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Abstract

Relations between people and AI reinforce each other. Although one of the studies conducted by analysts suggests that by 2030 about 30% of the world's working time can be automated, AI can help by taking on monotonous and repetitive aspects of workers' current work. Meanwhile, these employees will focus on types of work that are more strategic or require a more analytical approach. However, this also requires retraining of existing labor at a certain level.

This new way of working began to influence the labor market: in fact, it is expected that the development and introduction of new technologies, such as AI, will create millions of jobs around the world. In the future, millions of people will either change jobs or acquire new skills to support the use of AI.

In my study, I will try to determine the negative and positive aspects of AI in world labor market, analyse current situation and give some predictions of the future of this market.

Content:

Introduction.

Artificial intelligence describes the working processes of machines that require intelligence when they are performed by humans. Thus, the term "artificial intelligence" means "investigating the intellectual behavior of problem-solving and the creation of intelligent computer systems"

There are two types of artificial intelligence:

• Weak artificial intelligence: a computer is just a tool for studying cognitive processes - the computer imitates intelligence.

• Strong artificial intelligence. Processes on the computer are intelligent, self-learning processes. Computers can "understand" the right software/programming and are able to optimize their behavior based on their past behavior and experience. This includes an automatic network with other machines.

II. Areas of artificial intelligence

In general, the economic advantages of AI can be divided into five categories:

• Deep training

This is machine learning, based on a set of algorithms that try to model high-level abstractions in data. Unlike people, machines are always connected. If the machine makes a mistake, all the autonomous systems will take this into account and the next time they will avoid the same error. Ultimately, intelligent machines will win against every human expert.

• Robotics.

Industrial robots replace people from the XIX century because of technological progress. They work more accurately than people and cost less. Creative solutions, such as 3D printers and self-learning capabilities of these production robots, will replace human labor as expected in the future.

• Dematerialization

Thanks to automatic data collection and data processing, traditional back-office operations are no longer needed. The autonomous software collects the necessary information and sends it to the employee who needs it. As we all know, the entering

of artificial intelligence into many structures is an important problem of our time. AI replaces human labor with special machines.

Gig-economy is an increase in self-employment, typical for a new generation of employees. A gigabyte is usually understood as two forms of work: "work in a crowd" and "work on demand through applications", organized network platforms. There are more and more independent contractors for individual tasks that organized companies on online platforms. Traditional labor relations are becoming less common. Many employees perform different tasks for different clients.

• Autonomous driving has the right to control itself and use sensors without human intervention. Taxi drivers and truck drivers are becoming obsolete. The same applies to warehouse managers and postal carriers if the delivery is made in the future by unmanned aerial vehicles.

All these factors indicating the strong position of AI in our days and it will increase. Many experts debating, how will be the influence of artificial intelligence, what will be the advantages and disadvantages in the future. Artificial intelligence is the capability of machines replacing human behavior. So for developed countries, where there are high rates of technological progress, it is more actual and predictable such revolution. Replacing human labor force by special machines in U.S and EU countries- can cause large unemployment rate in the future. So which steps should be done to prevent high rates of unemployment, how to make equilibrium- the main issues. All positive and negative predictions should be considered. It is vital to observe and notice how will AI will affect to the society and human’s behavior, even moral values.

Chapter I. Transformation of world labor market in conditions of globalization

1.1 Scales and structure of labor force supply in the global labor market

The Statistical information.

The global workforce is part of an international workforce, including those working in international firms, corporated with each other through a global connection and production, temporary labor migrants, the unemployed, people working for export, casual or other non-standard jobs. In 2011, the Global Labor Fund numbered about 3 billion workers, of which about 210 million were unemployed. The global labor force or international labor fund reflects the new global diffirentiation of workers that has emerged since the 1975s as a result of other forces of globalization. The global economic factors that stimulate the growth of transnational corporations, namely the global movement of products, services, technology and capital, change our understanding of the workforce and the structure of the modern workforce. The post-industrial society in the Western world was followed by industrialization process in other parts of the world, especially in Asian part. As industrialization occurs around the world, and more and more cultures deviate from traditional practices in terms of work and work, there are usually obstacles such as various laws.

