



The Future of Work; Opportunities and Challenges

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Abstract: *The labor markets around the world will undergo great transformations over upcoming years and decades. These developments are largely due to mega-trends that will impact key dimensions of labor market. Here, the key question for the world of work experts is: how the future of work looks like and how it can be shaped? The present article, based on the most important studies in the world, attempts to answer these two questions. So, among the major issues here are the main drivers of labor market transformation and its consequences for the future of work, and the challenges and opportunities arising from developments in the world of work. At first, mega-trends of labor market have been investigated, as the main drivers, then, the future of work will be defined along five dimensions in which mega-trends will impact the world of work. Next, challenges and opportunities arising from the world of work changes are examined. Finally, the summary and conclusion of the article is presented.*

Keywords: *The future of work, labor market mega-trends, change drivers.*

INTRODUCTION

Recent developments in the world of work have attracted attentions of many activists from the world of work. The opportunities and challenges of recent developments, sometimes assumed threats, have sparked a lot of debate among academic professionals, researchers, policymakers and the public. The Future of work literature is fraught with fluctuations in attitudes towards the future of work. According to the International Labor Organization studies, mega-trends, including the Fourth Industrial Revolution (focusing on the robotic technologies development, artificial intelligence and genetics), globalization and demographic and climate changes, act as drivers of labor market changes by which the future of work will be affected in five main dimensions; the future of quantity and quality of employment, the wages and income inequality, social support systems and industrial relations (see Fig. 1).

In this paper, the effects of trends on the key dimensions of the labor market are examined. Among the mega-trends impacts on the world of work and employment are the emergence of new forms of employment, creation of new jobs or elimination of the existing jobs, changes combination of the future workforce, the future of working condition evolutions, the sustainability of social protection systems, the growth of average wages and incomes, and the distribution of income and wages among households, and finally, evolutions of labor organizations in the future, which are discussed in detail.

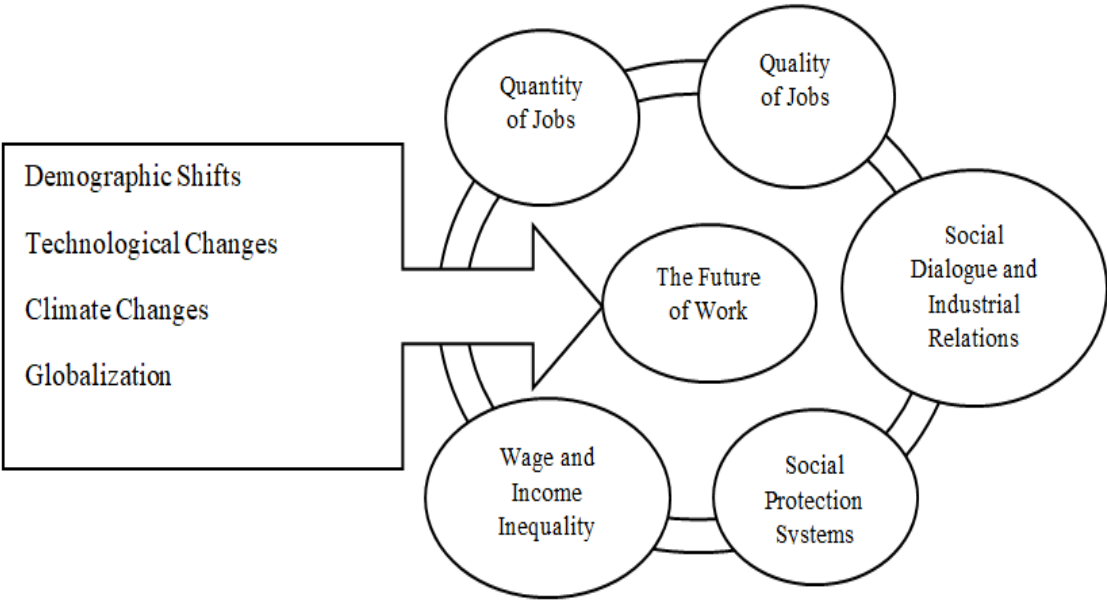


Figure 1: Mega- trends and their impact on the future of work

Demographic Shifts:

Demographic changes are the most important determinant of the global labor force prospect. The world population is projected to grow from 7.349 billion in 2015 to 9.725 billion in 2050 and 11.213 billion in 2100. More than half of this population growth will happen in Africa by 2050. After 2050, according to a forecast of African dependency rates, due to reduced fertility rates, young population growth will slow down and their dependency rates will decrease. But in other parts of the world experienced similar trends long ago, the dependency ratio is expected to increase continuously, as a result of an increase in the aging population and the development of the silver economy (see Chart 1). Raising dependency rate means a decline of the growth rate of the potential labor force. (Bloom et al., 2016)

