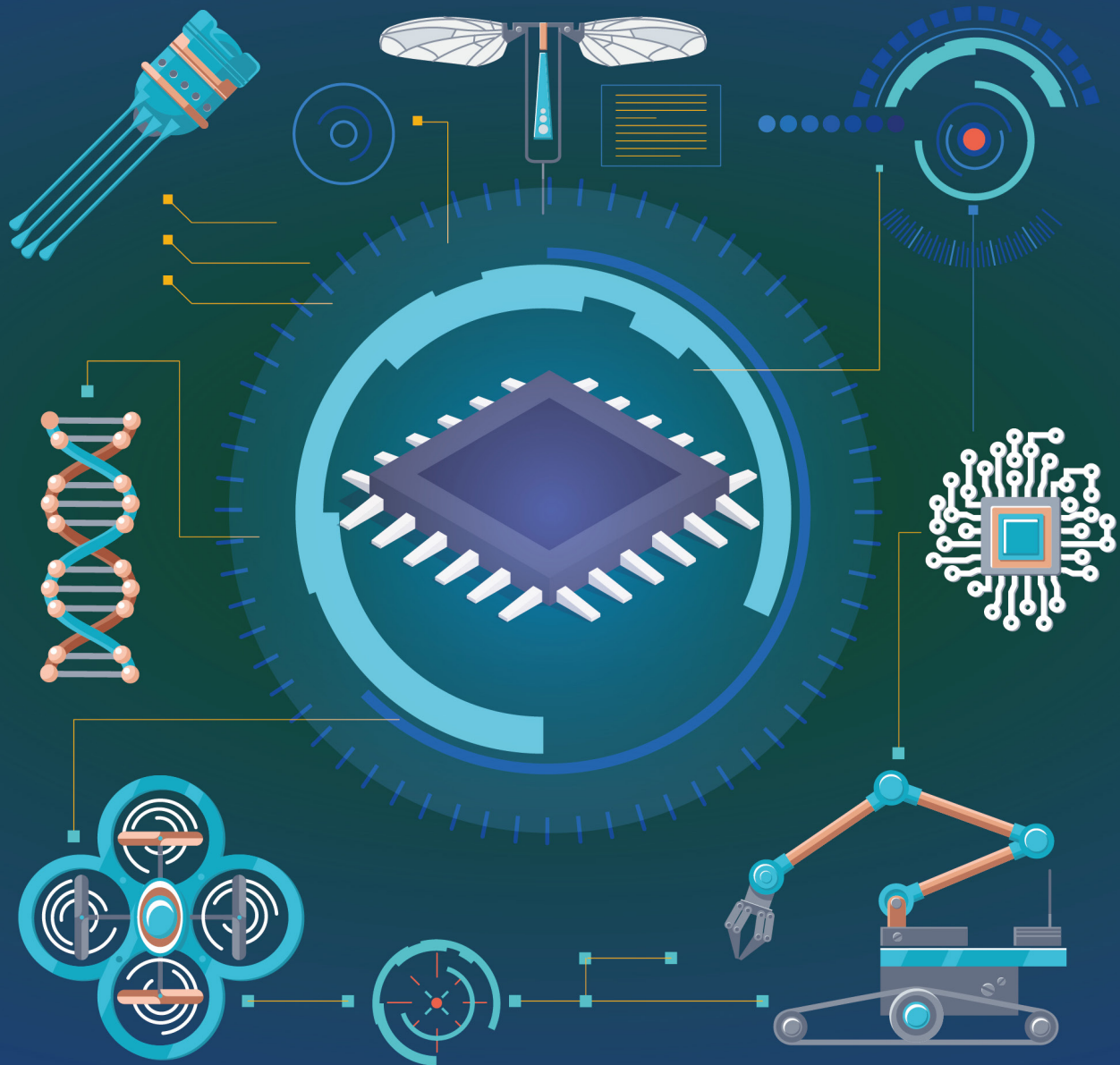




AMERICAN JOURNAL OF IR 4.0 AND BEYOND (AJIRB)

VOLUME 1 ISSUE 1 (2022)



Indexed in



PUBLISHED BY: E-PALLI, DELAWARE, USA

AI, the Global 4th Industrial System and Nepali Labour Future?

