

How prepared are we to fight mosquito-borne diseases?

Untenable costs of hosting the Rohingyas

Bangladesh needs new policy to resolve the issue

A roundtable organised jointly by *The Daily Star* and North South University titled "A roadmap for sustainable solutions to the Rohingya crisis" on September 24, brought together academia, members of civil society and security analysts. What has become abundantly clear is that, Bangladesh must spend USD 1.2 billion to support the million or so Rohingyas who have taken refuge in the country since 2017. Two repatriation attempts this year failed because the Rohingyas refused to go back without guarantees from the Myanmar government, which it has steadfastly refused to ensure.

We understand that the process of repatriation, which has not started yet, could take years to complete. And the longer this refugee population stays in Bangladesh, the greater will be the damage to the local environment and economy. Unfortunately, foreign funding has been waning of late and a paltry 38 percent of the USD 920 million needed to feed and house the Rohingya populace for the current fiscal has been committed by international agencies.

The sad reality is that Bangladesh's bilateral efforts in engaging Myanmar in constructive talks to repatriate its people has not borne fruit. There is greater need for active participation of the United Nations, China and ASEAN countries (Myanmar is part of ASEAN). Unless international efforts are made to convince Myanmar's leadership that prolonging the Rohingya crisis will create multidimensional threats whose effects will not be contained within the borders of Bangladesh only. The root point, citizenship and safety of the Rohingyas, need to be resolved now so that they may return home in dignity. A failure to do so could open up the door for extremist outfits to recruit and train this hapless population, which would then become a regional security problem affecting all of Bangladesh's neighbours.



TASNEEM TAYEB

BANGLADESH is still reeling from the worst dengue outbreak in its history, even though the initial shock has passed. According to the official estimate, the mosquito-borne disease has so far claimed 75 lives across the country. The unofficial figure, however, stands at 155 and counting. Some 85,757 dengue patients have been hospitalised since January this year. The fear of a potential spread of the Zika virus disease—another mosquito-borne disease—from neighbouring India and Nepal has only added to our travails. Moreover, with winter—the peak season for the breeding of Culex mosquitos, known to carry viruses that can cause West Nile fever, filariasis, avian malaria and Yellow Fever—lurking around the corner, people are now more concerned than ever before about fighting mosquitos and the diseases they can spread. Conversations with experts and officials indicate that to successfully fight these diseases, all relevant sectors will have to chip in.

Since the dengue epidemic gripped the capital earlier this year, the two city corporations have imported new pesticides from abroad to accelerate the anti-mosquito drives. According to Dhaka North City Corporation (DNCC) Mayor Atiqul Islam, to make the fogging drives more effective, GPS trackers are being used to monitor the activities of the workers involved with fogging. Dhaka South City Corporation (DSCC) Chief Executive Officer Mustafizur Rahman has revealed that they have also brought in new pesticides from abroad and are going to recruit and train another few hundred workers to conduct the fogging drives. But how effective is fogging alone in eliminating mosquitos? According to Professor Mahmudur Rahman, former director of the Institute of Epidemiology Disease Control and Research (IEDCR), while fogging drives are important, focus should also be given on larvicide in order to eliminate mosquitos.

The focus of anti-mosquito drives also differs when trying to contain Aedes and Culex mosquitos. While Aedes larvae can be found in discarded tires and artificial water containers in houses and peri-domestic areas, Culex mosquitos breed in polluted water, especially in polluted lakes, canals and drains. Therefore, while the same pesticide will work to eliminate both Aedes and Culex mosquitos, the areas where the focus of fogging drives should be directed at will be different.

While discussing about the diagnosis

of Zika cases in India and Nepal, Prof Kabirul Bashar, a professor of entomology at Jahangirnagar University, said that Bangladesh should strengthen its disease surveillance systems. He also recommended that screening and, if required, quarantine setup should be installed at the major airports, to screen people who might show symptoms of the disease, especially those coming in from Zika-affected countries.

One might wonder, given the failure of the government in foreseeing and preventing this year's dengue outbreak, how capable it is of handling the potential spread a new mosquito-borne disease. While discussing the initiatives of the IEDCR, its director, Professor

reagents in order to prevent unnecessary testing. According to her, it does not take a long time to bring in reagents.

Unfortunately, even though entomologists have a very important role to play in all this, neither of the two city corporations have any. When asked about it, both sides, however, confirmed that they are soon going to recruit specialists in these positions. The DNCC mayor also added that they are forming a consultation group consisting of renowned entomologists in order to expedite their efforts to combat mosquito-borne diseases.