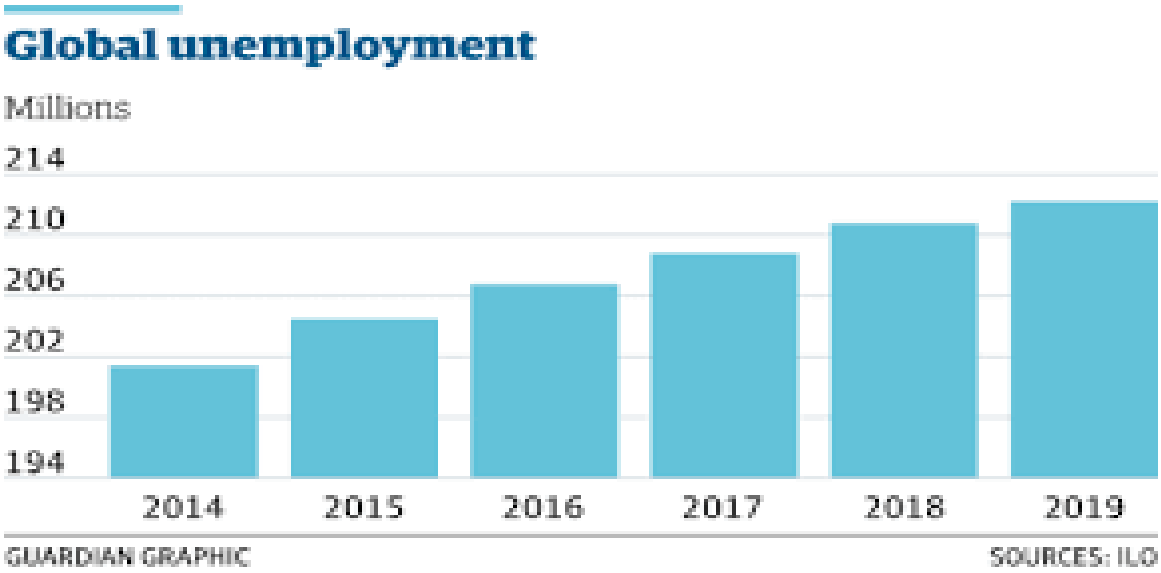
Labor Supply

In absolute terms, the world supply of labor almost doubled between the 1980s and the beginning 2000s, with half of this growth in Asian continent. At the same time, the speed at which new workers integrate the western part of the world started to decrease access. Employers in advanced economies offer growing global human resources a variety of opportunities, including importing goods, outsourcing production, and immigration. Global Employment The practice of accessing the

cheapest workers from around the world is in part the result of such tremendous growth in the labor force. While the bulk of the global increase in labor supply was made up of less educated (non-university) workers, the relative supply of workers with higher education increased by about 45 percent over the same period of time. From 1980 to 2010, the world's workforce grew from 1.2 to 2.9 billion people. According to the 2012 McKinsey Global Institute report, this was mainly due to developing countries that were moving from farm to factory. The number of jobs in the non-agricultural sector increased from 54 percent in 1980 to almost 73 percent in 2010. This industrialization brought about 610 million people out of poverty and contributed to the economic development of China, India and other countries. The increase in exports in developing countries contributes to the creation of one-fifth of non-agricultural jobs in these countries, and immigrants from less developed states constitute 35 percent of the working-age population in industrialized countries. In 2008, foreign workers accounted for 17 percent of all scientific, engineering, technical, and mathematical work in the United States. Employment grows fastest in developing and developing countries. Over the past 5 years, long-term unemployment (the proportion of unemployed people who have been unemployed for 12 months or more) in developed and developing economies for which data is available increased by 60% to 208 million in 2015 compared to just over 200 million in 2012.

Demographic data indicate that globally the structure of labor is altering. Additionally to the factors such as social and economic, which have been told before, much of this restructuring is also due to demographic factors, influence the structure of the global population. In richer countries with more developed economies, fewer people die from infectious diseases, and in general, life expectancy is much longer and fertility is lower. In these areas, the overall average age is increasing. The youngest groups of the population, especially in South-East Asia and Africa, are

those whose overall life expectancy is lower - many children and some adults still die from infectious diseases, but the birth rate is also high.



The Future predictions toward labor market

An innovative study conducted in 2017 even analyzed the impact of industrial robots on workplaces from 1993 to 2007 and showed that each new robot replaced about 5.6 workers, and each additional robot per 1,000 workers replaced the labor force by 0.34% and so on, a decrease in wages by 0.5%. During these 14 years, the number of industrial robots increased fourfold and decreased from 360,000 to 670,000 jobs. It is expected that by 2025 our labor force of an industrial robot will increase to 7 robots per 1,000 workers. (Toledo and Detroit already have 9 robots per 1,000 employees.) The result of this study predicted a loss of 3.4 million jobs by 2025, a reduction in wage growth to 2.6% and a decline in employment. The population is up to 1.76 percentage points

Automation takes place among all participants, but people are just beginning to talk about the potential dangers of automation, which reduce the incomes of large segments of the population. In the United States, the most frequently mentioned evaluate is the deprivation of the majority of current work places in the early 2030s. It's great that this conversation finally begins, but most people do not suspect that

this is already happening. And about half of those who know this rely on magical thinking to support their belief that automation does not matter. On the contrary, it is very disturbing.

Job losses due to new technology

About 47 percent of all US workers are at risk, according to the Frey / Osborn report in 2013. According to a poll by the Pew Research Center, 65 percent of US citizens expect a robot or an intelligent person within 50 years of the Algorithms to perform their work. Experts have different opinions about the dramatic impact of changes in work structures. Others argue that digitization and automation do not completely replace many of the employees whose jobs are at high risk, even if technical progress will replace.

Not every concrete occupation is replaced by the operation of machines as a whole, but it is undoubtedly that the individual professional activity is performed by the machine. The risk of replacement by a robot, for example, is 87 percent for a barman. For a robotic machine, it is already possible to mix drinks technically, which can send it to customers' orders directly to the kitchen, receive complaints and accept customers' money. Despite this, the atmosphere in the bar or in restaurants is no longer the same. Because of the lack of acceptability among potential customers and high initial costs, it is clear that 87 percent of all barmen will not lose their jobs in the next few years.

Small and medium-sized enterprises, in particular, are likely to discard technical devices due to the high cost of ownership and the lack of highly skilled professionals who can cope with new systems. There is a significant risk that between nine and twelve percent of all employees in the US and Germany will be completely replaced. Nevertheless, we can assume that the completion of several occupations by machines will ultimately cause job losses. Other studies suggest that AI and robotics are not just killers for work; Job reservations are more or less offset by the newly created work. For example, the federal government suggests that digitalization and

automation will create about 390,000 new jobs in the third sector in Germany in the next ten years.

What can certainly be predicted is the continuous movement of employees into the third sector of services. But even in this sector of services the transition will be gradual. For example, consider the following issues that people may encounter in the service area. Do you perform less routine operations? Do you fulfill certain tasks that other colleagues can not perform? Are your employer can acquire his skills without problems from a cheaper external service provider? 88 people who can answer "yes" to these questions, do not have to worry about that their tasks are performed by intelligent algorithms.