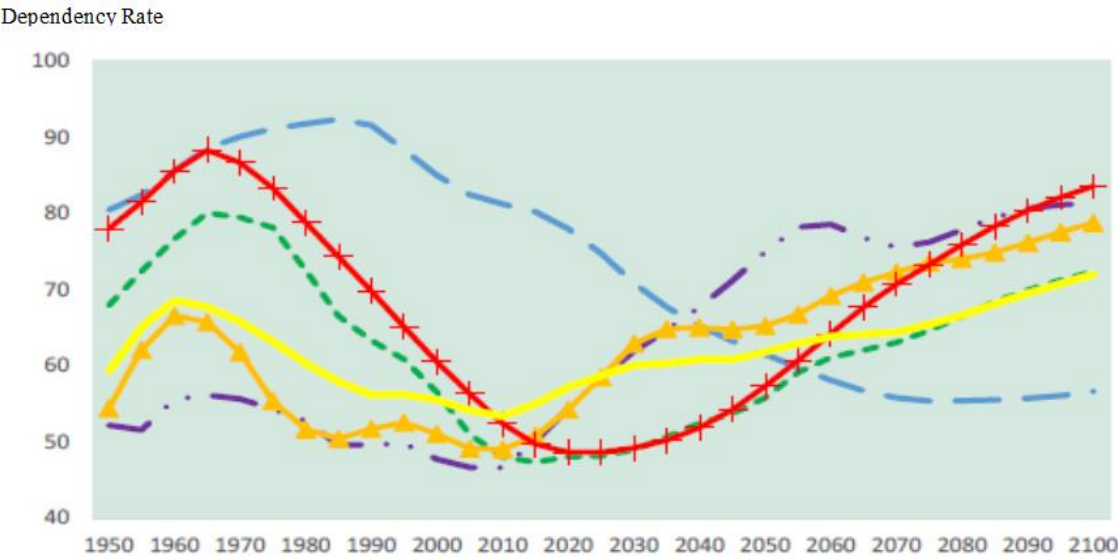


Chart 1: projected dependency rates in major world regions
Source; Bloom et al. (2016); population forecast, United Nations (2016)

The Forth Industrial Revolution (Technology Revolution);

One of the key concerns is if there would be enough jobs for all job-seekers in the future of work. The question is how rapid technological change will affect the future of work. Some technology specialists expect technological transformation in the scale of the nineteenth-century industrial revolution, dubbed "The Fourth Industrial Revolution (4IR)". They believe that, as a result of the current technological alterations, machines, robots, and computers will increasingly have an absolute advantage over labor; hence the likelihood of replacing a car with a person in the future will be very high. As a result, some jobs will be lost. On the contrary, there is little information about the potential of creating new jobs in this way.

Many scholars argue that to create new jobs it is necessary to develop and regulate new markets, especially in the green economy, the healthcare and health services sector, or in the public sector, where no profitable activities currently exist. Here, the main concern is that creating new jobs may not be fast enough, so when automation and other systems operated by artificial intelligence replace the existing labor force, the number of existing jobs can be reduced faster than the workforce, so until new jobs are created there would be a significant increase in unemployment rate. Also, automation and digital revolution might causes jobs re-shore from developing countries into advanced economies. The increasing usage of robots in developed countries, as well as new production techniques which demand a sophisticated level of skills will reduce labor-costs advantages in developing countries. This may lead to the displacement of employment from developing countries to developed countries. On the other hand, it is believed that technology can boost job opportunities in new professions, especially in architecture, engineering, computer science and mathematics. In fact, historically, technological advancement leads to net positive effects on employment, such as modification, moderation and transformation of processes, because "even those tasks that cannot be replaced by computerization are generally completed by it." (Deloitte, 2014)

Climate shifts, environmental degradation and the green economy

Another driver of change that may affect the world of work is the climate change that causes environmental degradation. For example, greening of an economy may affect the total number of jobs in the future of work. On the one hand, climate change and the adoption of environmental policies; result in job elimination in some energy intensive sectors, such as car producers and users. On the other hand, it leads to the creation of new environmentally friendly jobs (France Strategie, 2015). In addition, greening the economy will result in decreasing economic and natural resource extraction activities and jobs that lead to carbon and greenhouse gas (GHG) emissions (World Bank, 2017), in contrast, developing low carbon economy, only in energy sector, results in creating 18 million new jobs (ILO, 2018).