Although the two city corporations of Dhaka have taken multifaceted measures to combat mosquito-borne diseases,

effective preventive measures can be taken in time. He also suggested that in order to check the effectiveness of the ongoing anti-mosquito drives, the authorities can study the Breteau Index (number of positive containers per 100 houses inspected), so that additional measures to destroy mosquito-breeding grounds can be taken if required.

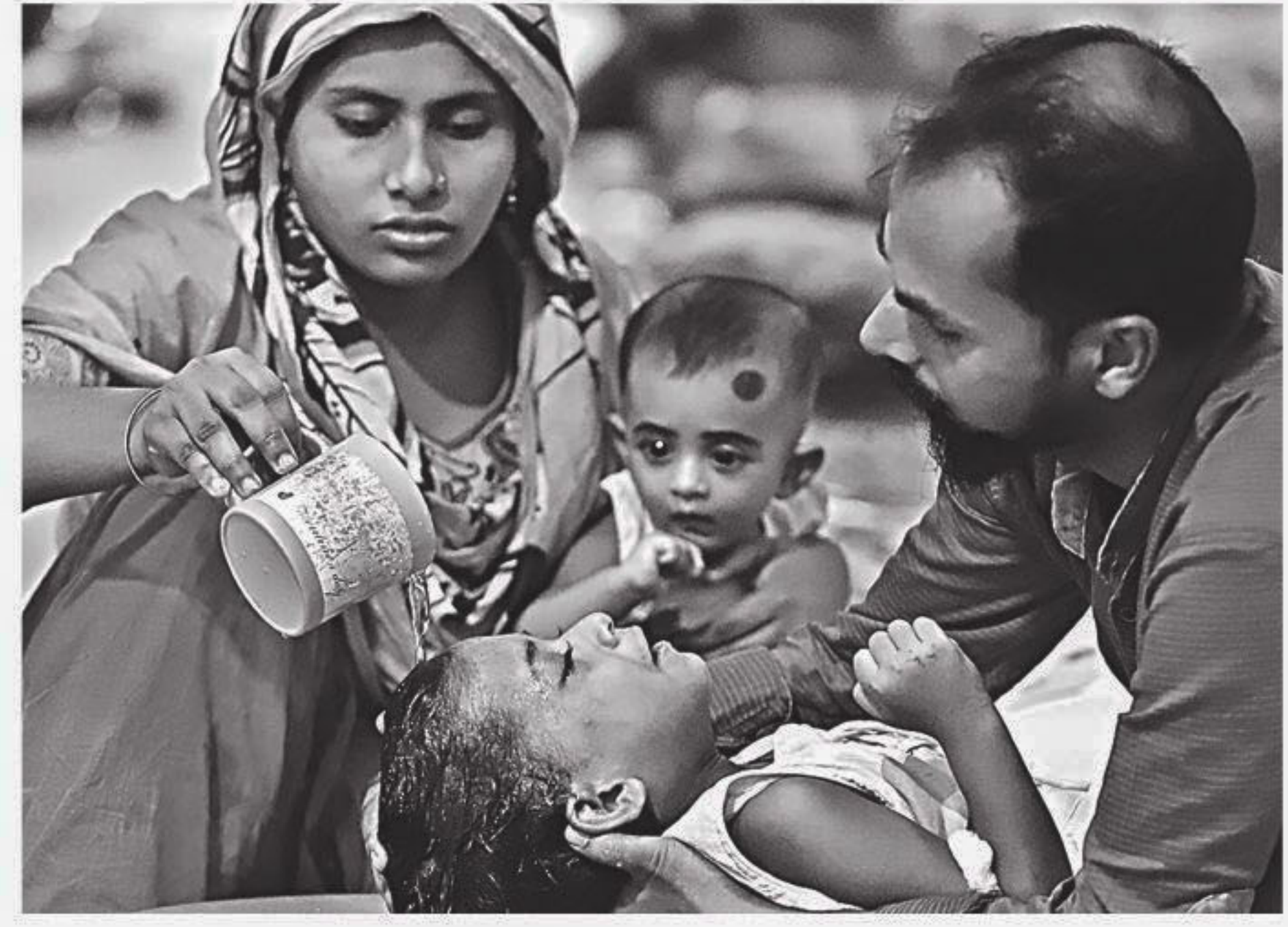
From this year's experience we have seen that urban planning has also an important role to play in combating mosquito-borne diseases. According to Prof Mahmudur Rahman, while planning long-term strategies to fight mosquitos, the government and city authorities must focus on city plans that leave zero space for mosquito larvae breeding, and that facilitates anti-mosquito drives. He said that even buildings should be designed in such a way that they do not leave room for waterlogging that can turn into mosquito-breeding grounds.