However, we must admit that no one has a job that is completely safe. However, the potential digitization of their jobs is likely to be reduced for those who have a doctoral degree or a master's degree (only 18 percent in total)

One of the most important statistics that I learned about the discussion on automation is that the majority of the population in the US have information that over the past 30 years, we have abolished jobs. 81% are aware of this, according to a Pew Research poll in which more than 4,000 adults were interviewed.

Only 1/4 Americans informed that because of advanced technology a state produce much more and less. Most people do not know this or blame things such know grants or offshoring for job losses, although offshoring is possible only through technology improvements and accounts for only 13% of job losses in production. This is a problem. We cannot make the necessary changes if people do not know that the problem exists, or that the issue of the existence of the problem should be discussed. We cannot agree with decisions that unconditionally guarantee everyone a basic income as a productive dividend, as people become actively unemployed through productivity gains, and the discussion is seen as a future threat to our social structure and not an obvious and real danger.

Consider the following: what occurs when the next economic decline appears? The fall in oil prices has simulated a decline in the oil industry, which was facilitated by

massive unemployment and investment in automation. What will happen if all industries respond to mass unemployment and investments in automation? If we look at recent history, any subsequent downturn has led to a permanent decline in the labor market. The best results seem to have already occurred in 2000. To understand the complexity of this issue, firstly we should observe the statistical data. This diagram below indicate us, that AI starting increase the influence in industries in developed countries. Future predictions for human labor force are positive: by 2030, many experts expect that nearly 35 percent of people will lose their jobs in EU countries and U.S.

Possible changes in job market

First of all, IT and scientific professions, as well as media research and humanistic professions, will initially profit from increased investment and related growth in the industry. In natural sciences (physics, biology, computer science and chemistry) the probability of losing jobs is ten percent. In addition to senior managers (11 percent), the prospects for physicians are equally good (only one percent). In the next decade, the IT service sector will experience the biggest boom. Typically, high-paying occupations include business leaders, physicists, mathematicians and engineers, life

scientists and medical professionals, in other words, typical occupations related to science, technology, engineering and mathematics (STEM) that exist both in the manufacture , and in service. These highly paid professions have not been eliminated; on the contrary, the number of employees in these professions will increase. After that, the teaching, legal and advisory professions will participate in the profits caused by numerous restructuring and technical improvements.

Teaching Professions

The "teaching" area involves not only the areas of school, college and vocational training, but in particular also the opportunities for adult education and training. This professional group benefits from the need of the companies to spend more on adult education, achieving further key skills for new and existing staff. The number of young professionals graduating year after year is increasing. The range of additional qualifications to internationally recognized degrees also increases, so that even an individual employee is under pressure to obtain additional degrees to distinguish himself from well-trained colleagues. There is a general tendency towards more education. More education leads to more jobs for teachers, although there are fewer personal meetings, more webinars and more online seminars for generations

Humanistic Professions

In the last decades, creative professions have received all sorts of benefits, and people in these professions will not be replaced by machines in the future. Whether superstars are predicted with their music, artists with their works or authors and actors with their literary or cinematographic works, or simply humanitarian and media scientists, their demand is predicted for their professions. The end user will continue to demand creative entertainment and graphically attractive presentations in the future. Since there is no program, these tasks can hardly be performed using intelligent software. The same applies to the communicative field of the social sciences or to professions with an emotional component. Communication with other people will always come directly from people. Although communication in social

networks are increasingly occurring, they also need to be well-equipped and technically equipped

Lawyers

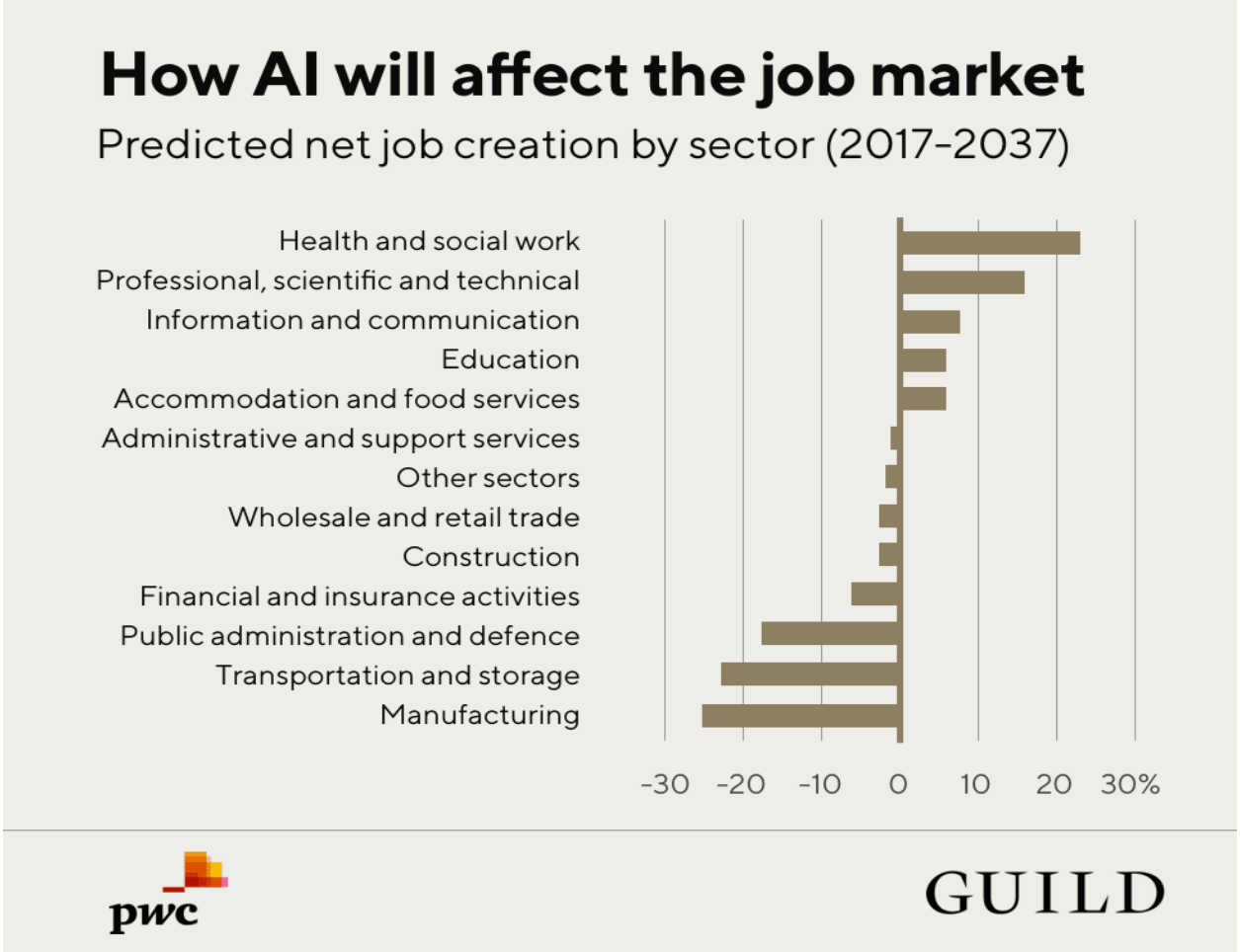
Although the risk of being replaced by intellectual software or a machine for lawyers is small (three to five percent), the following examples show that technical developments are also taking place in this area. In addition to financial and insurance sectors that are technically well-equipped, and in which financial services have been evaluated for years with computer simulation and analysis, intelligent software can also conquer the legal market and optimize work habits. Studies show that a lawyer is less vulnerable than other financial sector bodies because of the need for personal relationships with clients and the creativity needed to draft new laws and contract terms.