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Article Information

Received: November 27, 2022

Accepted: December 01, 2022

Published: December 17, 2022

Keywords

Artificial Intelligence, Future of Labor Workforce Globalization, Technology for 3rd World Country, 4th Industrial Revolution, Nepal

ABSTRACT

The article provides a framework for the rapid advances in the 4th IR (Industrials Revaluation) efforts in the future of Nepali workforces and labor. The industrial revolutionize the future labor market, with machines replacing human labor due to savings through labor costs will be substantial for competitive markets. Agriculture, hydroelectricity, tourism, and the labor force have been identified as the key drivers of the economic growth of Nepal, and we should be intensely concerned for the future of the workforce. Due to the lack of technological education facilities, development of intensity from the government, priority, and implementation, this modern problem appears graver than envisaged. The increasing adoption of AI (Artificial Intelligence) profoundly changes the old foundation's concept of labor and its reforms introduced by the Global capitalist industrial system. For that, is Nepal ready to challenge embracing the labor market and its properties since our economy relies heavily on unskilled worker's remittances? The study is based on a review of the existing literature relevant to the objectives of this study, which includes government data, books, book chapters, journal articles, newspaper articles, policy documents, consultancy reports, and online documents, research reports from various national and international organizations.

INTRODUCTION

AI collection of multiple technological bases led to changes in the labor market, with machines replacing human labor. How do the technological changes and 4IR upgrading implications Nepal's workforce? Moreover, what will be the younger generation's future since we are not yet ready for that? Nepali Youth is increasingly choosing to remain outside the workforce and labor force after completing school. This worrying trend affects both male and female youth, so one of the nation's economic forces could be entirely forced to work in a repetitive job (Elizabeth *et al.*, 2020). Roy Amara, 1925–2007 American futurologist, once said: We tend to overestimate the effect of a technology in the short run and underestimate the impact in the long run (Amara, 2016). This is just a caution about AI's future technological dominance in machines, tools, and workplaces. The developing 3rd world is entering into a fast-paced technological race behind all the competition due to the pressure of technological advancement and new economic opportunities to catch up with well-developing countries for generations to come together with an advanced education system of intelligent, optimistic approach toward AI. (Feijóo *et al.*, 2020) Since Nepal's present and future education system is nowhere grown up to produce a modern skilled workforce, those innocent victimized might be low-class industrial workers. People are the agents of change regarding technologies and society. How will the new technologies be integrated into the everyday life of Nepal?

LITERATURE REVIEW

Artificial intelligence based on high-speed networks and interfaces would change the production process,

and business models based on big data will be popular. The speed factory in Germany, which produces Adidas-personalized sneakers, is a typical example of innovation in the production process. Operational technology will lead to a hyper-connectivity society, with human-machine, machine-machine, and human-human connections. During the third industrial revolution, manpower shifted from the manufacturing sector to the service sector. There is also a concern that the inequality of labor income and capital income could deepen. (Ibid) Theoretical Physicist, Michio Kaku, talks about Artificial Intelligence and the future labor market, "There are huge gaps in what robots can do. The (repetitive) jobs that will disappear will be in regards to blue-collar workers, the automobile and textile industry, and white-collar workers, middlemen, low-level accountants, bookkeepers, agents, and tellers will disappear. Non-repetitive jobs such as (semi-skilled blue-collar work) robots can't fix a broken toilet, pick up random garbage, or hammer a nail; garbage men, plumbers, carpenters, and construction workers will have jobs in the future. In the white-collar world, workers who engage in intellectual capitalism involve common sense: lawyers, counselors, professors, or people involved with human relations, creativity, imagination, leadership, writing a script or book, doing science, and so on (Truong, 2016). The global installed base of advanced robotics will accelerate from around 2 to 3 percent annually today, 10 percent annually during the next decade. This development will power dramatic gains many industries around the world and lead to shifts in competitiveness among manufacturing economies. The prices of hardware and enabling software are projected to drop by more than 20 percent over the next decade. At the same time, the

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performance of robotics systems will improve by around 5 percent each year. As a result of higher robotics use, the average manufacturing labor costs in 2025—when adjusted for inflation and other costs and productivity-enhancing measures are expected to be 33 percent lower in South Korea and 18 to 25 percent lower in, for example, China, Germany, the U.S., and Japan than they otherwise would have been (Zinser *et al.*, 2020).