What is apparent from these comments is that fighting mosquito-borne diseases is not a walk in the park; it is not even a one-off or seasonal stint. With global warming and changing weather patterns leading to more favourable breeding environment for mosquitos, it will take the efforts of the entire nation to fight the multiple diseases that can be carried by this insect. While policymakers will need to formulate effective strategies and policies to control and prevent these diseases, executing authorities like the two city corporations down to the Union Parishads will have to effectively implement these policies and programmes.

Institutions like the IEDCR and DGHS, along with other specialised bodies such as ICDDR,B, have to be vigilant and strengthen their surveillance systems to detect these diseases and act as early warning mechanism, so that effective measures can be taken in time to root out the diseases before they become a major threat to public health. The media should also keep track of the progress of all the programmes that are being initiated and make every stakeholder accountable by reporting their progress.

And the common people have to play the most important role in eliminating potential mosquito-breeding grounds by keeping their houses and surroundings clean. This year's outbreak should be a learning experience for all, and we must all assess what went wrong and identify the gaps in our systems and rectify them immediately. The two city corporations of Dhaka and the IEDCR have claimed to have initiated a number of steps but it remains to be seen how much of these is actually implemented, and to what effect.

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Parents pour water on a child suffering from dengue fever at Mugda Medical College and Hospital in Dhaka on August 20, 2019. PHOTO: STAR/ AMRAN HOSSAIN

Meerjady Sabrina Flora, said that the airports are already equipped with screening booths where visitors from Zika-prone countries can be tested and diagnosed, adding "although the booths are not functioning currently, they can be made operational when necessary." She also added that the IEDCR has strengthened their surveillance of diseases like dengue and Zika, and that currently there is no reason to worry about Zika.

But the question remains, how equipped are the hospitals to test potential Zika patients should it become necessary? Prof Flora said that IEDCR is equipped to diagnose Zika and that other hospitals should have the required machines to test patients for the disease. She also added that these hospitals have not currently been advised to stock

these measures are only Dhaka-centric, while mosquito-borne diseases have reached the far corners of the country. According to Prof Kabirul Bashar, a more comprehensive initiative needs to be taken by the authorities, especially the LGED ministry, involving the people at the Union Parishad levels, to plan and implement well-rounded programmes to eliminate mosquitos, with a special focus on larvicide.

A similar thought has been echoed by Prof Mahmudur Rahman, who views the initiative to fight mosquitos as a "multisectoral issue" and suggested that in order to effectively prevent such an outbreak in the future, the government must now form an After-Action Review body to assess the failures and lessons learnt from this year's outbreak, so that

Freeing up Dhaka's roads and footpaths

Make a sustainable and long-term plan

THE Dhaka South City Corporation Mayor Sayeed Khokon has announced that the DSCC authorities will soon take necessary steps to remove illegal vehicles and rickshaws from city roads and conduct a drive to free footpaths in Motijheel, Gulistan and New Market areas to reduce traffic congestion in the city. Reportedly, Dhaka North City Corporation (DNCC) has also identified the footpaths that have been illegally occupied in different areas under its jurisdiction and already started evicting those. However, from our past experience we know that such drives provide only temporary relief to the city dwellers.

Over the years, we have witnessed several drives to free up Dhaka's roads from illegal parking and footpaths from the occupation of the hawkers. Unfortunately, the condition of those roads and footpaths reverted to their original state within a very short time. And we all know why: we do not have proper, designated car parking facilities, hawkers are usually evicted without being relocated, and keeping them on footpaths means money for some law enforcers and the politically powerful.

We need a well-coordinated, long-term plan to free the streets and footpaths of Dhaka. For that, both the city corporations should sit with the relevant agencies that work for the city's development, including various private organisations that have been carrying out development projects in the city and make an implementable plan. The city authorities should also hold separate meetings with the hawkers' associations to discuss their plans, including the relocation of the hawkers. Conducting random drives have little effect if not followed through under a sustained plan. We hope the city authorities will take the issue seriously and take measures that will have fruitful results.

The political economy of the fourth industrial revolution



SELIM RAIHAN

THERE have been four waves of industrial revolution so far in the history of mankind. The first industrial revolution (from the mid-seventeenth century to the mid-eighteenth century) took place in Europe and the United States. This revolution made a switch from hand-based to machine-based production processes and included the use of steam and water power, chemicals and iron manufacturing, and the development of mechanised factories.