Nevertheless, this profession is not protected from AI revolution, and further technical development is necessary. The intellectual algorithm passed the decisions of the European Court of Human Rights and found samples of the text. In this case, the algorithm was able to predict the result of other cases with 79 percent accuracy. In addition to the usual online databases and automatic time tracking, the key issue is to expedite the review of contracts. For example, reviewing contracts or entering contracts into a database is often a nuisance for lawyers and leads to high costs for the client. To reduce the work of lawyers and save money for customers, software developers and lawyers work on intelligent systems to review contracts known as optical character recognition (OCR) . Such software allows patent or contract to pre-examine legal documents. The software can also automatically generate a graphical representation of the data that it collects.

Alternatively, the software can automatically check certain proposals based on decisions taken. In the problematic sections of the text, the system presents a reservation to the lawyer for individual consideration. Therefore, the lawyer only needs to look through the points of the problem, while the standard verification of non-problematic provisions is performed by the software.

DOCTORS AND NURSING STAFF

As the lawyers, doctors and nurses are far from being replaced. But even in this area, technical capabilities can lead to job cuts. In some cases, machines can work faster, more accurately, and more efficiently than the people. Hospitals without robots will be unimaginable in the future. For example, your job will be to get people out of their wheelchairs or beds, or even help doctors perform operations on people. Ultimately, demographic changes, at least in Western Europe, will lead to an increase in the work in this sector, as the population is constantly aging, and modern medicine is one of the reasons.



1.2 Strengthening the impact of international migration on the global labor market.

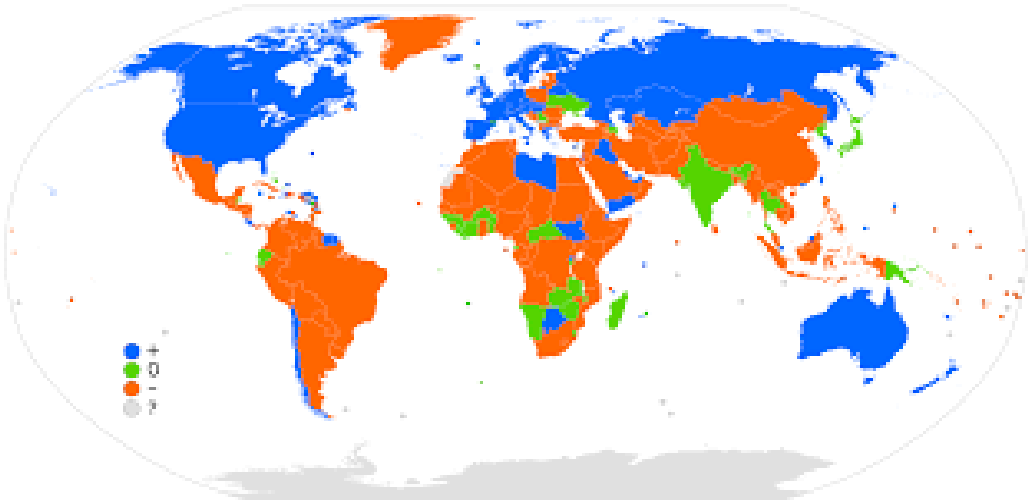
Of the 165 million migrant workers worldwide, approximately 111.3 million (68.1%) live in the states with high income, 30 million (18.9 %) in middle-income countries, 16.6 million (10.1 percent) in lower middle income countries. and 5.6 million (3.4 percent) in low-income countries.

Migrant labor creates 18.5% of the workforce in high-income countries, but only 1.4–2.2% in low-income countries. From 2013 to 2017, the concentration of migrant workers in high-income countries diminished from 74.9 to 67.5 %, and their share in countries with income levels is above average. This may be due to the economic and financial evolving process.