A developing economy will likely specialize in sectors that rely more on unskilled labor, which it has more of compared to an advanced economy. Assuming robots replace unskilled labor but complement skilled workers, a permanent decline in the terms of trade in the developing region may emerge after the robot revolution. This is because robots will disproportionately displace unskilled workers, reducing their relative wages and lowering the price of the good that uses unskilled labor more intensively. The drop in relative price of its main output, in turn, acts as a further negative shock, reducing the incentive to invest and potentially leading to a fall not just in relative but in absolute GDP (Alonso *et al.*, 2020).

For example Bangladesh, before automation, 50 workers were needed to produce 5,000 pieces a day; after automation, a factory required 30 workers to produce the same output while the remaining workers continued to work with the factory in a new line. As a consequence, with automated processes, 50 workers can now produce an estimated 8,000 pieces a day. The small and medium factories could not exploit the scope of automation like their large counterparts because they can't afford machine. (Behtarin *et al.*, 2020).

UAE, according to the recent technology vision survey, 2071 objectives; AI “the new wave upon which all our services, sectors and future infrastructure will rely on.” Emirati educators are looking for using AI to crunch data about behavior, scores, academics, attendance, assignments, extracurricular history and curriculum, , Saudi Arabia’s ultra-high tech future megacity (“Bigger than Dubai! More robots than humans!”) Project, will further developing the kingdom’s digital environment (and create 200,000 jobs in the bargain) Grow the local talent pipeline using AI High unemployment alongside massive reliance on imported talent. A young and highly educated workforce but chronic wordlessness among the young, the talent base is a series of paradoxes that have proved frustratingly difficult to resolve. With its power to augment human skills, drive innovation and create new ways of working, AI presents a once in a life time opportunity to build domestic talent equipped for the industries of the future. Over time this would enable the regional to overcome skills bottlenecks, create local jobs and potentially even become an exporter of AI talent in the future (Elsaadani *et al.*, 2018).

The study’s limitations

This comprehensive analysis gives a quick overview of how AI affects public employment in Nepal. While our research does not encompass all of the

available knowledge, it does provide a comprehensive understanding of the phenomena based on a thorough examination of the various social components of the technological advancement, Nepali education system, workforce and labor history.

Research question

- How will Nepal’s future generation face workplace or labor market obstacles?
- Are policymakers, the government, and intellectuals aware of the forthcoming social chaos, unemployment, injustice, and discrimination in the workplace?

Automation, AI, and the Emerging Economies

The high degree of automation made possible by some of these advances could cause widespread job losses. First, job automation takes place only where it is both technically and economically feasible. Second, data covering 12 Developing Asian economies show that from 2005 to 2015, rising domestic demand more than compensated for jobs lost due to technological advances. Third, technological change and rising incomes will lead to new occupations and industries, further offsetting labor displacement due to automation. Nonetheless, new technologies will alter the composition of skills needed by the workforce. It may also lead to more frequent unemployment, lower wage growth—especially for the less skilled and widening income inequality (ADB, 2018). Among the small economies that have relied on manufacturing, the export of services, primarily tourism. The skill, capital intensity, and complexity of digital technologies that favor advanced economies and the likelihood that they will lead to a telescoping of global value chains are the worrisome problem for emerging economies (Yusuf, 2017). Those who subscribe to the precautionary principle will require higher levels of cognitive, non-cognitive, and technical skills that are not plentiful in emerging economies and will accumulate slow. In most emerging economies the digital transformation of government is at an early stage with much ground still to cover (Eggers, 2015).

