital in Pune.

For the first four years, the couple struggled to raise money for the “few hundred” kids they supported — “People thought we were crazy,” says Dr Anuradha — before CSR (corporate social responsibility) funding, from about 2014, began opening the door to grants.

What started as a personal mission has grown into a full-fledged programme that covers 850 diabetes-afflicted children from

different parts of Maharashtra. Sweetlings operates from Pune through a hub-and-spoke model, with outlets in Kolhapur and Nagpur. Sweetlings spends around ₹120,000 per child for treatment every year.

In March 2026, Sweetlings opened a centre of excellence, setting the stage to further fuel the programme’s growth. The Tata Trusts supports this centre by funding the medical care of 150 children, its medical and social work team, and a research project.

“Support from the Tata Trusts has been invaluable for us,” says Dr Anuradha. “We see this as a long-term collaboration in not just looking after patients but also for research and capacity-building.”

The need for organisations such as Sweetlings is acute. Nearly 300,000 children and young adults in India are estimated to be living with type-1 diabetes, a disorder in which the pancreas produces little or no insulin. Without insulin support, these children can die from high sugar levels and their attendant toxicity.

Sweetlings estimates there are about

35,000 children struggling with the autoimmune disorder in Maharashtra alone, with cases increasing by 3-4% a year. The burden of managing the disease is especially taxing for poor families.

Drawing on their experience in the United Kingdom, the Khadilkars have adopted a multidisciplinary model to manage diabetes. Sweetlings goes beyond providing medical care. There are free glucometers and insulin pens, health checkups and specialist consultations for diabetes-related complications like eye, nerve and kidney damage, as well as nutritional, social, psychological and even career support, community awareness programmes, and the training of healthcare professionals in municipal hospitals.

Child-centric approach

“A multidisciplinary clinic is necessary when it comes to any childhood disorder because children are growing and dealing with so many changes,” says Dr Anuradha. “Many a time, what happens at home or school impacts the child.” Adds Dipali Ladkat, medical officer (research) at the Jehangir Research Institute: “Our model is child-centric, not disease-centric.”

Over time, Sweetlings has added staff and capabilities to address the diverse needs of the children being cared for. Its 25-member team includes doctors, healthcare professionals, nutritionists, educators and counsellors.

Poverty, single-parent homes, abuse and myths are among the several social issues faced by the children and young adults that Sweetlings works with. One of the biggest challenges in all of this is the lack of awareness. “Some parents don’t even know how to assess the sugar levels of their children,” says Dr Ladkat.

Sweetlings’ diabetes educators start by teaching children and their families the basics, and then the how and when of

Outreach and outcomes



The Sweetlings programme reaches more than **3,000 families** in about **40 villages** in the Pune and Pimpri-Chinchwad Municipal Corporation areas



The initiative has benefitted **1,150+ children** since its inception in 2010



850+ poor children with type-1 diabetes are supported under the effort, including 50 each in Nagpur and Kolhapur



Sweetlings’ outreach activities include...



Medical camps



Educational programmes



Community counselling sessions



Training for 500+ healthcare professionals

administering insulin. The team also dispels fears and myths associated with diabetes.

Real-life situations have shaped the organisation’s journey. Dr Anuradha recalls how one child kept skipping her afternoon dose because the neighbour in whose fridge she kept her insulin pen would take a nap. That led to Sweetlings donating mini-refrigerators to families (10-15 of these are distributed every year).

Apart from assessing family dynamics, Sweetlings’ social workers address misconceptions at school. For

instance, many schools don't allow children to take insulin injections. Dr Ladkat recounts how their social worker prevented a school from expelling a child because the teacher did not want to take the responsibility. "She even made him sit outside the classroom."

Children can be cruel, too. "We have had kids calling our diabetic child a drug addict for injecting insulin," says Dr Anuradha. The organisation invests in training its teams to handle such situations. For older children, the programme includes skilling coordinators "because, unlike us, many of these children don't have role models at home".

The problems thrown up by type-1 diabetes are many. The disease impacts mental health, leading occasionally to suicidal behaviour and depression. "When children, especially adolescents, see their friends partying or eating what they please, it affects them," says Dr Ladkat.

Starting afresh every day

Ms Pawar talks about how she had to overcome a physical fear of needles and also cope with emotional stress. "I had to tell my friends' parents that I couldn't play for long because my blood sugar would drop," she says, "or I would be angry at how my friends could get fascinated by the needles. Sometimes, the biggest challenge is to start afresh every day."

The Sweetlings team helped Ms Pawar shift the focus away from diabetes, to 'normalise' conversations around it, and gain new perspectives on life. "They have supported me through thick and thin and seen me grow into the woman I have become," says Ms Pawar, who is now able to enjoy her favourite cheat sweet (two bites of 75% dark chocolate).

With the Tata Trusts-supported new centre, the Sweetlings team is looking forward to expanding its work, which till

'This is a godsend'

Ravindra Mate, a driver at the Hirabai Cowasji Jehangir Medical Research Institute's office in Pune, recalls how terrified he was when their daughter, Janhvi, was diagnosed with type-1 diabetes when just four years old. After she lay listless for two days, Mr Mate took her to Jehangir Hospital in Pune, where he was introduced to the Sweetlings programme.