Nearly 61.5 percent of migrant labor lives in 3 parts of world; 24 percent in North America region, 23.9 percent in Europe and 13.9 percent in Arabic states. Other regions in which a large number of migrant workers live — more than 5 percent — include Eastern Europe, sub-Saharan Africa, Southeast Asia and the Pacific, and Central and West Asia.

For every senior employee in Uganda, Mali or Nigeria, seven young workers will enter a weakly structured national labor market. In these countries, only 40 percent of younger generations are employed and most of these jobs are low-paid jobs without social protection in the third sector. It is not surprising that many young people, especially those with better education, are willing to leave their countries

for the transition to western developed countries. A legal framework, less corruption, greater social security and better infrastructure is needed to prevent the migration of the younger generation. In addition, more access to higher education and training opportunities is needed, especially for women, in order to increase the competitive power of these countries. As mentioned above, migration has a potential to become more global and hazardous for the economic development. Developed countries trying to implement AI at their industries and obviously the share of AI in labor market will continue to enhance. It may cause unemployment in high quantities.



These new technologies will bring people to higher-paying employment where innovation drives economic growth. However, those with fewer talents or skills suited.

The transformation period will be complex and requiring some amount of time. There is a need to make a difference between the global migration process and the government. Thus, it will be your choice. Megatrends with demographic change, widening income inequality,

Fifty shades of gray

This is the concept of workers. Especially health care. Because this is not a problem, it can be done with fewer people. Twenty-nine of every 100 people over the age of 65 have retired support. By 2050, this ratio should rise to 50-20. Now especially for the elderly, will rise to 25.4 by 2050. For countries with low rates. It is necessary to eliminate the demand for migrant workers. It needs a place for mankind.

The health sector is an excellent example of how machinery is replaced by certain functions, but it creates other functions that focus on the jobs that individuals still have to perform. Although modern techniques affect how patients are diagnosed and monitored, in many aspects of health care it is still necessary to take into account the interests of the individual.

Similarly, less educated industrial workers can resort to manual labor, which, although considered low technology, requires the flexibility that machines can not handle. The same applies to tasks that can be considered in modern low tech economy, but machines can not do so: maintenance, health and animal care. Some jobs that normally attract migrants, such as driving a taxi, will disappear due to the use of independent cars.

At the same time, people who can think strategically and creatively will be very important. Learners resort to high-skilled occupations. The number of working persons and the number of people seeking employment will increase with higher

and lower qualifications and economies, and migration has always been so. As a result, the polarization of the labor market will increase economic inequality.

The OECD report "International migrant prospects 2015" shows that we have seen significant changes in the employment structure, especially in the health sector. Between 2000 and 2010, the number of migrant doctors and nurses working in OECD countries increased by 60%, with India sending the majority of physicians, and the largest number of nurses in the Philippines.

According to the report, between 2011 and 2014, the sectors that have achieved the largest increase in employment of domestic and foreign workers have been building and landscaping services, followed by education, construction work in both companies showed a marked decline. Food, beverage, health care and social work services are the third, fourth and fifth gains of workers of foreign origin. In contrast, local workers achieved the second largest growth in patient care, matrix counseling, management and manufacturing. In other words, the structure of work between migrants and local workers is changing.

Taken together, these interruptions will affect the views of immigrants. If relatively unskilled local workers believe that their jobs are being replaced, migrant resentment may increase dramatically. Cross-border destruction will be more consistent than structural changes in industry.

Technology will make it easier and cheaper for companies to produce products closer to the point of consumption. It hurts jobs in low-wage countries that have become jobs in the past few decades. Employment in rich countries will increase, attracting more immigrants.

As production moves to developed countries, there will be increasing demand for marketing, legal services, home and household care, and other support services that support the population and the wealthiest business ever. Thus, while some low-tech jobs are disappearing, new careers are beginning to emerge.

These changes cause disturbing problems. What is the number of low tech jobs that are out of date in rich countries, what will happen to those who have moved to low tech jobs before? What countries are leaving highly skilled migrants? Traditionally, what goods and services can be produced by the exporting countries of migrants in Asia, Latin America and Africa with a comparative advantage? Since migrants are less reliable as a source of safety valves and transfers, how do they respond to social pressure?

Education will identify people and communities who make a profit, and which people and communities will be left behind. The host country must educate the public and provide workers with better opportunities to replace them. Migration exporters will rely on education and technology transfer to increase productivity, create jobs in the country, and provide novice migrants with the skills they need to find work abroad to create a good brain cycle.

In most countries, immigration policy appears to be in place of the major problems.

If sates will not able to adapt to the next major shocks, they will have new waves of internally displaced people and their resistance. This creates moral dilemmas and carries great economic costs. Forced migration has frozen human capital, which is becoming a refugee, while at the same time increasing the cost of temporary shelter and food for people who are stuck. This would undermine the essence of global labor migration: the realization of human potential. Therefore, it is necessary to create a certain balance in order to reduce potential unemployment. Migration plays a vital role in this balance, and it must play a

common role in governments of different countries, as well as in non-governmental organizations. Historically, technological breakthroughs have created industrial revolutions that not only produce goods and services, but also move people around the world. The fourth industrial revolution, also known as the new machine, is no different. Since some jobs are outdated as a result of increased automation and the transition of industries between industries and jobs across borders, these technological changes will increase the policy and global economy of labor migration.

1.3 The way to ensure employment in the era of digitization.

In the context of digital transformation, the organization of work, which allows employees to train regularly, is increasingly important. To help employees keep abreast of the latest technical standards, regular training in digital literacy is necessary. This is also called digital competence varies from basic theoretical knowledge about how computers and communication devices are developed and functioning, basic knowledge of how to use them for navigation and expression in online communities.