How to import FDI for technology?

Nepal is strategically located between two rapidly growing economies countries China and India, with easy access to markets of more than 2.6 billion people, so investing in Nepal with relatively low labor cost is best for any investors. FDI, (Foreign Direct Investment) The Information Technology sector has experienced the highest Compounded Average Growth Rate (CAGR) of 141.23% over 5 years (Shrestha, 2022). The FDI inflows in Nepal is substantially low compared to neighboring countries. It shares only 0.01 percent of total FDI in the world while the South Asia received 3.1 percent of total FDI inflows in 2016. FDI began in the 1980s (Nepal Rastra Bank [NRB], 2018, p. 11). As a result, she has had FDI stock worth of NRs. 182,919.6 million until mid-July 2019 (NRB, 2021, pp. 22-23) - a negligible sum (Bhandari,

2022). Most investment gurus believe that agriculture and mining will produce the best returns around the world in the next 20-30 years

Nevertheless, fifteen plans target to improve more than 260 billion Nrs 2020. Nepal also expects to receive advanced science and technologies, technical staff, and

Land, Land and More Fertile Land	Tourism Investments	Hydropower	Outsourcing from US, Europe and Australia	Medical Tourism:
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Source: Nepal Gov. MoFu Borad

an approach to innovation in the industrial sector. It will undoubtedly include enhancement to the future technology improvement, but the question remains of how it will make an effort in Nepal's future workforce. For least developing countries, and especially in LDCs, Trade and foreign direct investment (FDI) are important vectors of technological upgrading. The basic consideration motivating the analysis is that technology can be biased in favour of certain groups of workers depending on their skills or on the tasks they perform. These tasks can be classified along two main dimensions: i) their degree of routinization; ii) whether they are manual or cognitive in nature (WTO, 2017). We could learn from India for rapid development of the permanent resident of people (PRC). India is particular importance to Nepal, as its location makes it a potential bridge between these two economic powerhouses. Harnessing this opportunity will require reliable infrastructure and human resources. Nepal has the potential to produce good engineers, managers, and hospitality service providers (ADB, 2015).

Future impact of AI in Asia

While the AI market is forecasted to create substantial economic distortion in Asia-Pacific, it is expected to grow from \$6 billion in 2017 to \$136 billion in 2025, averaging a stunning 47.71 percent growth per year. This would leave thousands of people in the manufacturing and transportation sectors jobless because the new jobs injected into the market due to AI would be highly specialized engineering jobs. With the vast number of new incoming technologies, another challenge will be for lawmakers to regulate the proper use of such technologies. Tractica (informaTech) forecasts that, at the current rate of progress, Asia will trail behind North America for the next 10 years. The biggest setback that Asia faces is a crippling shortage of talent in AI, rendering them unable to conduct effective research and development. To emphasize, where U.S. and Canada collectively have 10,000 AI specialists, China and India have a mere 1,000 specialists (Saha & Sarker, 2019).

UK, (United Kingdom) The potential impact of on average, those with lower levels of education (GCSE-level and equivalent only or lower) are at greater risk of job automation. Job education requirements are higher in the human health and social work sector, with more than twice the proportion of employees having high education. It also requires better matching of workers to the new opportunities that will arise in an increasingly digital economy central and local government bodies also needs to support digital sectors that can generate new jobs. UK Economic Outlook March 2017 (Berriman,

2017). To avoid this future uncertainty, Nepal has to act from today to change the education model, digitalize the government's bodies invest in a mass younger generation how to identify the skills that will be required for the future, and develop the training in an egalitarian system, that is constantly updated to stay ahead of the AI robots.

AI and Nepal

The concept of e-governance, still at its nascent stage in Nepal, has been left to decay in its own inadequacies (Kathmandu Post, 2021). The Nepal state of affairs concerning digitization is botched, whereas we saw some digitalization decades ago, The Naulo Restaurant in Kathmandu has five robot waiters under the slogan "where the food meets technology." Interestingly, Naulo is the first digitalized robotic restaurant in South Asia (Jha & Yadav, 2022). National Innovation Center Nepal, this initiative we are committed to create dynamic opportunities to help Nepal become a prosperous nation and to preserve talented Nepali individuals from leaving Nepal for better opportunities abroad (NIC, 2022).