"We had heard that diabetes can cause loss of eyesight, but the team calmed our fears," says Mr Mate. "They taught us how to check Janhvi's sugar and insulin doses. They reassured us."

Janhvi, now six, enjoys going to school, and singing and dancing are her favourite activities. The tough part is that she needs three glucometer readings and four injections a day, apart from regular checkups, but the Mates have learned to cope.

"I couldn't have afforded this on my own," says Mr Mate. "Sweetlings is a godsend." ■

recently stretched them thin. The new 8,500-sq-foot centre in Pune houses everything under one roof. This includes a dedicated lab, a pharmacy, an X-ray room, a play area and even a tiny café.

Ultimately, the Khadilkars and their team want one outcome above all else: that is, as Dr Anuradha says, "Healthy and happy children who become healthy and happy adults capable of looking after themselves." ■

A treat unfolds

A bakery and a café in Uttarakhand deliver a tasty example of women-led enterprises securing success with ingredients blended to order

The aroma of fresh baking lingers in the morning air around the Millet Bakery in Pauri town in Uttarakhand's Pauri Garhwal district. The bakery opens at 9am and the all-women crew running the venture has its hands full setting up for the day's service. There's a sense of energy, of purpose and ownership, in the ways of these women, many of whom have travelled from far-flung villages to get to work.

This is a sisterhood in which women's empowerment is more than bland terminology, and the vehicle for it is an initiative called 'gender-inclusive livelihoods through financial inclusion in Uttarakhand' (GiLU). Anchored by the Himmotthan Society, an associate organisation of the Tata Trusts, the initiative is supported by the Uttarakhand State Rural Livelihoods Mission.

It's a women's world

The GiLU effort is aimed at strengthening women-led institutions and promoting access to sustainable livelihoods in seven subdivisions across five districts of rural Uttarakhand. In its fold are more than 13,300 rural households who have been reached through interventions covering financial inclusion, livelihood diversification, enterprise promotion, skill development and market linkages.

The bakery and the nearby Didi's Café, a popular landmark, are among the standout examples of women-led organisations nurtured by Himmotthan. "The GiLU project is designed to place rural women at the centre of economic



Saroj Devi at the Millet Bakery in Pauri town in Pauri Garhwal district



Seema Devi (above) packs freshly prepared biscuits at the Millet Bakery; **visitors** at a local household enjoy the bakery's biscuits



growth,” says Rajendra Singh Koshyari, the organisation’s head for agriculture and agri-allied initiatives.

Himmotthan has backed the establishment of seven farmer-producer organisations (FPOs) in the region. The one linked to the bakery and the café is Gauras FPO, which was formed to strengthen women-led self-help groups (SHGs) and producer groups.

“I have been associated with an SHG since 2006; that was when my husband passed away,” says Seema Devi, a 54-year-old from Baunsri village in Pauri Garhwal district (she is the oldest and most experienced of the five women at the bakery). “Many people ask me if I get tired because of my age. I tell them I feel energised because I try to exceed my own sales every day. I compete with myself.”

Growing together

Ms Devi has learned to manage the multifaceted precision required in running the bakery: measuring ingredients, calculating sales incentives, handling orders, etc. She and her co-workers get a fixed daily wage and incentives from door-to-door sales. This approach has helped the women earn an additional income, while also helping the bakery grow.

Financial inclusion and livelihoods are the pillars of the initiative, and they keep 37-year-old Saroj Devi going after she lost her husband when she was 24. Income from the bakery has enabled her to keep her children in school and college. Another employee, 50-year-old Kusum Devi, has the bakery to thank for being able to take care of her family and her sick husband. “We all forget our problems when we bake,” says Ms Saroj, an ace at making cream rolls.

The bakery has been a learning journey for all these women. “Everything was new to me. I had never used — or even seen — an oven before,” says 34-year-old Parvati Devi.

Baked just right

Highlights of the **GiLU** initiative, which has been a standout success for Himmotthan Society