It is surrounded by information literacy, that is, the ability to cope with information in a purposeful, autonomous, responsible and effective manner. In addition, it is already impossible to imagine a world of employment without a vocation education. If companies expect higher education and professional development of their employees, it is extremely important that they provide employees with the opportunity to receive this qualification, even outside of internal training.

From an entrepreneurial point of view, regular training of one's own employees can be considered important, since a lack of training can lead to a lack of motivation. In addition, it is argued that education and the transfer of knowledge counteract the "social decline" of groups of employees. In addition, companies are

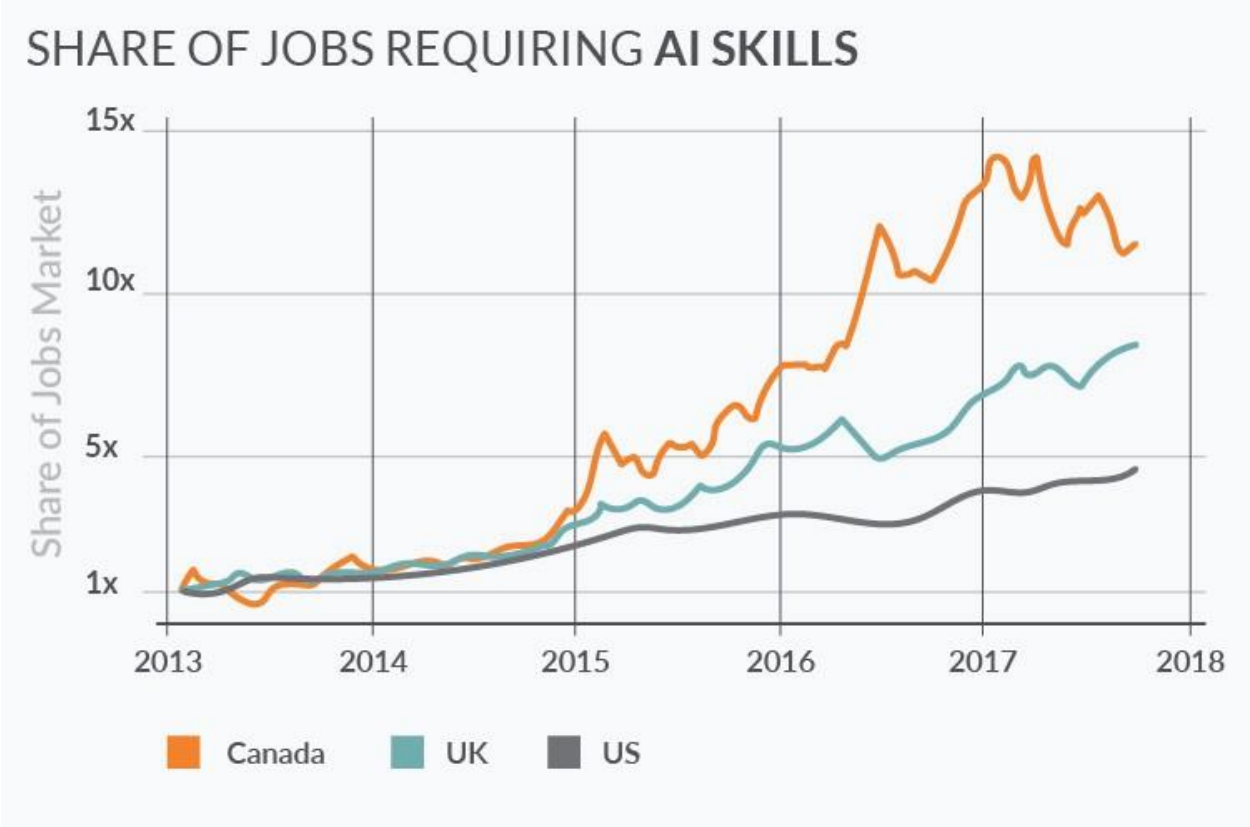
indirectly forced to offer their students retraining and training, as workers must work longer and longer. Especially in the service sector, professionals are in demand for changing customer needs. Representatives of trade unions and workers require advanced training for workers, but what training is needed for IT training? Therefore, every single company needs an analysis of the workplace, which will be automated in the next few years. Based on this analysis, employees can become qualified professionals performing other tasks. There is no general need for special education.

For example, Volkswagen announced that in the next few years one of ten administrative jobs will be ordered. The task of workers' representatives will be to integrate these workers into the modern labor market and transfer them to other jobs in the group in order to keep the promise that no worker will be dismissed because of working conditions.

Adaptation of the education system is necessary

From the above we observed the jobs that will be in high-demand in the future. Without any doubt, AI will play the most important role in this factor. So employees need to learn new key skills, but it is also necessary to adapt the education system to these new frameworks. For example, at the World Economic Forum in 2016, it was agreed that both schools and universities should not teach the world the way it is, but, as it will be. Therefore, new skills strategies are needed for individual countries. They should arouse students' interest in topics such as mathematics, computer science, science and technology at school, and teachers should teach students how to think critically when using and helping new media, a basic understanding of this for the acquisition of new digital and information devices.

In addition, the method of project thinking should be used increasingly to encourage creative minds in schools and universities. This method is a comprehensive curriculum that accompanies students in creative work. Adaptability is one of the great challenges facing people, but at the same time, it can be a great force. The next generation of employees must learn to adapt quickly to technical, social and digital changes, as it is expected that even the "fifth industrial revolution" will not take long. Lifelong learning is a fashionable word that applies not only to fully automated robots, but also to people. When the employee's workspace is automated, the employee must be able to move himself or disconnect from the machine.



Changes in the structure of unions

The central issues arise in connection with the question of which representative bodies are responsible for employees, to what extent and how representatives of workers consist of special cases. New business models affect business plans and organization. If trade unions and workers' representatives want to continue to protect the interests of workers, they must also change their own structures.