Bringing Silicon Valley to Kathmandu Valley: I wanted to see if I can contribute in bringing the best AI education to Nepal and make Nepal known around the world as one of the best sources of AI talent," says the Nepali founder of Fusemachines (Awale, 2019). Digital Nepal Framework admits: "The growth of e-commerce in Nepal is inhibited due to the lack of a supporting ecosystem such as limited digital payment options (Abidi & Wang, 2019). Can Nepal invest in the cloud? A group of young overseas Nepalese based in the UK wanted to invest in cloud computing in Nepal. They were already doing work for Amazon, Microsoft and Alibaba and were attracted by Nepal's lower labour cost, as well as the availability of professional software engineers (Acharya, 2019). We have 25 Data Scientists and Engineers working in Kathmandu at present – we are planning to take this number to 100 by the end of this year. Our aim is to help Nepal become a technology hub like Israel" (Khadgi, 2022). Mentee: This New Nepali EdTech Platform Introduces "Learning Glass Technology" for Lessons Delivery (Gautam, 2021) For the first time in Nepal, Masters' degrees in Artificial Intelligence interested to pursue a career in Artificial Intelligence now have the opportunity to get an AI degree in Nepal (Kathmandu University, 2021). AI exhibition (AI Expo 2019 Nepal), held first and biggest Expo on Artificial Intelligence in Nepal. Head or Research, AI for development Google Developers Expert in Machine Learning (Shrestha, 2019). There are 5 Companies in Nepal that provide Artificial Intelligence, they are specialized in Artificial Intelligence including branding,

UX design, web design, web development, social media marketing, mobile apps (TechBehemoths, 2022).

A few months earlier Honorable Finance Minister stated in his budget statement on January 15, 2079, that IT-based businesses and others would receive an 8% cash subsidy. There should be laws to contain the public's fundamental rights and plans and national strategies to regulate AI. There should be laws to contain the public's fundamental rights and plans and national strategies to regulate AI. We also need clear, advanced laws for dealing with malicious use of AI and cognitive-based priority of cognitive-based technology.

Until now, the use of AI-based technologies is mostly the private firm's banks, and the Health sector is enjoyed investing in infrastructure and contributing their knowledge for a generation, so the government must be granted to protect them.

Nepal Government Technical Advancement

There is much finger-pointing between the authorities at the center not only for their lack of pursuit of E-governance but also for the policy for the modernization of education, whereas more than 35000 elementary schools and private schools serve the rest—20 percent. The office of the controller of examinations (OCE) conducts a National Level Examination annually for more than 300 thousand students. However, nothing is being done to improve the existing drawbacks of modern technology. Report points at dire lack of IT staff and infrastructure at local units. Of the 434 local units evaluated, 90.32 percent had fewer than two IT staff. 84.1 percent of the local governments

have staff with bare minimum qualifications. Only 14.52 percent local governments has IT staffers with a master's degree (Shrestha, P., 2021). Nepal national education policy objectives and goals for the Fifteenth Five-Year Plan (2076/77 - 2080/81): To improve sustainable development in Education Science and Technology, Nepal National Education policy act 4.3 by 2030, the Nepal government has granted equal opportunities for sustainable skilled and technology-based education for all men and women (NPC, 2020).

Nepal Future Labour

Nepal's working-age population is expected to exceed 20 million by 2025, meaning there will be an additional 5 million people entering the workforce (UN, 2015). The most critical demand in the country is for mechanical skills, electricians and electrical engineers, IT professionals, chemical technicians, and entrepreneurial and managerial skills (P. Shrestha, 2021).

Comparing last 2018/19 to 2021/22 foreign workforce approved pattern

Nepal's foreign jobs concentrate on unskilled occupations. In 2018/19, 56 percent of total permitted migrants worked as construction workers, laborers, cleaners, and helpers; only 0.2 percent were hired into professional or high-skilled occupations.