Has reached **13,374** households



Comprises **388** producer groups and **7** farmer-producer organisations



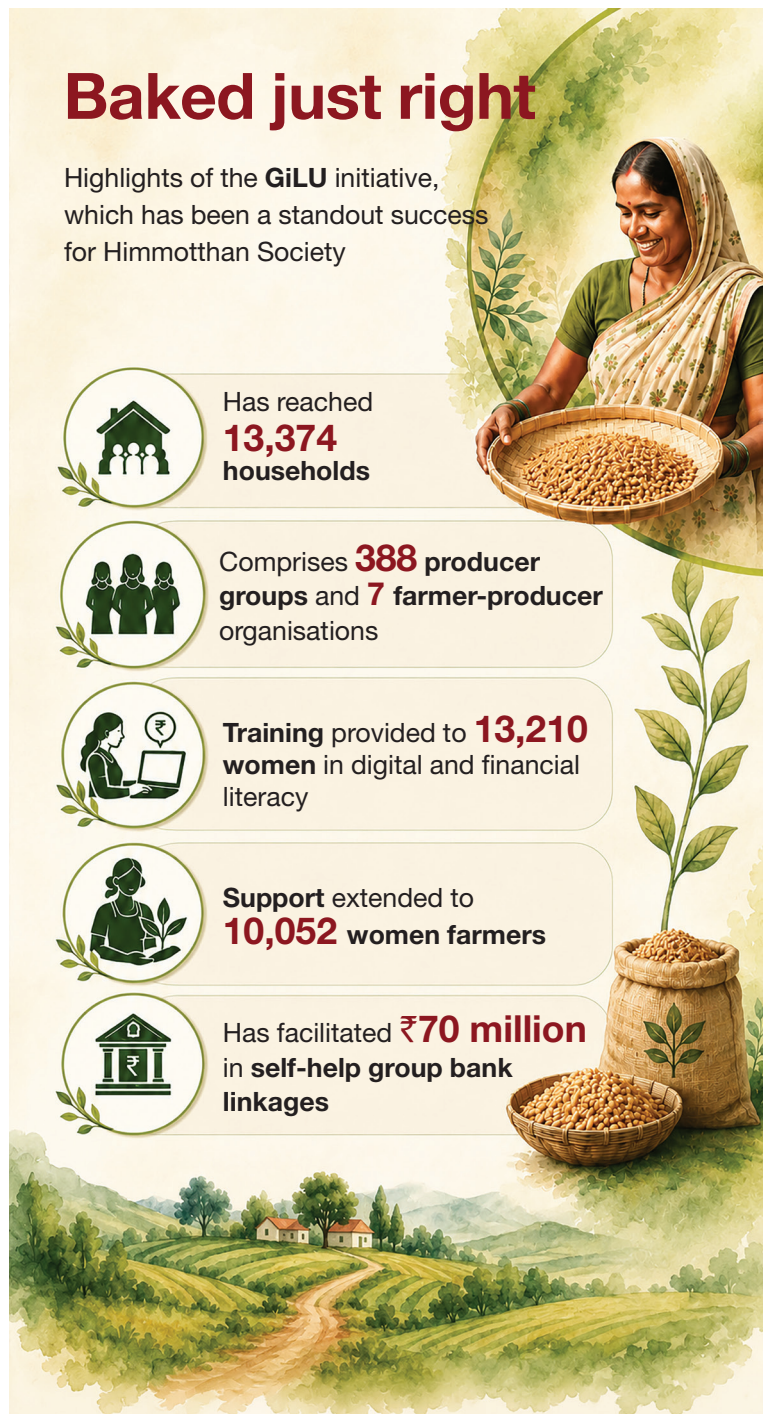
Training provided to **13,210** women in digital and financial literacy



Support extended to **10,052** women farmers



Has facilitated **₹70 million** in self-help group bank linkages



“We were scared of putting the baking tray in the oven. Now, it’s a daily affair and we all know how to set the temperature and pull the fresh bake from the oven.” Ms Kusum agrees: “Our fear of machines is long gone.”

Millet Bakery made a humble start in 2019, but Covid and the following lockdowns threw a spanner in its works. The central government’s National Rural

Anjali Devi serves patrons at the Didi Café in Pauri town



Fast-lane FPO

The Gauras farmer-producer organisation (FPO) was established in Pauri in Uttarakhand in 2022 to create downstream and value-addition opportunities in millets. Himmotthan Society, while working with local women farmers, realised that though production of milk, finger millet, barnyard millet and other local products had increased, market opportunities were lacking.

The Gauras FPO was set up under GiLU by Himmotthan to address this gap. Apart from the bakery and café, the FPO has established women-led community-run dairy units. Women members have received training in enterprise management, quality assurance, customer service, financial management and business operations.

They are also guided to make the most of government schemes such as the National Rural Livelihoods Mission, which gives women access to community investment funds, bank credit and other financial services. This support makes it easier for women-led enterprises to find their feet and to thrive.

The Gauras FPO has 1,190 members from 62 villages in Pauri Garhwal district and an annual turnover of more than ₹8.5 million in 2025-26. "It has gone beyond being a market facilitator; it has become a collective business platform for women, who organise the entire value chain from production and aggregation to processing and marketing," says Diwakar Purohit, lead for the GiLU project at Himmotthan. ■

Livelihoods Mission (NRLM) came to the bakery's rescue at that point, giving it the contract to supply millet biscuits to children in *anganwadis* (childcare centres) in five subdivisions of Pauri Garhwal.

The programme was also supported by the central government's Integrated Child Development Services. "This helped the bakery earn about ₹150,000-200,000," recalls Vijay Bisht, NRLM's mission manager for Pauri Garhwal. Since then, the bakery has gone from strength to strength.

The bakery stands out for two reasons. The first is its unique selling proposition: offerings made using locally grown millets and dairy products. "It is a great way to feed millets to our kids," says customer Uma Devi, whose 20-year-old daughter snacks on jeera-flavoured *jhangora* (barnyard millet) biscuits while preparing for her exams. Secondly, the local millet supply chain that feeds the enterprise has a women-driven value chain that extends back to the farm.

To promote millet cultivation, Himmotthan worked with women farmers and trained them to adopt improved agricultural practices, from field preparation to sowing techniques, harvesting and post-harvesting methods.



Millet Bakery and Didi Café come under the umbrella of GiLU, which has a central place for women

“A high-yielding, early-maturing variety of finger millet (called VL379) was made available to the farmers,” says Dr Koshyari. This was developed by the Almora-based research institute Vivekananda Parvatiya Krishi Anusandhan Sansthan, which comes under the Indian Council of Agricultural Research.