As the economy becomes green, even if traditional sectors that use non-renewable energy are faced with job cuts, the net employment change is expected to be positive. Moreover, by changing consumption patterns, employment growth in eco-friendly retail and other green jobs is expected to have an increase in the number of green jobs: for instance, in the United States, with the expansion of the green economy, it is anticipated that, several jobs such as energy auditors (over 202,000 jobs), climate change analysts (over 39,700 jobs) and cellular fuel technicians (over 99,700 jobs) will be created by 2022. However, if environmental protection jobs are not sufficiently developed, then economic costs may be far greater; for example, every degree Celsius of global warming, on average, costs 1.2% of GDP to the economy and as a result, employment is likely to be downsized.

Moving toward a "circular economy" and resource efficiency is a solution to environmental sustainability, by which a significant number of new jobs can be created through reallocating the workforce. In this economic pattern, instead of the principle of extraction, production, consumption, and discarding, the principle of production - services – consumption, recycling – re-consumption and recycling, as possible as, will work; hence, there are potential employment opportunities arising from repair, rental services and recycling activities (Ellen MacArthur Foundation, 2013).

Globalization:

The globalizing of economic activities and new communication technologies has enabled many workers to be independent of their organization. These independent workers, such as free agents, e-lancers, and boundary less careerists, enjoy the flexibility of new forms of work comparing to traditional works. New forms of work allow workers not only to choose clients, but also they can decide when and where to work and for how long they work. Workers in non-standard jobs typically suffer from unstable employment, low wages and a lack of social security. In order to increase the positive effects of globalization on the future of work and minimize its negative impacts, it is necessary to prevent the bipolarization of workers and achieve a balance between flexibility and security. The guarantee of equal hourly wages for equal work hours is one of these methods. Another is ensuring the right of non-standard workers to influence their working conditions. In other words, flexibility should not be at the cost of losing security.

How do mega-trends impact key dimensions of the labor market?

Quantity of the future employment:

Population aging and increased access to educational facilities are among factors that globally lead to a reduction in the growth rate of potential labor force, especially in developing countries. The decline in working age population will be more common among the OECD countries, and may even reach 7% by 2060. This demographic change also occurs in emerging economies. For example, in Latin America, 30% of the population will be elderly by 2100. Although labor and pension reforms in OECD countries is expected to partly offset the decline in working-age population and increase the labor force participation rate by 2.4%. However, labor force contribution is expected to reach zero to GDP per capita, or even negative, as a result of global economic growth.

Skilled immigrant attraction policies have caused many young migrants to leave developing countries. Brain drain has affected emigrant states, due to an increase in dependency rates; so, their human capital will be decreased. According to studies, this trend will be vice versa in the future, with many immigrants leaving the high-income countries (including reverse migration or emigrations).

Based on the scenarios for international labor migration trends, by 2055-2060 the global immigration rate will decline over the next 30 years (comparing to 2050). In the long run, net migration flows will decrease steadily so that by 2100 it will reach half of 2050. That is, the immigration rate will only be reduced by 50% within 50 years. Therefore, in order to compensate for the shortage of skilled labor in developing countries, migration of temporary workforce may work and therefore replace permanent migration. On the other hand, environmental degradation, climate change and water scarcity may increase the rate of migration, especially in geopolitically unsustainable areas. In fact, according to estimates, due to the inability to adapt lifestyle by millions of people to new changes, certain areas of the planet, will soon become uninhabitable by the end 21st century. Since 2008, an average of 21.5 million people has been forcibly displaced due to climate change or disasters. In addition, rising incidence of conflicts is a major challenge faced by immigrant states, due to increased competition for attracting immigrants, racial tensions and suspicion.

However, even though global labor force participation rate has been declined, still the challenge of job creation remains (see Chart 2). So that by 2020, 500 million jobs must be created in order to have enough job opportunities for current and future job seekers. Taking into account the fact that youth unemployment rate will be three times more than the rest of population unemployment rate, there should be special opportunities for youth.