Final Approved List Skill Wise from 2020-07-16 to 2021-07-15

Latest, 2021 Nepal government(DOFE) shows 307

Table: 1 Report on Final Approved List Skill Wise from 2020-07-16 to 2021-07-15

S. N.	Skill Type	Approved No of Men	Approved No of Women	Total No of Approved
1	High Skilled	55	6	61
2	Professional	226	20	246
3	Semi-Skilled	14427	1156	15583
4	Skilled	65869	4557	70426
5	Unskilled	74665	5717	80382
	Grand Total	155242	11456	1666898

Source: Department of Foreign Employment, Nepal

labors (highly skilled and professional), 0.0184%, and Semi-skilled and skilled, including the majority of 86009, which is about 5.115% in total remaining 94.82% are unskilled labor who has got approved to leave Nepal.

While comparing the last four years of labor migration chart 2018/19 to 2020/ 21, there is a bit of hope, but nothing is moving in Nepal's favor, whereas we need to lift massive unskilled people for the future, which is not easy for the government. Most of workers are still in forestry, agriculture and fishery sectors (21.5%), which is mostly operated with traditional skills. It is suggested that, because of farmers' weak ability or educational qualifications, the speed of implementation of modern technology or the prospect of automation capacity in the agriculture sector will be very sluggish. Similarly, wholesale & retail trade, repair of motor vehicles (17.5%), manufacturing (15.1%), construction (13.8%), education

(7.9), information and communication (0.9%) and so on. Above data states that more than 50% of the peoples are engage in agriculture, forestry and fishery, wholesale & retail trade, construction and manufacturing most of based on traditional skills. Similarly, only about 13% of total workers are in high skilled job category, most of them are low and unskilled workers in agriculture, sales workers, and elementary workers. Also the proportion of unskilled and low skilled workers is very high related to high skilled workers (Khanal *et al.*, 2020).

Higher Professional Education tends in Nepal.

To understand the current workforce production and tend, we have to go past Nepal's political, economic, and higher education. In the base of past, the above data adduce that low enrollment rates in professional disciplines like medicine or engineering have been attributed to the poor

preparedness of high school graduates for technical fields, and the fact that these programs are costly to operate and therefore only offered by a small minority of institutions, which usually charge high tuition fees (Roach, 2018).

In 2017/18, 423,996 students were enrolled in Higher Education. Tribhuvan University (TU) has 335,126 (79.04 percent) students, Pokhara University (PokU) has 29,419 (6.94 percent) students, (Purbanchal University) PU has 26,128 (6.16 percent) students, and Kathmandu University (KU) has 17,942 (4.23 percent) students and the rest of the students are enrolled in other universities and medical academies. The enrolment proportion in terms of field of study is 78.6 percent in general programs and 21.4 percent in technical programs. Enrolment in management, education, and humanities is 46.78 percent, 17.88 percent, and 13.20 percent, respectively, as opposed to 7.11 percent in S&T, 6.08 percent in Medicine, and 6.55 percent in Engineering (UGC Nepal, 2017).

The above data shows how Nepal's education produces the future workforce and labor. Since the higher studies rate has always been poor in Nepal, the workforce primarily depends on 78.6% of the Kaku's (repetitive) jobs concerning blue-collar workers, and only 1% of the country's higher education institutions offer post-graduate level degrees (Truong, 2016). Are they enough for the white-collar world? Those workers who engage in intellectual capitalism involve common sense: lawyers, counselors, professors, or people involved with human relations, creativity, imagination, leadership, writing a script or book, and doing science (ibid). Similarly, among them, technical and Science and Technology (S&T) of 21.4% are most likely to go aboard for higher studies. The best mind of the nation's brain drain will lose its qualified, skilled human resources in critical sectors like education, health, science, technology, and business. Even though there are no educational boundaries today, every material you can get on the internet. The lack of consistency in funding across higher education institutions has critical implications for developing higher education in Nepal. A coherent funding framework, including norms and criteria, will rationalize government funding across institutions and through fiscal years. Overall, it also raises the question of the cost-efficiency of institutions and fields of study that receive high financing (ADB, 2015).