The millet story is central to the success of the bakery and its sister concern, Didi’s Café. Pankaj Negi, manager of the Gauras FPO, believes that the two entities are able to maintain the quality of their products

because the millet growers are direct suppliers. “Also, the finger millet grown by members of the FPO is procured at the minimum support price,” he says.

Diwakar Purohit, who leads the GiLU project for Himmatnagar, explains that the bakery was provided technical and financial support along with continuous guidance on quality control, recipe development, product certification, branding and packaging, and marketing strategies. “This guidance helps our women-led enterprises grow from small initiatives into organised and sustainable



Being an employee of Millet Bakery has provided Kusum Devi and her family with financial stability

business ventures,” he says.

“The success of Millet Bakery and Didi’s Café demonstrates that when rural women are provided with the right ecosystem — access to institutions, finance, skills, technology and markets — they become entrepreneurs, leaders and drivers of local economic growth,” says Vinod Kothari, the executive director of Himmotthan Society.

Inside the bakery itself, growth is driven by products such as the bestselling cream roll, with sales of an average 37 packets (one dozen rolls per packet) every day. Another bestseller is the baked millet *laddu*. In all, the bakery sells about 45kg of pastries and other products daily.

Didi’s Café uses the same supply chain

as the bakery. Managed by 42-year-old Anju Devi and a team of four women, the café serves health and affordable fare. Its millet *thali*, for instance, is priced at ₹80 and is a popular lunchtime option. During evening hours, students from the nearby Hemvati Nandan Bahuguna Garhwal University patronise the café.

The well-being of Millet Bakery and Didi’s Café is encouraging for far more than financial reasons. They establish how community participation, strong market linkages, hard work and commitment can widen horizons and give rural women new opportunities to be independent, and interesting ones at that. ■

Text and images by Megha Prakash

India's lost Einsteins

Children from lower-income backgrounds need a leg-up — and then some — to realise their potential and find a place in the academic sun

In his seminal 2019 paper tracking achievement gaps by income, Professor Raj Chetty of Harvard University found that if talented low-income children could invent at the same rate as their rich peers, America would have four times as many inventors, a generation of 'lost Einsteins' who never made it to the economy ^[1]. Nearly one in five of the world's young people is from India, and most of them are poor. Close to one in seven children on earth comes from a low-income family in India, which means plugging the gap here moves the global needle more than anywhere else.

Avanti Fellows has spent more than 15 years chasing this goal. Through a combination of residential test preparation, public advocacy, government schemes and mentorship, we have helped more than 7,000 low-income students find a place in India's top 3% of STEM (science, technology, engineering and mathematics) colleges, helping them make the transition from intergenerational poverty to securing a spot among India's academic elite.

A distinct issue

Increasingly, state and national governments are starting to recognise that equity for high-achieving students is an issue that is distinct from broader educational inclusion, demanding its own policies and interventions. Investments here generate extraordinary returns.

Avanti's long-term alumni data shows that an investment of ₹200,000 per child in test preparation yields an almost 25x return

over 10 years in household earnings. The societal impact is far greater. Students who make this transition change the social culture in entire districts, build aspirations, create remittance flows into rural economies and, over time, help seed businesses, publish papers and add to India's leadership.

The starting point is identification. To aspire to the top 3% STEM colleges in India one needs to have the conviction — and a signal — that this is a feasible choice. Most students we encounter systematically underestimate their abilities. While many are school or even district toppers, the lack of visible role models makes dreams of admission to a premier engineering college or medical school seem unattainable. This affects how they spend middle and high school, often pegging themselves to lower standards.

There are, additionally, few public pathways for exposure for students coming from less privileged backgrounds. The national talent schemes run by the National Council of Educational Research and Training no longer exist, and existing programmes such as the Aryabhata Ganit Challenge see limited participation. The national infrastructure for Olympiads remains, but this is not broad-based, like in Singapore and Taiwan.

Our work shows that technology adoption in testing and outreach can play a dramatic role in student identification. In 2025, approximately 200,000 students participated in online testing in a partnership initiative we have with six government school systems.



Akshay Saxena,
cofounder and co-
chief executive of
Avanti Fellows, works
at the intersection of
public policy, nonprofit
leadership and
education reform

What it will take to unlock their potential?

A high-potential, low-income child faces a stack of systemic hurdles on the way to a top-tier college. This is the scaffold it takes to carry them all the way up.

WHY IT MATTERS HERE

1 in 7

children globally is a low-income Indian child — the talent lost here is lost to the world

Start

Low-income child

HURDLE 1
Identification

HURDLE 2
Test preparation

HURDLE 3
Finance

Top-tier college
7,000+ placed · 25 x 10-year return

HURDLE 4
Hidden curriculum

CARE — runs beneath every step

Mentorship · Belonging · Growth mindset · Self-regulation — not a pressure cooker

THE SCAFFOLD WE NEED

Tech-enabled discovery

200,000 screened → 7,000+ high-potential students found

Free structured prep

Classes, targeted practice and mock exams — no fees

Cost barriers, not prep

Exam fees · Devices · College admission fees · Scholarships

Campus communities

First-generation belonging: FFE, Dakshana, CSRL, Ex-Navodayan

This helped us identify more than 7,000 high-potential students, all of whom received support either through residential programmes or online. Technology makes it easier to provide students with structured practice, surface their performance to administrators and teachers, and shift culture and expectations across entire systems.