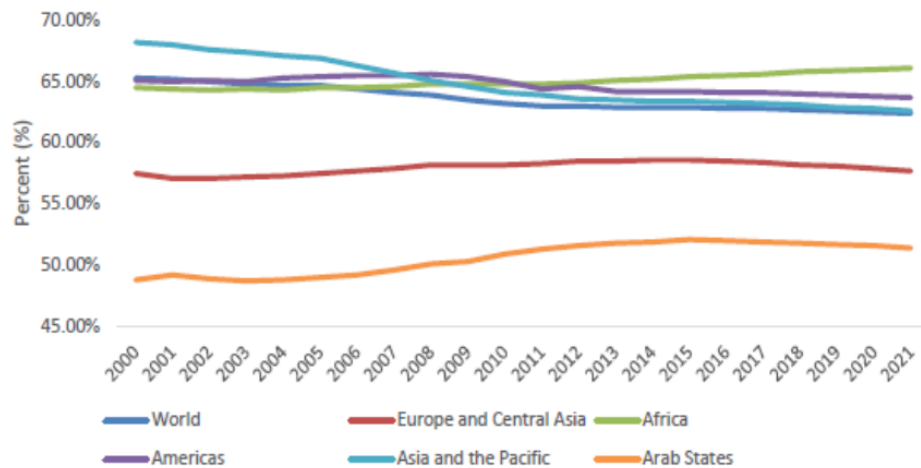
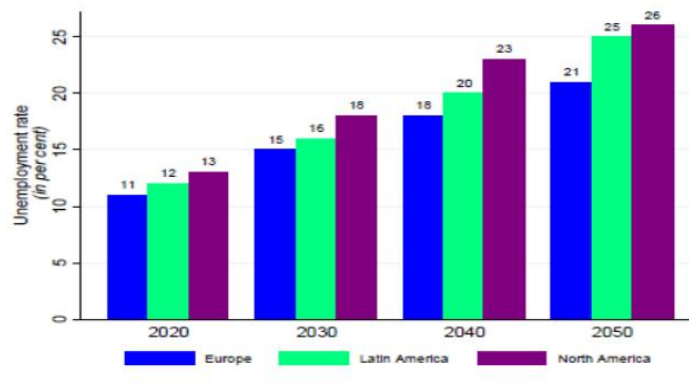


Chart 2: labor force participation rates by regions; age +15 (%)
source: ILO; 2017 a

According to a scenario analysis of European countries, the female participation rate will increase to an average of 75.1%. This participation rate, not only is expected to increase over the 2012 to 2022 period, but also this increase will be in highly qualitative jobs. However, in developing countries, there seems to be a slight improvement for gender gap in participation rates. For example, according to the ILO (2016b), while in regions like the Arab states, there is a constantly improving female participation rate, others are expected to see gender gap increase, especially in East Asia. Therefore, globally, due to falling fertility rates, further developments of healthcare sectors and more automation of homework, overall female participation rate has been increased.

According to the World Economic Forum (2016b), by 2020, there would be a global surplus of 4.759 million (about 4.9 percent) out of 96.928 million official and managerial employees. According to the Bertelsmann Foundation study, unemployment rate in developing and developed countries will reach over 20% in Europe and more than 25% in Latin America and North America by 2050 (see Fig. 3). Despite these influences, changes in the future of work are welcomed due to the potential benefits of technology like productivity improvement. According to a study, companies with higher automated activities will probably experience revenue growth more than 15 percent, 6 times more than companies with less automation (Daheim and Wintermann, 2017).



Source: Daheim and Wintermann (2017)

Chart 3: Expected Unemployment Rate

Generally, according to global estimates, automation will affect 1.1 billion workers (49 percent of jobs) and US\$ 12.7 billion in wages. Also, according to World Bank (2016) studies, by the year 2030, 66.6 percent of jobs will be susceptible to be made redundant due to technological advances. However, other studies believe that only 9% of jobs in OECD regions are automatable. Nevertheless, the process of job destruction and substitution might be happened over a long time as a result of low wages and slow technology adaptation (Arntz, Gregory and Zierahn, 2016). However, the jobs lost caused by the tech influx into the world of work would be undeniable and will happen anyway.

According to some other studies, the total jobs will not be lost, but only 45% of the tasks currently performed by human beings will be substituted. So, only 5% of jobs can be completely replaced by technology (McKinsey, 2015).

Table 1: Estimates of technological unemployment

organization	Estimates	Source
Bruegel	Between 47% of jobs are at risk of automation for EU Countries	Bruegel Blog (2014)
ILO	56% of jobs in UK, 21% in Japan and 35% in Germany are at risk for ASEAN-5 Countries	Frey and Osborne (2013)
McKinsey	60% of all occupations have at least 30% technically	McKinsey Global Institute (2016)
OECD	9% of jobs in OECD average are at risk Low risk for complete automation but important share of automatable tasks at risk (50%-70%)	PWC (2017)
Oxford University	47% of workers are at high risk of job lost for automation in America	Ronald Berger (2016)
Pricewaterhouse Coopers	38% jobs in America, 30% in UK, 21% in Japan and 35% in Germany are at risk to automation	Bowles (2014)
Ronald Berger	8.3 % jobs in industry lost against 10 % new jobs in service sector by 2035 in Western Europe	Chang and Huynh (2016)
World Bank	2.3 all jobs are susceptible automation in Developing Countries	World Bank (2016)