What can Nepal do?

How will 4IR globalization shape labor market risk perceptions and policy preferences? Perversely, the future of labor demand depends on the relative cost of relative investment goods and, financing conditions, product demand. The existence of specific technologies. Robust empirical validation is made difficult by the specificity of modern skills data. It is difficult to construct resilient labor markets because of the uncertainty around technology's impact on labor (Frank *et al.*, 2019). Nepal should focus on investing more budget At least 0.75 percent of GDP should be allocated for Science and technology (S&T). The importance of S&T is reflected in the percentage of

GDP spent. India has increased spending to 0.7 percent, China's two percent, Japan's 3.4 percent, and the US's 2.7 percent while Nepal spends the least at 0.45 percent of its \$30 billion total budget (Adhikari, 2022). Knowledge-based STEAM education, major technological revolution demands human resources equipped with Science, Technology, Engineering, Arts, and Mathematics knowledge, skills, and capabilities that are committed to producing technical sophistication and interdisciplinary thinking (Shrestha, 2020). 8 Things Every School Must Do To Prepare For The 4th Industrial Revolution; Make schools Educators, schools, government officials, and parents must re-think education and how to prepare the next generation to take advantage of the plethora of opportunities and overcome the challenges enabled by ever-increasing technological change (Marr, 2021). Nepal should focus on the slogan of the 4th Industrial Revolution: the 'Evolution of Nepal Education' system through modernization of skilled workers and their education depending on the prediction of the demand and supply in various workplaces and technological advancement.

Government of Nepal STI Policy

We don't have a long history of formation in Science Technology and Information (STI) Policy since 2053, Nepal's separate body of the Ministry of Science and Technology. In the year 2061, the National Science and technology act was implemented. Nepal should focus on the slogan of the 4th Industrial Revolution: the 'Evolution of Nepal Education' system through modernization of skilled workers and their education depending on the prediction of the demand and supply in various workplaces and technological advancement.

Science, Technology, and Innovation Policy

The National Science, Technology, and Innovation Policy (2019) identifies six priority areas. Achieving the Policy's objectives will require responsive institutions and adequate funding. The Policy has proposed creating a science, technology, and innovation fund, but no budget has been allocated to such a fund yet (UGC Nepal, 2021).

How will Nepal's future generation face obstacles in the workplace or labor market?

According to OECD, the vulnerable jobs are coming decade, whereas Nepal approved 95% (2022) unskilled labor for aboard. After a details analysis, Nepal's education enrolment proportion in terms of field of study is 78.6 percent in general programs and 21.4 percent in technical programs. Enrolment in management, education, and humanities is 46.78 percent, 17.88 percent, and 13.20 percent, respectively, as opposed to 7.11 percent in S&T, 6.08 percent in Medicine, and 6.55 percent in Engineering. For instance, jobs that require a bachelor's degree may identify cognitive workers who are less susceptible to automation. Ideally, educational institutions train workers to possess valuable skills that lead to higher

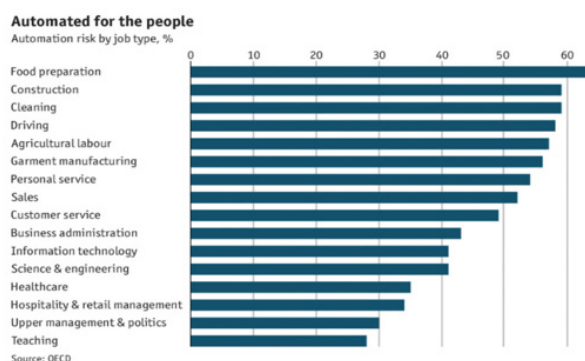


Figure 2: The 4IR technological change and the future of work

Source: OECD (OECD, 2018)

wages. Three characteristics of educational systems have been used to explain social stratification processes: stratification, standardization, and vocational specificity. These characteristics have been the basis for educational systems' varied "capacity to structure" students' entry into the labor force (Kerckhoff, 2001).