The second factor is access to test preparation. Even getting a 90% score in board exams is not enough to qualify for India’s intense competitive exams. Most students today spend upwards of ₹200,000 per head on test preparation, and most rural areas lack quality coaching centres.

Even students who receive free test preparation from Avanti struggle to persist when they are not in fully free residential schools like the Navodaya Vidyalayas. Importantly, there must be the realisation that true equity in STEM education goes beyond the marksheet; it has to be rooted in a culture of care.

There are reasons for this shift in perspective. According to research

conducted at Stanford University by Carol Dweck, Greg Walton and Geoffrey Cohen, true academic tenacity rests on four psychological pillars: belief about whether intelligence can grow, a sense of purpose, social belonging, and self-regulation.

The notion that these pillars develop in pressure-cooker environments is fundamentally flawed and has done far more harm than good. The students who survive these conditions during the test-preparation period become more vulnerable to the volatility of grades even after making it to their colleges of choice, thus affecting their ability to navigate the rigorous four years of their respective courses, and sometimes the rest of their lives.

The small percentage of students who make it to top colleges need additional support to benefit from the experience. Sociologists call it the ‘hidden curriculum’, with the unwritten rules of elite institutions that privileged students absorb from family and surroundings: how to navigate the place, how to ask for help, how to build networks^[2].



Students from government schools, especially rural ones, arrive without this exposure and the gap is punishingly hard to close. These skills are learned slowly, practised informally and demand sustained mentorship. Several American universities now run dedicated first-generation programmes — some, like Georgetown University, were built to teach this hidden curriculum — that offer students a single port of call.

The rapid improvements in artificial Intelligence (AI) are likely to cause structural shifts in India's knowledge economy. Hirings in the IT sector — the backbone of upward mobility for many of our students — has slowed to a trickle. The skills needed for a first job have grown exponentially and shifted higher up the value chain. Students who are unable to plan, create and think will find it hard to participate in the tech jobs of the future.

Sectors that to this day have a limited need for technology understanding are also rapidly evolving. The second curriculum will now include creativity and AI literacy and will likely become a greater hurdle. But the same technologies also offer solutions: personalised learning, building from scratch, starting a business, etc.

Knowledge and research are deeply democratised and internet access is now ubiquitous. We are already seeing our students embrace these technologies, change how they learn and adapt. We need to find ways to provide them with the scaffolding they need to learn better and more effectively on their own. ■

A teacher from Avanti and her students at the Jawahar Navodaya Vidyalaya in Hassan in Karnataka

1. Bell, Chetty, Jaravel, Petkova & Van Reenen, "Who Becomes an Inventor in America? The Importance of Exposure to Innovation," QJE 134(2), May 2019 (NBER w24062, 2017). Popular name "Lost Einsteins."

2. Gable, R., *The Hidden Curriculum: First-Generation Students at Legacy Universities*, Princeton University Press, 2021. (Term originally: Jackson, P. W., *Life in Classrooms*, 1968.) → the unwritten rules of elite institutions.

The legalities of everyday life

The Consumer Justice Report 2026 is a reminder that justice is not confined to criminal law or the constitutional rights of citizens — it also exists in the ordinary transactions that govern our existence

When we think about justice, it is natural for the mind to wander to the dramatic: criminal trials, constitutional challenges, landmark judgments and questions of liberty tend to dominate public conversations about the law. Justice is imagined as that which unfolds in courtrooms, involving serious crimes, state power and high-profile legal battles.

Yet some of the most common injustices experienced by ordinary people are far quieter. They occur when a family invests its life savings in a home that is never delivered, when an insurance company refuses a legitimate claim, when a bank imposes unlawful charges, when a defective product does not deliver what it promises, or when a service provider fails to honour its obligations.

These are not incidents that typically make headlines, but they shape the everyday experiences of millions of people. They determine whether individuals can trust markets, institutions and the legal mechanisms meant to protect them.

The Consumer Justice Report 2026, published as a complement to the India Justice Report (IJR), asks us to take these everyday violations seriously. It reminds us that justice is not confined to criminal law or constitutional rights. It also exists in the ordinary transactions that govern daily life.

The report sheds light on the functioning of India's consumer dispute redressal system and reveals the extent to which institutional shortcomings are preventing consumers from obtaining timely and effective remedies.

Drawing on an analysis of RTI (right to information) responses on capacity and budgets, and 2.85 million consumer cases filed between 2010 and 2024, the report seeks to provide one of the most comprehensive assessments of consumer justice in India to date.

Lens on commissions

Some of its most revealing and urgent findings emerge from an analysis of state and district consumer disputes redressal commissions (SCDRCs and DCDRCs) in capital cities, which serve as important indicators of the health of the consumer justice system as a whole.

At the national level, consumer courts mirror the trends of the judiciary as a whole. Many are grappling with increasing delays and mounting backlogs. By the end of 2024, more than 500,000 consumer cases remained pending across the country.