The second industrial revolution (from the late nineteenth century to the early twentieth century) was a phase of rapid industrialisation. The technological revolution in the form of telegraph and rail networks, wider use of public utilities (gas, water and sewage system), and factory electrification featured the second industrial revolution.

The third industrial revolution had begun since the mid-twentieth century with the emergence of nuclear energy, the rise of electronics-based transistor and microprocessor, computer, telecommunication, biotechnology, and high level of automation in the production process.

The fourth industrial revolution, that has been taking shape since the late of the twentieth century, builds upon the third revolution and the digital innovation. Artificial intelligence, genome editing, augmented reality, robotics, Internet of things, and 3-D printing are the features of the fourth industrial revolution.

What makes the fourth industrial revolution different from past three industrial revolutions? The fourth industrial revolution is characterised by merging technology that is argued to obscure the lines between the physical, digital and biological spheres. It is commonly argued that the magnitude and intensity of these changes are leading to the transformation of the entire production, management and governance systems in ways which are unprecedented. It should, however, be mentioned that this is not a very new phenomenon.

All industrial revolutions saw many "unprecedented" inventions compared to their immediate past periods. However, one should be careful while analysing the fourth industrial revolution so that the analysis doesn't end up calling it as a "mystical" phenomenon—something which can't even be explained properly due to its "unprecedented" velocity of change. At the core of all industrial revolutions is the political economy of the relationship between technological advancement and economic development. A better understanding of the fourth industrial revolution requires political economy analysis of the relationship between technology and development.

The relationship between technology

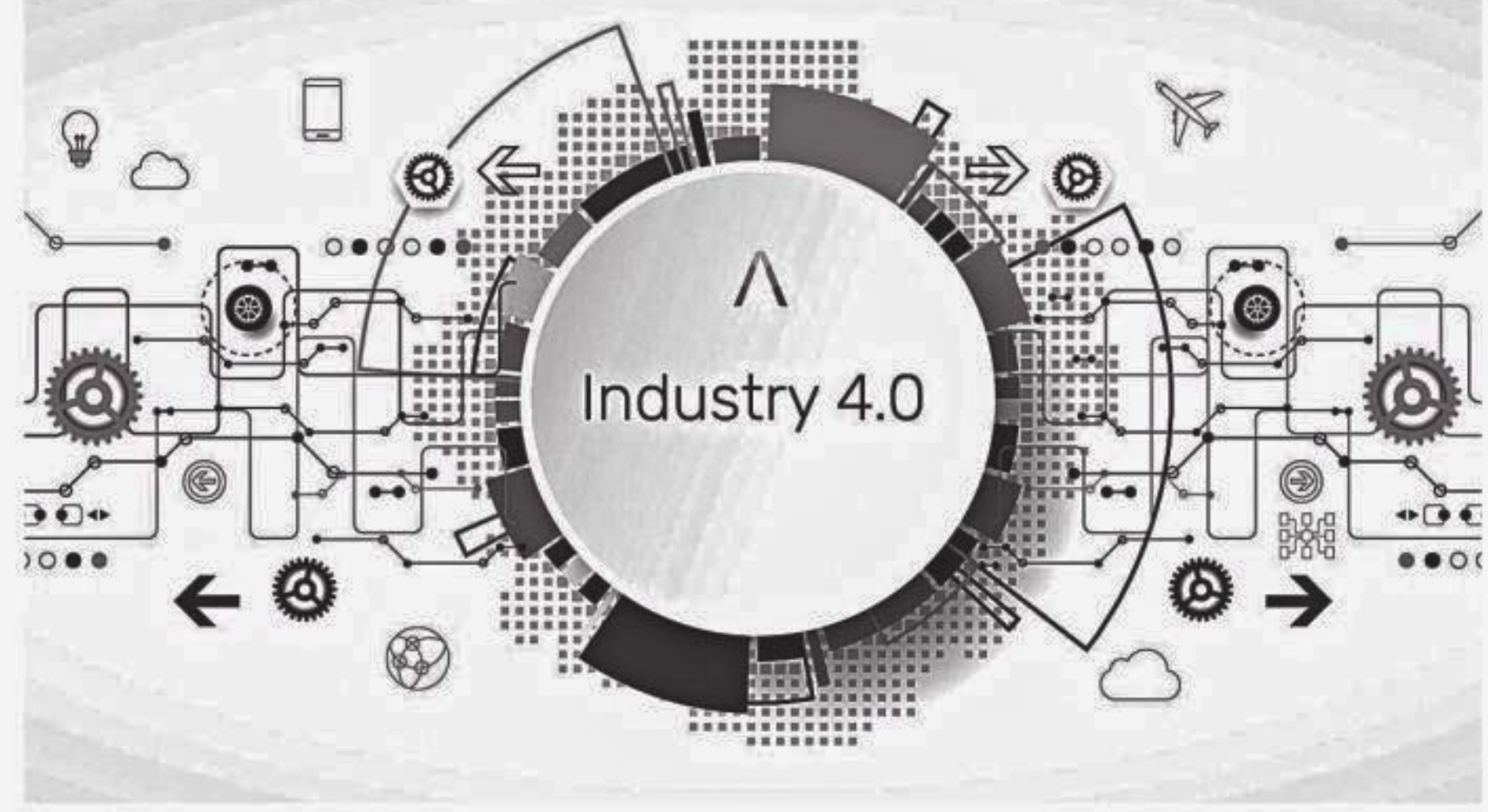
is dependent on a variety of factors, which include the spending on research and development (R&D), both by the government and the private sector (at the firm or industry level), nature of value chain of any goods or services which encourages innovation, level of development of any economy (and it is obvious that major innovations take place in the more advanced countries while the majority of the developing countries remain at the recipient end), strategic vision of the government and the private sector, quality of human capital available in the economy, and the quality of research in the universities and research organisations. The supply of new technology, however, does not go