Service sector jobs, especially official and administrative ones (Frey and Osborne, 2013) and transportation sector, especially driverless cars and trucks are among the occupations with high potential for job loss. Automation has significant implications for both the number of job loss (13% of job reduction) and income inequality (Estevadordal et al., 2017) On the other hand, technological revolution will drive employment growth in service and production sectors. For the United States, for example, every new tech-related job will create about 4.9 new local jobs. This fact is also applied to Europe as well (Goos, Konings and Vandeweyer, 2015). About developing countries, high-tech manufacturing needs for high skilled labor will be 6 to 9 times higher than the United States. There would be the same automation effects on unemployment rate in other sectors, such as electricity, agriculture (using the Internet of living things in agricultural processes, etc.), industry, so on .Ultimately, Block Chain (BC) technology algorithms via, restructuring the financial sector and eliminating the traditional jobs such as accounting, banking, translation etc. may have a huge impact on the world of work. However, BC has a potential for new job like BC developers, Internet architectures, and cognitive engineering (ILO b; 2016).

In addition to employment reduction rate, there are studies that confirm the potentials of new tech to create new jobs. For instance, a study on effects of technology on jobs in Russia by 2030 showed that creating new jobs would be greater than potential for losing current jobs. On the other hand, in some businesses, even if robots replace a large number of workers, human-affiliated jobs - such as creativity and emotional intelligence

- might become more common. For example, in France, the Internet has destroyed 0.5 million jobs in the past 15 years, while creating 1.2 million new jobs (World Economic Forum; 2017b). However, some industries dependent on technologies such as Additive Manufacturing (AM) are greatly affected by new changes. So, considerable amount of labor will be reduced due to the lack of appropriate skills (World Economic Forum 2015a). In sum, Fig. 2, draws negative or positive impacts of drivers on jobs.

Drivers	Jobs	Decrease or Increase
Technology	Mathematic, Computer and Engineering	↑
Demography	Care and Health	↑
Environment	Green Jobs	↑
Technology	Administration and Office, Service, Sales, Textile, Clothing, Footwear, Electrical and Electronic, Agriculture	↓
Environment	Non-renewable energy	↓

Figure 2: Expected increase or decrease in occupations and their drivers

Gender perspective says that men are at greater risk of losing their job than women. However, men will be more likely than women to find new jobs. Skill gap is one of the most important challenges of labor market transformation. At present, globally, 43% of jobs face the challenge of lack of skill (UKCES; 2013). This trend is expected to continue for both developed and developing countries and lead to occupational and geographical mismatches. This will help stabilize unemployment, prolong it and hurt job prospects. Digital platforms (such as LinkedIn Monster .com) through connecting people by providing them job opportunities play a significant role in reducing skill mismatches and generate huge profits at micro and macro levels: For example, as a study, online platforms will lead to 72 million jobs and increase global GDP by 2% over the next two decades (Manyika, et al. 2015).

Quality of Future jobs;

In recent decades, non-standard forms of employment have increased considerably all over the world. These new forms have led to unpleasant consequences for both workers and employers. Mainly, weakening of company's ability to respond to labor market demands due to the erosion of skills, productivity reduction etc. are among employers' concerns and reduction of job security and worse working conditions are among concerns of workers. However, employers will probably benefit from flexibility and cost savings in the short term (Quinlan, 2016)

Some researchers argue that online platforms in employment peaked in 2014 and have slowed down since then (Farrel and Greig, 2016). According to some other ideas, due to platform economy expansion and growth of a gig or sharing economy, flexible work and routine tasks are rising in developed economies and have a significant impact on the middle-class professions. This means that full-time dependent workers, who have lost their jobs, can be employed through the platform's working arrangements as self-employed workers. This trend is expected to continue in the future, so that by 2020, freelancers will account for up to 40% of the future workforce. In a far future, a lot more freelancers will work on platform systems. However, emergence of the gig economy has also changed the concept of employment and put it at risk. Because, in fact, workers employed in the gig economy are considered as self-employed. So, they lack many of their fundamental rights (such as having organizations, high wages, laws of conflict resolution, so on (IOE, 2017). Moreover, work-life imbalance due to less control over working hours, safety and health hazards, social isolation, and so on, are among platform work threats for workers. However, in the case of expanding platform economy in the future, the likelihood of the emergence of new forms of labor unions, such as dig-lancers unions, is very high (ILO, 2017b). Besides increasing non-standard and informal employment, other factors such as working conditions,

OHS, climate change and temperature increase will also affect the quality of future jobs. These impacts would be more prominent in vulnerable geographic areas. For example, since 1960s in West Africa, as a result of doubled hot days, associated health risks, such as clinical effects of heat and increased likelihood of unexpected injuries have increased. Consequently, labor productivity has dropped. On the other hand, improving labor market efficiency, work-life balance for workers with family responsibilities and inclusion of marginalized groups are among non-standard employment benefits.