Rather than decreasing, pendency has grown, increasing by approximately 21% between 2020 and 2024. The very institutions designed to provide quick and affordable remedies are increasingly



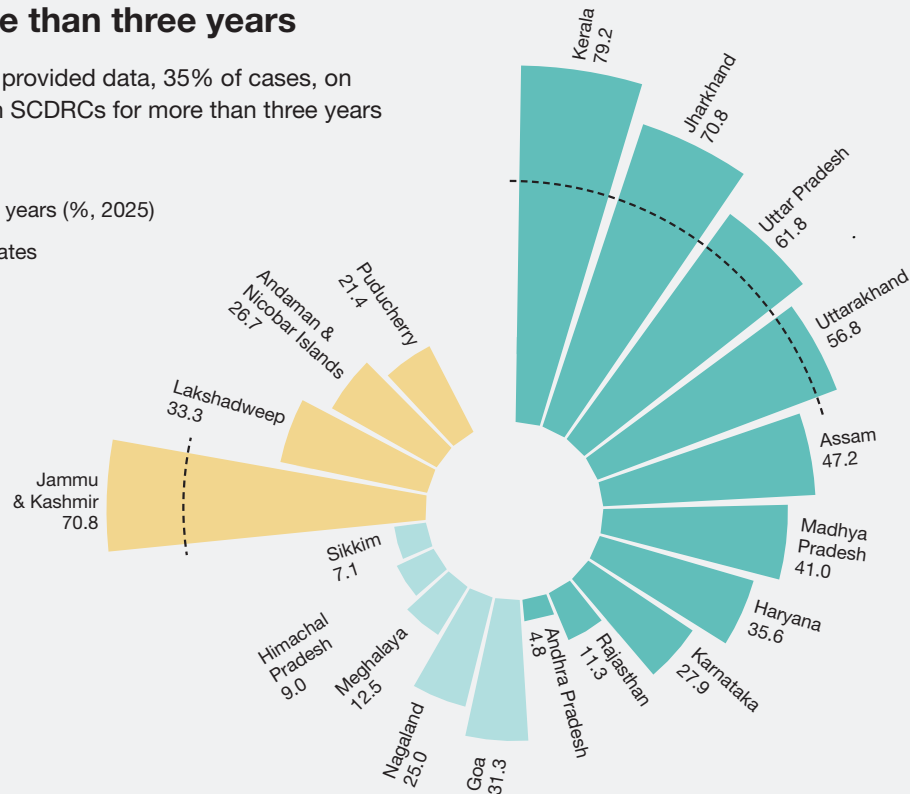
Valay Singh is the cofounder and lead of the India Justice Report

Graph 1: At least one in three cases pending for more than three years

Among 19 SCDRCs that provided data, 35% of cases, on average, were pending in SCDRCs for more than three years

Share of cases pending > 3 years (% , 2025)

- Large and mid-sized states
- Small states
- Union territories
- Above 50% cases



Note: States and Union territories arranged in respective clusters in descending value

Source: RTI responses from SCDRCs received between April and June 2025

struggling to keep pace with demand.

This trend is particularly concerning because consumer courts were established to provide an alternative to the lengthy and expensive processes associated with conventional litigation. The Consumer Protection Act envisions a system that is accessible, efficient and consumer-friendly. Cases are expected to be resolved within a matter of months, ensuring that individuals are not forced into prolonged legal battles to secure basic rights and entitlements.

The reality, however, often falls short of this vision.

The report paints a concerning picture of the state of consumer justice institutions in India. While consumer courts were established to provide accessible and relatively speedy remedies for disputes

relating to goods and services, delays continue to persist across the system.

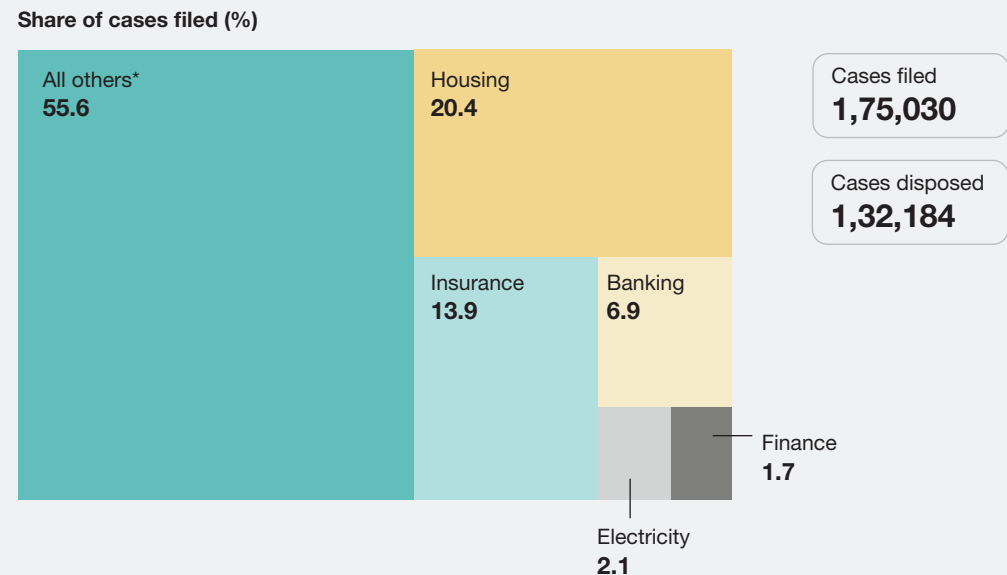
One of the report's most striking findings is that nearly one in three pending cases before SCDRC has remained unresolved for more than three years, raising questions about the ability of these institutions to provide timely redress to consumers (graph 1).