The increased use of virtual platforms, social networks and other IT tools opens new opportunities for collective communication between employees. These tools are free. Why does an employee have to pay union membership if he can communicate freely with other employees, and if pressure from the media on employers sometimes helps employees solve their problems? It is said that this factors creating less active trade unions. Trade unions must represent or defend new forms of "workers" regardless of the form of their work. Then, for example, they have to use more social networks and struggle for the social interests of "younger generations" to cope with them. This will be the key to justifying the extraordinary position of trade unions in the working world of the future.

Most labor laws (such as labor laws, labor safety laws or employee representation laws or trade unions) are based on the old concept of work in the last century. Some people argue that trade unions should not only be traditionally represented as workers, but also expand their scope influence on crowds and highly skilled freelancers. The situation is the same for the workers' representatives. An example of cooperation and adaptation of trade unions to a new form of employment is the "Fair Crowd Work" platform. Structures of companies are changing their virtual workgroups and far-reaching digital networks. This will lead to underrepresentation of dependent employees. Only the "old main employees" are represented, and the "younger generation" is outside the countries with strong

legislation on representation or not integrated into the company. Therefore, some legislators can decide to create new forms of representation of employees who are no longer connected with the old definition of the company or employment. The first step may be the strengthening of European workers' councils or councils for working with groups. At the moment this opinion is very limited. Another way to introduce freelancers to link the structures of employee representatives with the status of dependent freelancers, who work primarily for a company or a group of companies.

Even if highly qualified freelancers no longer rely on protecting unions from inhuman working conditions, these conditions require a dialogue between politicians, business representatives, trade unions and independent contractors. Prior to globalization, trade unions had to limit the downward spiral of wages pay and struggle for better working conditions for workers. During the "second age of the machine," some argue that they should strive for better robots and a broader, faster Internet, rather than protecting workers in their traditional sense. Older workers in particular would have more time for new learning skills.

Creating new structures in the company

The established companies, in particular, will have to think about whether they are able to satisfy the new requirements of the market. More than 40 per cent of the CEOs of companies operating worldwide assume that there will be significant changes in their companies in the next three years. One company or another have to redefine its focus of operations because of the lack of demand for their products. This also includes the creation of new business structures.

1. In-house organization

Above all, the established companies have to think about whether they can meet the new requirements of the market. More than 40 percent of the CEOs of global

companies expect significant changes in their companies over the next three years. One company or another, like the aluminum industry in the US, will need to redefine its focus the lack of demand for their products. This includes the creation of new business structures.

In the future, in addition to the traditional division of a company in departments such as sales, supply chain, production, research and development (R & D) and finance, the IT department will gain in more importance than today. This may require an internal reorganization, as a distinction must be made between data analysts and traditional IT specialists. The results of data analysts and data scientists are indispensable for many other departments. Therefore, an interface has to be created that ensures that information is forwarded internally as soon as possible to the competent authorities. Ultimately, the area of big data will become more important.

But not only the departments needed to be better connected. Businesses need to focus on their core competencies and cost-effectively outsource other work. This includes production and services. A professional connection between companies and their external providers - not just within the company - will be a basis for success in the digital world. Especially in large companies, the number of levels must be reduced. Smaller organizational charts are required. Each unit between the workgroup and the person making the final decision takes a lot of time and money and may need to be eliminated. The departments must be flexible and independent in order to respond quickly to customer concerns in industry.

The Internet of Things provides a direct link between the customer's computers and their suppliers or service providers. An old pyramidal hierarchy level is no longer able to meet the needs of this flexibility. One possibility could be the change

of leadership in a particular workgroup if another person in the specific domain has better technical skills.

Not only internal organization, but also a single workplace will be the object of countless changes. While cloud computing provides access to internal data around the world, digitization expands the use of the automated data processor, making it easier to make quick decisions. The cross-over of individual workers to new technologies provides more convenient communication and better information sharing. For this reason, the facts and results of analysis of large data necessary for decision-making are collected by the right person. This leads to greater independence of the individual employee. Such dematerialization saves a lot of time for employees to use for other tasks.

As mentioned earlier, intelligent assistant systems can simplify or even perform part of the day-to-day work of employees. This equally applies to individual stages of physical and cognitive work. Automation of work stages, especially for heavy activities, is an advantage for employees. Sometimes effective cooperation with a robot or system is possible only if the employee is trained. As a result of technical development, this training can be flexible in terms of location and time .

3. Virtual working groups

In a study published by the Academy of Management, the authors describe the virtual team as a group of people working independently for common purposes in space, time and organizational boundaries, using technology to communicate. Teams allow people to gather with the best experience no matter where they live.

The advantages of such working groups are that they come directly from information and are collected locally by specialists in this field. Because integrated employees are interrelated, it is assumed that information can be obtained quickly, since a comprehensive exchange of information is possible at any time. Cross-

border expertise and well-connected workers lead to optimal business products. In addition, it is assumed that employees can share their work, so if the employee is an employee, there will be a corresponding replacement. Employees no longer need to work together simultaneously and in the same place to exchange business information or coordinate processes. As a result, it is possible to work efficiently and consistently anywhere and everywhere, where the work takes place. However, it should be noted that members of the virtual working group often do not communicate personally with their colleagues. Especially when it comes to working in a home office, communication is possible only through technical means that can lead to employee isolation and less creative ideas. Moreover, if participants can communicate with each other in terms of language and content, cooperation is better. As a side effect of these new working groups, the level of hierarchy in the company will change.