fears of job losses due to automation, there is also scope for the creation of new jobs driven by the emergence of new production and supply processes of goods and services. The net effect on jobs in an economy is dependent on the success of the country in terms of economic diversification and development of the skill levels of the workforce.

However, while analysing the implications of the fourth industrial revolution for the people at the country or global level, it should be kept in mind that there are huge disparities, in terms of the access to the benefits of technological development, among the people within a country and between the countries. There exist multiple "worlds" of technological advancement within a country and at the global level. While it is highlighted that "technology" has a major "public-good" characteristic and, therefore, its "nonexcludable" feature should be promoted, the political economy dynamics behind the process of and entitlement to technology in most cases leads to the situation where the "non-exclusion" principle doesn't hold. Given the nature of the fourth industrial revolution, which has a thrust reliance on artificial intelligence, in future, talent, merit, and intelligence will play a critical role in the distribution of the gains. The high degree of inequality in the access to quality education and health services in most of the developing countries is likely to lead to the situation where "intelligence" becomes the scarcest factor of production owned by a few in the society. At the global level too, the gap between countries capable of such continuous innovation and the countries at the periphery is likely to intensify.

Therefore, there is a need for concerted and strategic efforts made by governments in developing countries to face the challenges of the fourth industrial revolution. While countries prepare themselves for embracing the fourth industrial revolution through appropriate economic and labour market policies and strategies, the success will also depend on the "inclusiveness" of these strategic development efforts.

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and economic development has been complex. Under the free market economy, the demand for new technology is driven by the competition among firms in the production process to enjoy internal economies of scale and to become more competitive in terms of price and quality. At the industry level, the demand for new technology can be driven by the compulsion to generate external economies of scale. Also, the demand for new technology emerges from consumers' evolving preferences and choices, and when some firms want to tap the new and emerging markets for goods and services based on the anticipation of the changes in consumer preferences. In contrast, the supply of

hand-in-hand with the demand for new technology.

Like the past three other industrial revolutions, the fourth industrial revolution also has the promise of enhancing global production level and improving welfare and the quality of lives of the people across countries. The new opportunities include a dramatic reduction in the transaction costs in terms of accessing information, adopting new technology in the production process, availing services, consumption of goods, and trade within and between countries. Social sectors, like health and education, have already started seeing new approaches and potentials of benefits of the fourth industrial revolution. While there are

LETTERS TO THE EDITOR

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All is not well in our country

We are observing with fear and anxiety the activities of the various wings of the ruling party with news of serious misdeeds committed by some members of Chhatra League and Jubo League being published with increased frequency.

When the foundation of a house is weak, cracks are bound to appear in which weeds will grow making it more vulnerable.

The law enforcers have suddenly woken up and busted some casinos and arrested individuals including GK Shamim who was accused of tender manipulation, extortion and running drugs and gambling rackets. Police said that they were unaware of these criminal activities, but how is it even possible that they were in the dark all these years? One wonders what the intelligence agencies were doing all this time.

It is really unfortunate that members of the ruling party are involved in such anti-social activities and the police have done nothing over the years. We hope that the government will take immediate steps to eliminate the root causes of these activities and ensure a peaceful and just society for all.

Nur Jahan, Chattogram