The report also identifies significant human resource shortages across consumer justice institutions. As of January 2025, approximately 40% of sanctioned member positions in state consumer commissions were vacant, while vacancies among presidents and support staff were also recorded across several jurisdictions.

The report documents prolonged periods during which some commissions

Graph 2: Sectors with the most cases (2010-2024)

Single highest share of cases were filed under the housing sector

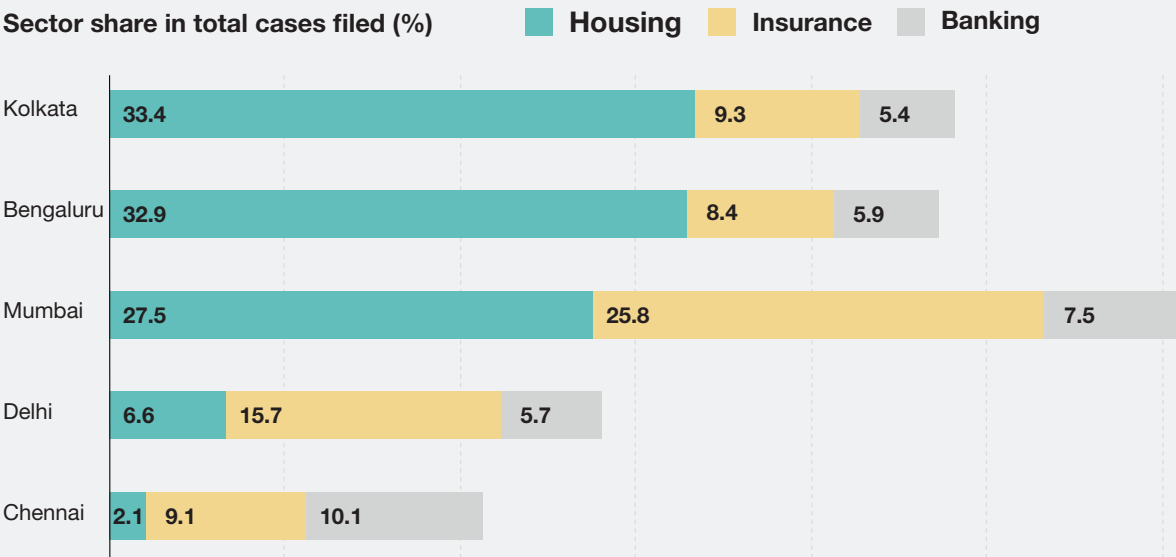


**Includes data in the 'others' category and 31 more sectors (defective goods, medical and postal, and transport, among others) that feature in the dashboard.*

Source: Confonet (now e-Jagriti)

Graph 2: Top sectors in the biggest five cities (2010-2024)

In Mumbai, Kolkata and Bengaluru's DCDRCs, more than 25% of cases were filed in the housing sector



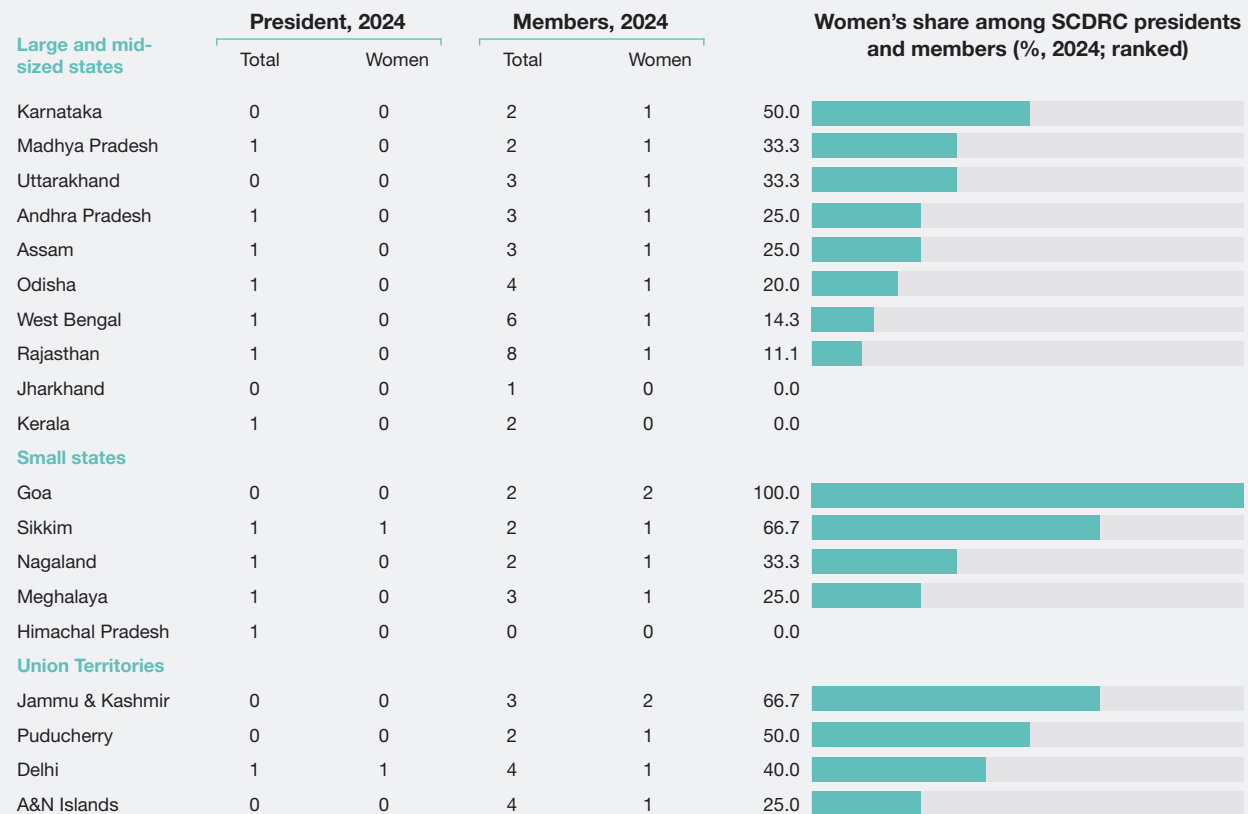
Source: Confonet (now e-Jagriti)

