The fourth industrial revolution and PICs

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RAPID spread of innovations in information and technology (ICT) in terms of usage of internet and mobile phones by urban and rural population and those in remote and far flung areas has brought about an unprecedented economic transformation, now called “The Fourth Industrial revolution”.

The term was coined by Klaus Schwab, founder and executive chairman of the World Economic Forum in 2016 with his book titled: The Fourth Industrial Revolution.

School textbooks describe how the First Industrial Revolution which introduced the steam engine way back in 1760 in Britain, marked the beginning of machinery based and factory oriented production processes; and how it changed our great grand parents' world from an agrarian and handicraft economy to a machine oriented economy.

The Second Industrial Revolution, approximately a century later was ushered in by inventions (the light bulb, telephone and internal combus- tion engine), accompanied by mass production in steel, oil and electricity industries.

The Third Industrial Revolution was followed by inventions of semiconductor, personal computer and internet. Starting in the 1960s, and reaching its climax in the late 1990s, the digital revolution is now becoming the Fourth Industrial Revolution. It is now getting more different from the Third Industrial Revolution as it is “blurring the lines between the physical, digital and biological spheres”.

The current phase informs us how technologies like artificial intelligence, autonomous vehicles and the internet are merging with humans’ physical lives. Klaus asked us in his book to “think of voiceactivated assistants, facial ID recognition or digital health-care sensors”.

These technological changes lead to societal transformation, much more different from the previous industrial revolutions.

The 2016 World Development Report (WDR) informs us that the Fourth Industrial Revolution is ongoing, “where all economic agents, either as producer, retailer and consumer, or units, institutions and individuals move between digital domains and offline reality with the use of connected technology to enable and manage their lives”.

More than 40 per cent of the world's population has access to the internet with new users coming online every day; among the poorest 20 per cent of households, nearly 7 out of 10 have a mobile phone; and "the poorest households are more likely to have access to mobile phones than to toilets or clean water!"

International efforts and bilateral assistance are now directed at promoting greater access to digital technologies in Pacific island countries (PICs). Through greater inclusion, and improved access to technologies, PICs aim at reducing the digital divide and enabling the poor and disadvantaged in remote islands, to have basic services. They include banking services, as urban based banks were in the past unwilling to open and operate "mortar and brick branches", as they were found uneconomical. Now with innovations in mobile banking, most of the hurdles have vanished. The cost of sending remittances has gone down by 90 per cent after the introduction of digital payment system.

Further, women's participation has risen in the labour market — as e-commerce entrepreneurs, in online work, or in business-process outsourcing. Furthermore, digital ID systems provide better access to public and private services.

A paper presented last week at the 2019 Pacific Update by Dr Makun of the University of the South Pacific (USP) and Prof Jayaraman, now of the University of Tunku Abdul Rahman, Malaysia and formerly of USP and Fiji National University, will be of interest.

They highlighted how pro-active policies pursued by governments in Pacific island countries have been speeding up the spread of ICT.

They include dismantling of monopolies and promoting greater competition, higher investment in infrastructure and electricity, enabling uninterrupted access to internet, encouraging computer and financial literacy and liberal imports of ICT goods.

Fiji has the highest subscriber rates for mobile phones (83 per cent), followed by Palau (64 per cent), Tonga (58 per cent), Vanuatu (53 per cent), Solomon Islands (47 per cent), Samoa (43 per cent). In most of the other PICs, only about one-half of the population has a mobile phone subscription.

The study findings reveal that although ICT has proved to be a significant driver of growth in the PICs, the mobile phone penetration rate is below the needed optimum rate of 85 per cent.

One should not rest with the progress in urban areas and in main islands. Targeted approach to connect remote/outer islands is the critical need.

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