The nation we envision

One year after the fall of the Hasina regime, five Bangladeshi students at Cornell University, US, reflect on a nation in transition and envision a future beyond fascism.

Prioritising health and nutrition

SHAH MOHAMMAD FAHIM *and* **SAIF MAHMUD**

Bangladesh has made remarkable progress in many health indicators over the years; however, health services still rank at the top of public dissatisfaction. Several critical reforms are essential.

First, the country should introduce and strengthen a comprehensive referral system to ensure seamless patient transitions between primary, secondary, and tertiary healthcare facilities. Reform efforts should prioritise primary care, especially in urban areas where disparities exist for low- and middle-income citizens. Slum residents, in particular, experience severe undernutrition and limited access to essential women's health services, highlighting the urgent need for targeted interventions.

Additionally, Bangladesh must confront the increasing burden of non-communicable diseases (NCDs), such as diabetes, hypertension, heart diseases, non-alcoholic fatty liver disease, mental health disorders, and age-related neurodegenerative conditions. With the elderly population projected to nearly double by 2050, the overburdened healthcare system must prioritise specialised care for the at-risk population. Primary care facilities require substantial investments in infrastructure, diagnostic tools, and trained personnel.

Emerging technologies, especially artificial intelligence-powered wearable devices like smartwatches, can monitor vital signs, allowing early detection of potential health risks and chronic conditions. Such proactive monitoring could significantly reduce emergency hospitalisations and premature deaths while improving overall health outcomes. Aggregating data from wearables would also offer valuable real-time insights into national health trends, enabling preventive strategies rather than costly treatment approaches. However, widespread adoption requires a robust digital infrastructure. To effectively adopt digital health solutions, the country must develop a unified electronic health record (EHR) system integrating data from hospitals, primary care facilities, and wearable devices.

Advancements in AI and biomedical technology can also significantly improve nutrition outcomes. Instead of "one-size-fits-all" nutrition programmes, the country should adopt and implement precision nutrition approaches tailored to individual needs to combat deficiencies and prevent associated chronic diseases. A nationwide school-based nutritional assessment programme, the inclusion of health and nutrition education in the curriculum, and the improvement of school meal programmes are essential. This would significantly boost overall nutrition and prevent the future onset of nutrition-related NCDs.

Finally, health sector allocation should rise, from five percent to at least 15 percent of the national budget. In addition, effective policies and evidence-based public health programmes are necessary.

PHOTO COURTESY: **SHAH MOHAMMAD FAHIM**

Placards displayed by Bangladeshi students at Cornell University's Arts Quad in the US on July 20, 2024, expressing solidarity with the anti-discrimination movement in Bangladesh.

Rethinking adaptation planning for climate change

YOUSUF MAHID

Bangladesh is internationally recognised as a climate adaptation leader, admired for its vulnerability-driven planning and proactive role in global climate negotiations. However, a critical paradox is: adaptation planning in Bangladesh has often prioritised technocratic solutions over climate justice, sidelining communities most at risk.

Years of dedicated efforts have led to ambitious strategies such as the Delta Plan 2100, the National Adaptation Plan, and the Mujib Climate Prosperity Plan. These initiatives heavily depend on foreign investment, limiting the country's autonomy in shaping its own climate future. Consequently, they have enabled elite-led and donor-driven interventions that failed to meaningfully protect or empower vulnerable communities. Most projects remain short-term and experimental, treating affected populations as mere subjects rather than active participants.

The July uprising presents an opportunity to transform this paradigm. It creates space for climate adaptation models grounded in justice, participation, and national sovereignty. Policymakers must re-envision adaptation planning as a long-term, community-centred process, instead of launching a series of uncoordinated ventures. Local governments and frontline communities should be engaged to identify risks, set priorities, and evaluate their measurable outcomes.

The country should also diversify climate finance strategies, reducing reliance on external donors by increasing domestic budget allocations, leveraging regional partnerships, and establishing community-based adaptation funds. Planning must integrate local knowledge systems, inclusive governance, and enforceable accountability mechanisms.

However, genuine transformation demands redistribution of decision-making power, commitment to ecological and social equity, and strong political will to reject superficial solutions in favour of lasting change. The country should prioritise rebuilding adaptation planning as a tool for climate justice, not compliance, to restore dignity and reclaim national agency in the era of global climate uncertainty.

The future of work

AYAJ RANA

Bangladesh's demographic dividend risks becoming a liability unless its growing workforce gains access to meaningful employment. Unemployment rose from 2.49 million in 2023 to 2.66 million by September 2024, with millions more lacking formal jobs. Nevertheless, the country is already the world's second-largest supplier of online freelance workers, contributing approximately 16 percent globally. Recent surveys show many aspire to entrepreneurship, while many prefer remote work.

This signals a significant policy gap. To convert freelancers into entrepreneurs, the government must treat digital work on platforms like Upwork, Fiverr, Freelancer, and Toptal as strategic exports. Education and vocational training must emphasise digital skills, English proficiency, and client management. Collaborations between the National Skills Development Authority and industry can produce modular curricula, while scholarships and stipends should encourage enrolment of women and rural youths.

Infrastructure and regulatory support are equally critical. Reliable broadband and uninterrupted electricity are essential for remote work. The government must streamline payment gateways and establish formal partnerships with global platforms to facilitate secure financial transactions. Issuing freelancer identity cards and expanding loan access can further support digital entrepreneurship. Additionally, creating freelancing hubs with shared services, mentorship, and legal support can nurture startups.