Graph 4: Women among state commission presidents and members

The CPA, 2019, mandates that among the members (and/or president) there be at least one woman

16 SCDRCs did not share data on gender

Rajasthan had the lowest share of women in SCDRCs



Note: States and Union territories are arranged in respective clusters in descending order of women's share

Source: RTI responses from SCDRCs received between April and June 2025

functioned without a full complement of leadership and personnel, alongside data on workload, case clearance rates and pendency. Together, these findings point to persistent capacity gaps within institutions responsible for resolving consumer disputes.

DCDRCs in capital cities offer a lens through which to understand these challenges (graphs 2 and 3). Capital cities are centres of commerce, housing, finance and service delivery, generating large volumes of consumer transactions and, consequently, consumer disputes. The functioning of their district commissions provides an insight into the capacity of

consumer justice institutions operating under significant demand.

Consumer justice infrastructure itself remains unevenly distributed. At the time of assessment, India had 775 districts but only 685 operational DCDRCs. This means that many districts continue to lack a dedicated consumer forum, highlighting gaps in the institutional architecture of consumer justice.

The assessment of capital-city commissions reveals considerable variations across indicators such as vacancies, staffing, pendency, budgets and case clearance rates. Delhi's district commissions recorded some of the

strongest outcomes among the cities assessed, maintaining average case clearance rates of 95% across multiple commissions.

Kolkata, by contrast, recorded a substantially larger share of long-pending cases, with more than one-third of cases remaining unresolved for over three years in some commissions. Variations were also visible in staffing levels, with several commissions operating with vacant president, member or staff positions.

Across Chennai and Bengaluru, differences emerged in both institutional capacity and workload management. While some commissions maintained relatively strong disposal rates, others recorded significant vacancies among members and administrative staff.

Uneven performance

The assessment of ‘other capital cities’, including Andaman and Nicobar Islands, Vijayawada, Kamrup, Patna, Durg, North Goa, Gandhinagar and Gurugram, similarly revealed an uneven performance across jurisdictions. Only a third of these commissions achieved case clearance rates of 100% or more, while several continued to report substantial staff shortages.

Representation varied considerably as well. The 2020 rules require every commission to have at least one woman, whether as president or member, and this is a minimal benchmark. While most responding commissions reported compliance, representation rarely exceeded the minimum. Very few institutions reported a woman president and, nationally, there were only two women presidents. Less than one-third of members in four SCDRCs are women, with Rajasthan having the lowest share of women in these commissions (graph 4).

Between 2021-22 and 2024-25, allocations grew by 52% for the 21

responding state commissions. Yet utilisation averaged 85% in 2024-25. Some states, though, reduced budgets despite rising caseloads and high vacancies.

At the district level, budget data were available for 14 capital-city commissions, which together received allocations amounting to ₹450 million between 2021-22 and 2024-25 and spent approximately ₹440 million.

The disparities between commissions were considerable. Bhopal received the highest cumulative allocation at ₹73 million over four years, while Vijayawada received only ₹930,000 during the same period. Expenditure patterns, too, varied significantly across the assessment period. These figures illustrate the differing resources available to consumer justice institutions, even as they operate under the same legislative framework.

Taken together, the findings broaden the way in which access to justice is understood. Consumer courts are often treated as a specialised or peripheral part of the legal system. Yet they are among the institutions most likely to be encountered by ordinary people seeking remedies for harms experienced in the course of everyday life.

The functioning of consumer justice institutions, therefore, provides an important measure of how legal rights operate in practice. Vacancies, infrastructure gaps, budget allocations, staffing levels, pendency and representation are not merely administrative indicators. They shape the ability of institutions to receive, process and resolve disputes.

The Consumer Justice Report 2026 places these experiences at the centre of the conversation, drawing attention to the systems, resources and institutions that underpin access to justice for millions of citizens across the country. ■