Figure 3; Potential hazards to working conditions in the future

The quality of jobs can also be improved through the transition to a greener economy. For example, in the waste management and recycling sector, where most workers are hired informally, recycling must be turned into a formal job before becoming a green job. Formality can provide opportunities for improving working conditions for the workers.

The future of social protection;

Sustainability of social support systems is challenged by current and future market changes. Working conditions are influenced by emerging new forms of employment and technological changes. Polarization of wages and salaries directly affects financing of social support schemes and public services, such as health care and education, since these are largely dependent on formal labor contracts. Digital crowd workers in the gig economy, considered as self-employed, experience inappropriate working conditions, e.g. obligation to pay a full contribution of social security, and non-payment of minimum wages (ILO, 2016).

Tax-based social security systems may erode as labor force decline for population aging, and consequently health-care and retirement costs will increase. Because elderlies use more services and need more expensive treatment. Globally, the number of elderly care services will increase and will be delivered for longer periods. So, if later retirement age or tax reduction will not exist, all pension funding resources may be swallowed. In addition, if the current trend of increasing life expectancy continues, next generation retirement rate will be halved. Above all, emergence of tax competition arising from globalization may paralyze most social security systems. From 1967 to 1996, globalization has had a significant and negative impact on corporate taxes and reduced tax revenue prospects. If this trend continues into the future, funding gap for pension systems, especially in emerging economies, will be wider. According to a study, this gap might reach \$ 400 trillion by 2050, roughly five times greater than the current global economy size. The weakening of the macroeconomic

environment with low interest has led to unsustainable social protection systems due to a fall in the world term premium and monetary policy rates near to zero in advanced economies. If this trend continues, benefits paid by current pension system will be reduced due to the lack of further participation. Ultimately, mass migration flows will be another major challenge for social security systems. In general, net impacts of migration are positive (e.g. 0.4 GDP growths in OECD countries due to migration between 2007 and 2009). But the sudden and sustained migration flows have a negative impact on the existing social security systems and existing infrastructure. For example, increase in the rate of immigration to Europe in 2015 is four times more than 2014 (World Economic Forum; 2017).

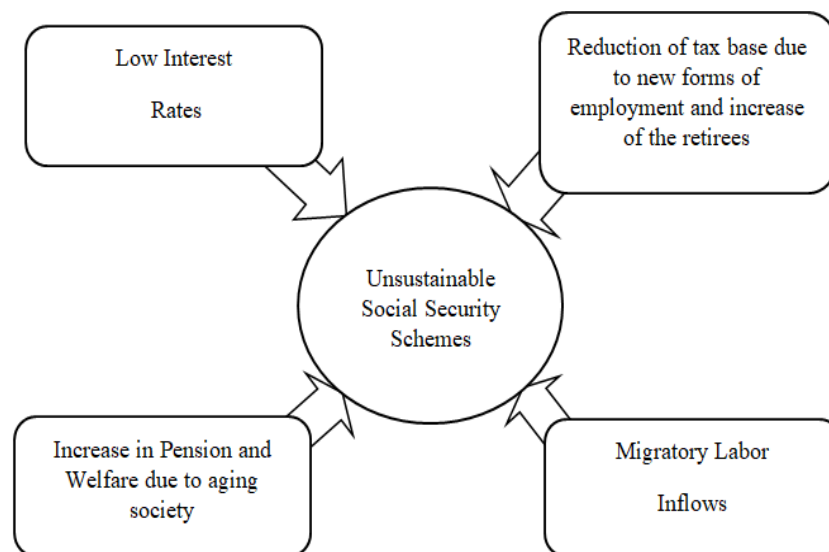


Figure 4: Negative Impacts on social security scheme financing worldwide
Source; Balliester and Elsheikhi (2018)

Several suggestions have been presented to solve these challenges. For example, designing and implementing portable health and pension plans with the acceptance of sharing risks and social security responsibilities by workers, employers and the government, in order to include workers in non-standard employment and unemployed workers. Taxing on capital, robots, and other technologies, especially with regard to wage cuts, is another suggestion as an additional revenue stream for social security systems. In the case of wage-based social contributions, total value-added tax on national income should be considered. This will significantly reduce the cost of labor. For example, in Italy, the total national value added tax, instead of wages, increased workers participation from 16% to 33 % (Guerreiro et al., 2018).

The Universal Basic Income (UBI) is a radical suggestion. Based on UBI, each citizen will have an unconditional amount of income that reduces or eliminates the requirement for paid work. At the moment, increased robots and fears of a lack of adequate jobs in the future for everyone, are good for persuading UBI's policy. Poverty reduction as well as decreasing administrative complexity and costs of social protection systems will be another benefit of UBI. However, UBI has attracted several criticisms like impoverishing some people due to having UBI, infeasibility of policy both politically and financially. A study showed that despite potential moral hazards for UBI programs and fraudulent claims, they continue to provide better protection for workers and are more socially desirable (Fabre, Pallage and Zimmermann, 2014).