Labour laws should also evolve to recognise digital workers, ensuring fair contracts and effective dispute resolution. Trade negotiators must advocate for cross-border data flows to secure international market access. These targeted reforms are essential to transform Bangladesh into a hub for exportable digital services, reducing the economy's reliance on sectors like the garment industry and remittances.

AI, robotics, and the future of communications

TAUHID TANJIM

AI and robotics are reshaping our daily lives. While the global tech giants race ahead, Bangladesh cannot afford to remain a passive consumer of foreign technology. We must develop our own AI and robotics applications to solve unique challenges. In developed countries, firefighters deploy water drones to combat blazes and search-and-rescue robots to save lives. Drones and automated systems offer transformative solutions for Bangladesh's specific needs during floods, cyclones, and earthquakes. These devices can deliver emergency supplies to stranded communities and conduct search-and-rescue operations in areas hazardous to human responders.

AI can also be leveraged for the future of communications, which lies not just in faster internet but in seamless connections between citizens, AI assistants, and robotic systems. The government must take decisive action to transition from 4G to 5G infrastructure, enabling the high-speed connectivity essential for real-time AI coordination and robotic response systems. The country should also develop policies and allocate a sufficient budget to support innovators of digital solutions and develop AI-powered technologies in our context.

Bangladesh must stop driving its talents away

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In 2014, while working for a reputed company in Bangladesh, I had to wake up at 5am every day to catch a bus, which typically took around two hours to reach my workplace in Gazipur. After a full day of work, compounded by heavy traffic jams, I usually arrived home between 9 and 10pm. This left me with only six to seven hours for showering, dinner, spending time with my family, sleeping, and preparing for the next day. As an industrial engineer earning a limited salary in a highly competitive and overcrowded job market with few facilities, I felt increasingly unfit for the relentless race.

I attempted the Bangladesh Civil Service (BCS) exam once but was not selected in the preliminary stage. I found myself among many engineers who lacked practical opportunities to apply their skills. After discussing my frustrations with seniors and friends from Shahjalal University of Science and Technology, I decided to leave the country. In 2015, I landed in the US to study at Lamar University.

The experience was completely different. There was no student politics or noise pollution; everything was clean, and people were incredibly cooperative. As a graduate student in the US, I benefited from systems starkly contrasting with those in Bangladesh. For instance, American universities offer extensive funding through teaching and research assistantships (TAs and RAs), which often cover full tuition, provide stipends for living expenses, and health insurance—opportunities rarely available in Bangladesh, where higher education is largely self-funded with minimal scholarships. Students studying in American universities also have access to state-of-the-art laboratories, advanced technology like high-performance computing clusters, and collaborations with expert faculty from top institutions. Additionally, international students can utilise Optional Practical Training (OPT) and Curricular Practical Training (CPT) to gain paid work experience and pathways to H-1B visas or green cards. Bangladesh's system, meanwhile, suffers from limited infrastructure, overcrowded classrooms, and political disruptions.

FILE VISUAL: **MAHIYA TABASSUM**

In Bangladesh, graduate and PhD programmes often suffer from insufficient funding, outdated facilities, and a disconnect between academia and industry demands. Political instability, frequent strikes, and economic challenges like low salaries (often below living wages for skilled professionals) exacerbate the issues, leading to a nearly 10 percent rise in educated unemployed individuals over the past decade.

These US facilities were instrumental in my success. During my time at Lamar University, I worked to develop a facial recognition system for unmanned aerial vehicles using machine learning techniques, gaining hands-on experience in computer vision and AI domains. The access to cutting-edge tools and a supportive environment helped me secure a fully-funded scholarship for my PhD at the University of Oklahoma. Without the advanced labs and funding, I might not have built the portfolio that led to publications, collaborations, and ultimately, prestigious positions.

In Bangladesh, graduate and PhD programmes often suffer from insufficient funding, outdated facilities, and a disconnect between academia and industry demands. Political instability, frequent strikes, and economic challenges like low salaries (often below living wages for skilled professionals) exacerbate the issues, leading to a nearly 10 percent rise in educated unemployed individuals over the past decade. The brain drain is rampant; Bangladesh's brain drain index stands at 6.7 out of 10 (higher than the global average of 4.98–5.55), with thousands of skilled professionals emigrating annually for better opportunities abroad, resulting in economic losses and skill shortages that hinder national development.

To reduce brain drain, Bangladesh can implement targeted strategies: first, increase government investment in education by expanding scholarships and modernising university infrastructure to match global standards; second, align academic programmes with industry demands through partnerships, offering internships and vocational training to boost employability; third, improve economic incentives like competitive salaries, tax breaks for returning professionals, and dual citizenship policies to encourage "brain gain;" fourth, promote political stability and anti-corruption measures to create a safer, more attractive environment; finally, foster entrepreneurship with low-interest loans and startup incubators, turning potential emigrants into local innovators. If adopted, these steps could stem the outflow and build a thriving knowledge economy.

My journey from Bangladesh's challenges to the opportunities of the US has been transformative. Now, at the University of Oklahoma, I develop AI-driven digital twins for metal additive manufacturing at the Sooner Advanced Manufacturing Lab, reducing costs and waste. Looking back, the supportive ecosystem of the US was key to my success—but with reforms, Bangladesh could nurture its own talents and reverse the tide.