Finding

The composition of unemployment in the future for developing nations is due to poor technological progress, lack of investment, research, and poor educational background. Nepal, youth brain drain, and massive unskilled unemployment labor will lead to social flux. This output can backfire on a nation's advancement. The accelerated by the FIR, multinational corporations could easily exploit the workforce and the environment of developing countries (UNICEF, 2019).

Nepal's private sector is not growing fast enough to absorb the available labor supply into high-quality wage jobs. FDI is another productive firm to transfer S&T, but political instability and lack of skilled workforce are serious concerns. We find out what the effects will be in the coming decade of the massive expansion of technology; the problem is how Nepal will act in the future for a competitive market due to the 4IR of AI.

To alleviate Technological gap we have to promote and develop the Venture Capital and Private Equity markets; (ii) foster Fintech through a modern retail payments system; facilitate delivery of high-quality business support services to help commercially sustainable firms emerge from the cluster of competing producers by differentiating their product, upgrading their product quality and/or identifying untapped markets for the same classes of products. Otherwise, multinational corporations take advantage of loosening labor regulations in developing countries to increase productivity; workers in developing countries work in hazardous workplaces without proper welfare (Min *et al.*, 2019).

After intensive research on various areas of the nation's education, FDI economic background, government infrastructure, S&T policy, youth brain drain, and labor approved statics, we concluded the Nepal is in the primary phase of production Skill workforces for 4IR and AI.

CONCLUSION

The Nepal government should regularly review the national curriculum framework and technical and vocational education and training (TVET). These revisions require timely and effective implementation to enhance youth's employability. Government should train educator and renew curriculum timely to address technological changes, so we have to import profound educator around world. To avoid this system, we have to start technological industrialization strategies to address the alarm of automation anxiety in the global labor market for Nepali labor. Transforming unskilled migration to semi-skilled and skilled migration work and for skill level to be used as benchmark for workers entering into foreign employment; investing in provision of free skills training for the workers aspiring to enter into a regulated foreign employment system. Developing the professional capacity of workers' unions is a prerequisite for achieving competence in policy reforms, results-based monitoring of labour standards enforcement, meaningful social dialogue and implementation of collective bargaining agreements. Synergic tripartism between the government, workers and employers forms the ground for professional dedication in this respect (ILO, 2016).

Policymakers and the government need to rethink Nepal's long-term national strategies. Nepal has opportunities to create a hub for AI research and new zones supplying cheap renewable energy globally. Since Nepal stands to generate these earnings provided the country starts exporting 13 gigawatts of electricity to India by 2030 and doubles this capacity by 2045, says a (U.S. Agency for International Development)USAID report titled "Economic Benefits from Nepal-India Electricity Trade" released in 2017 (USAID *et al.*, 2015).

To minimize the societal upheaval, addressing Nepal's digital advancement and public education. Better using AI education for simplifying concepts on tutoring, services, and learning materials, all digitally, with AI cognitive education being easy and accessible for everyone. We have at least focused on the Model for a year program to strengthen the quality of education.

What will happen if we don't timely address 4IR and

AI challenges?

In worst case scenario, new industrial low-class workers? No predictions not always 100 percent correct, but we have to serious for uncertainty.

Government, how will enforce the new welfare policy, how will evaluate the exiting economic disparity in Nepal when future repetitive job are in danger?

The danger is that only a private institution will benefit from successful technology adoption in Nepal case while government is very far from AI advancement; it only creates more digital gaps upcoming generation.

Analyzing various scholarly articles nature of the job is likely to change due to the automation revolution; the people who are not smart enough to create value-added will be out of luck or be working for pennies.

The third world workforce will be nonviable economically within the next decade. These residents will be forced into a world where they have no edge, creating a majority of low-income class with no way to advance up the socioeconomic ladder because they might have a work ethic. We must have to concern with a comprehensive and globally shared view of Nepal's technological advancement since AI is perversely affecting our lives and reshaping our economy. Is this possible? The fundamental way to create a bright workforce future is to educate our people more and more.

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