The future of income and wage inequality;

According to the "Global Risks Perception" study, income growth and welfare disparities are the most likely trends of global development in the future; therefore, a vicious cycle of inequality widening will exist due to the inability of the households at the end of income distribution to adjust to new conditions (World Economic Forum, 2017). Unlike the national inequality, the global decline in income inequality has accelerated over the

past three decades. This reduction in inequality, for emerging economies, has been beneficial for lower-income deciles. But in some industrial countries, after the 1980s, the trend has been reversed. Many economists believe that (ICT) developments play the key role in these changes. Technological changes have made a small group of corporate giants rise their dominance, take hold of the global economy and enjoy high profits, but the share of labor in corporation value-added and sales is too low.

Rent-seeking and market power of large corporates, along with the poor mechanisms of income redistribution and financialization of the economy, also play an important role. These factors originate from technological, economic and political developments, reducing the share of labor from national income and increasing the share of top decile. In general, most scholars seem to expect a global stagnation in wages, with the exception of emerging economies such as China that is expected to experience raising wages (ILO, 2018). Meanwhile, the growth of online platform employment, can be a tool for the OECD workers to "fall down", because of competition among low-income workers to achieve jobs, so, it leads to the reduction of real wages or keeps it at moderate level (OECD; 2016b). Erosion of labor market institutions, low union density (IMF; 2016), global competition, continuing recent technological trend and polarization of jobs, changes at combination of national income from work to capital and the rise of superstar companies are among other drivers of income and wage inequality (see Chart 4).

Specifically, the rise of superstar corporations, such as Google, Facebook, Amazon and Apple, has increased income inequalities. Over the past four decades, an increasing number of industries has been an example of "winners take most" and have left a smaller share for their competitors. Additionally, just 10% of superstar companies account for 80% of total profits. As these corporations pay high wages, a very small share of sales returns to labor and it widens the income gaps. The IMF (2016) notes that wealth has shifted from West to East, and this trend will continue. The share of the European middle-class will decline globally from 36% in 2009 to 14% in 2030. By contrast, the global Asia-Pacific share is projected to grow from 28% to 66%. In the United States, since 2000, only 0.3 percent of the middle-class households have earned higher incomes, compared to 3.3 percent falling to lower levels.

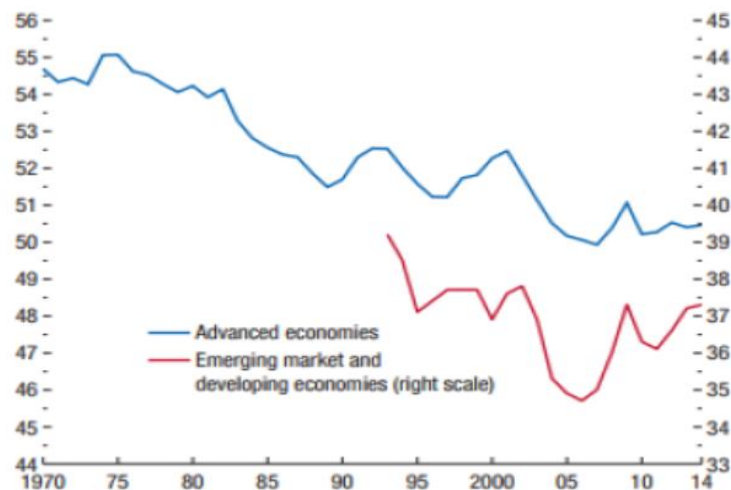


Chart 4: Evolution of labor share income
Source: IMF (2017b)

To reduce income inequalities, suggestions are presented as follows: Increasing the share of technology-led profits by setting up regulations for companies to support the use of the Internet, stimulating competition and innovation, investing in skills, accountability of institutions and governments to respond to the requirements of the community, and "Smart Protectionism" of indigenous workers rather than curbing global trade flows.

Pursuing these solutions will significantly affect the distribution of income. At the end, if there is no change in policy making, it is likely that trends affecting labor market developments will continue to worsen the distribution of global income.

The future of social dialogue and industrial relations

Social dialogue and industrial relations are playing an important role in the promotion of decent work, cooperation across social partners, peace and social justice, as well as economic performance (ILO; 2013a). In the future, social dialogue and industrial relations are likely to face unpredicted challenges by the Fourth Industrial Revolution. This revolution brings new business models by which work is being increasingly shifted to machines. So, labor market institutions capability to organize workers effectively and protect their rights can be questioned. There are some challenges to Social dialogue and industrial relations in the context of workers' organizations. Declining union memberships in developed countries, memberships dominance in the public-sector, older workers and middle-to-high earners, are among these challenges. This trend is expected to continue into the future. The same story exists about employers' organizations. So that, union participation rate has dropped from 30% for Babyboomers to 20% for Millennials. As a consequence, by 2030, working age membership might fall to 20% (compared to 25 % for now).

There are different views on how social dialogue and industrial relations ought to respond to these challenges. It is required for labor market institutions to act responsively to the changing world of work. In the case of workers' organizations, for instance, it is required for unions to anticipate and adjust their organizing and collective bargaining approaches to the dynamic demands of the modern economy, labor market, work organization, demography, and human resource management.

Other contributors advocate for a shift towards more decentralized and innovative collective bargaining structures to include isolated groups of workers. Indeed, with the emergence of online platforms and flexible forms of employment, workplaces are increasingly becoming fragmented. So, fundamental rights of workers like the representation, freedom of association and collective bargaining will face challenges. Nonetheless, the rise of new forms of employment (non-standard and flexible) creates substantial opportunities for membership since more and more individuals are in need of the services and support that workers' organizations offer. Currently, unionization rate among non-standard workers is markedly lower than their traditionally employed counterparts. Notwithstanding, some commentators highlight that the emergence of modern labor institutions and the consequent labor market regulations, are inevitable.

There are three trade union approaches currently organizing gig and platform workers;

1. Legal approach – Unions contest worker misclassification and try to include gig and platform workers in the existing employment conditions (as workers in gig and platform economy are defined as self-employed workers)
2. Alliance formation – The development of associations and alliances committed to providing a service to isolated workers, often in the form of lobbying on behalf of gig and platform workers.
3. Regulatory reform – The creation of new opportunities for collective bargaining at the state and municipal levels with the aid of regulatory and legal reform.

The raising of precarious employment, sub-standard conditions and marginalization may lead to the emergence of unconventional, community-based initiatives to protect vulnerable workers using innovative strategies. In the United States, for instance, an increasing number of worker centers are becoming established institutions for organizing workers and collective bargaining. This alternative form of labor protection has made significant gains for U.S. workers at all levels: Over the past two years as many as 13 states and 10 city and county governments have voted to increase minimum wages in part thanks to worker centers (Fine, 2015).

Few studies solely discuss the role of employer organizations in the future of work. With regard to the educational needs for workers to harness the labor market changes, employers' organizations should play a

predominant role nationally and locally through the conduits of organized training, consultancy, conferences and networking. For example, employer's organizations can take actions like; highlighting skill shortages for worker unions for evaluation and improvement of work organization, tailoring economic policies towards an integrated and forward-looking education system, particularly in the areas of science and research. Other important role of employer's organization can be the widening of the scope of their membership to new forms of employment.

Summary and conclusion:

The present paper examined, effects of the four main trends of globalization, demographic change, climate change and the industrial revolution on the key dimensions of labor market, including the quantity and quality of jobs, social protection, social dialogue, and income and wage inequality.

In the field of demographical change, labor force shortages and its effects on advanced economies have been discussed. The increase in the youth population, and the reduction of their participation rates in labor market, was another important issue. Potential inclusion of vulnerable groups, such as women and immigrants, was seen as a way to cope with this trend, coupled with labor market policies and retirement reforms. Subsequently, automatable jobs in both developed and developing countries are mentioned. At the same time, the argument that computing does not necessarily eliminate entire jobs, but also eliminates some of tasks, is also highlighted.

The impact of climate change on the future of employment is another important topic of this paper. Climate change is likely to increase employment in green jobs. However, it leads to reduce jobs related to polluting industries.

In the discussion of working conditions, it was argued that flexible and temporary work, among other forms of non-standard employment, would be most prevalent in the near future. Lower wages, lower social protection and less security in work are the most important consequence of this kind of employment. However, the flexible and remote work of marginal workers and workers with family responsibilities will help entering the labor market. The impact of gig economy entailing increased precarization, decreased bargaining power and reduced legal protection, is also highlighted. New forms of employment will eliminate participation in social security schemes. Similarly, reducing labor supply will have a negative impact on the level of social contribution and pay-as-you-go insurance systems sustainability. For some emerging economies, high wages may endanger social security. The last negative effect is low interest, which is expected to continue in the future. Studies also emphasize the importance of covering out non-standard occupational workers in social security benefits. Many commentators point out the importance of globalization and emergence of super companies as explanations for increasing inequalities. In addition, the gradual disappearance of labor market institutions has been discussed as another determinant of inequality. Finally, this review looked at the future of industrial relations. The recent trend of unionism has been declined in many countries, both for structural and demographic reasons. Many scholars have argued that traditional forms of trade unions and new models of representation possess the potential for solving instability caused by new forms of employment.

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