4. Matrix structures

Expanding the interconnection and internationalization of companies requires not only traditional internal structures, but also the creation of inter-firm and cross-border units. Today many companies already use matrix structures. Technical supervision and control over staff discipline is handled separately. As a rule, the authority to issue technical and related instructions is provided to different individuals who do not work in the same organization or the same company. This means that independent audits from an employee company can be entered into a group with cross-border activities. Increasing digital processing makes it possible. Due to the interdependence of individual companies, such monotonous structures often lead to greater productivity through improved information and information sharing. In addition, group standards are easier to implement in different countries.

Depending on the content of the relevant provisions of the contract, the lack of a matrix structure is that the integration of the employee into the organization no longer plays any role. In Europe, this can lead to the representation of an employee by various bodies, the right to participate in a number of internal bonus programs and to strengthen protection from unfair labor for an employee. As for some internationally active groups, the question arises as to how the national legislation implements the employment contract. Even if private international law provides some solutions, legal uncertainty should be avoided through a normative provision that is valid in labor contracts.

5. International collective labor agreements

In parallel with the creation of matrix structures, some of them envisage the adoption of agreed collective agreements between international groups. The goal is to establish uniform rules for all employees, such as working hours, additional training opportunities or business trips, to create a smooth platform. The implementation of this idea as simple as it can be understood is complex. Although international agreements are binding on such fundamental issues as the prohibition of child labor, forced labor or compliance with relevant labor safety standards, the partners of such agreements are generally only for the International Labor Organization. (ILO) .

At the international or European level, there is no agreed collective labor law. This is due to various national labor law systems. In some countries, although some entities are not regulated by labor legislation, the regulation of the collective agreement in other countries by virtue of legal norms will be null and void. That is why there is a huge legal uncertainty for companies, therefore only when they consider the nationwide collective bargaining (TBB) as a group means of problem management. However, there may be minimum standards that do not have binding

and mandatory provisions. This was indicated by the Accounts Chamber. The current use of SAIs depends on national legislation. Outsourcing work

Increasing globalization and digitization of society and a wide range of services provided by independent contractors on the Internet make it easier for companies to reshuffle their business areas or service sectors to other regions (outsourcing). In addition to production facilities, call centers or warehouses are located in countries with low labor costs or in weaker economic zones. Contracts for the provision of software and software services to foreign freelancers are also a typical example of outsourcing in the digital sector. For example, in the US, about 1.5 million jobs were lost in the manufacturing sector due to cheap manufacturing capacity in China. Another outsourcing or "private virtual working group" is a joint venture. Globalization leads to more active operational and strategic cooperation, even if this leads to the disclosure of core competencies between the two competitors.

The global trend will take place outside of traditional employment. Qualified young employees will focus on the development of creative solutions, especially for their independence and client base changes. Tomorrow the digital worker will no longer work in hierarchically structured companies and do the same things every day. Only one employer will be less dependent. The previously defined interval of any independent service will lead to another problem: what legal system can be applied in transboundary cases? There are some solutions, such as private international law, where the current jurisdiction is the place of service or the permanent address of the employer or the residence of the employee. International arbitration courts are a good way to avoid such problems.

However, a serious problem of the culture of the "exchange" or "work on demand" is the division of economic risk between the employer and the employee. In the

past, in some countries tradition was traditionally carried out by the employer. If the work is not enough, or if the employee is at home, because the employee is working, the employee must be paid at least until the end of the employment relationship. The same applies to bad employee performance. The costs of social insurance (contribution) for employees can also be distributed between employers and e, employees. In Western countries, such as Germany or France, these wage costs are very high and are the reason that some companies avoid traditional employment in the future. For example, in Italy, the "Labor Law", which entered into force in 2015, provides greater flexibility and reduces costs for standard employment in order to avoid outsourcing and to achieve a certain increase in the number of self-employed workers not protected by social security systems.

These risks are not shared in a culture prepared on demand. Independent employees are often responsible for their social security in the future. For example, such an external service provider who is too ill to work does not have to be paid, but simply does not receive any newer orders. The entrepreneurial risk has thus shifted in the direction of the freelancer. However, the award of contracts to independent contractors is a legitimate expression of a modern economy, which has certain advantages for both parties.

Also there should be established some organizations, in order to give information about the contracts. With the development period of AI, there can occur also some changes at legitimate system. Misinformation can cause some troubles in the activities of workers and the company.

Chapter II. Innovative achievements in the World economy and their influence on the World labor market

2.1 Artificial Intelligence in labor market of EU

The EU labor market is actually have three problems: the regimented employment protection, the economic restoration, and the altering population and workforce. The issues of the European Union labor market wide automation at many structures is considered as the major long-term trouble to human employment. But Europe's immediate labor market challenges are various types: structural, demographic and regulatory. The organizational problem stems from employment protection models developed at different times and taking into account different workforce. EU Member States, as a rule, put them among the countries most reflected in the OECD Employment Protection Index (OECD, 2017). Not all the news are dark. Some member states (especially the United Kingdom, Ireland and Estonia) are working on the OECD index. Others (Spain, Italy) actually made some reforms at their work force markets, and since the end of 2014 in Spain there has been a significant recovery of jobs (The Economist, 2017). Perhaps the most labor-intensive system of all that ever existed in France should be reduced in the near future. The structural trouble is connected with the need to adapt the EU countries to a dynamic labor market in the context of rapid technological changes and enhanced global competition. As more and more EU economic production moves from the manufacturing sector to the services sector, there will be created a mismatch in skills, which in the short run can lead to higher unemployment than balance and weak wage growth. There are a number of policies that can be used to facilitate the transition. National and pan-European retraining programs include the removal of national regulatory barriers to professional services (such as health, law and transport) to facilitate labor mobility, lower employment limits and tax capital to stimulate job creation and investment. The demographic problem is associated with the aging of the European population, high life expectancy, dependency levels and low birth rates. This is a challenge for public finance, as well

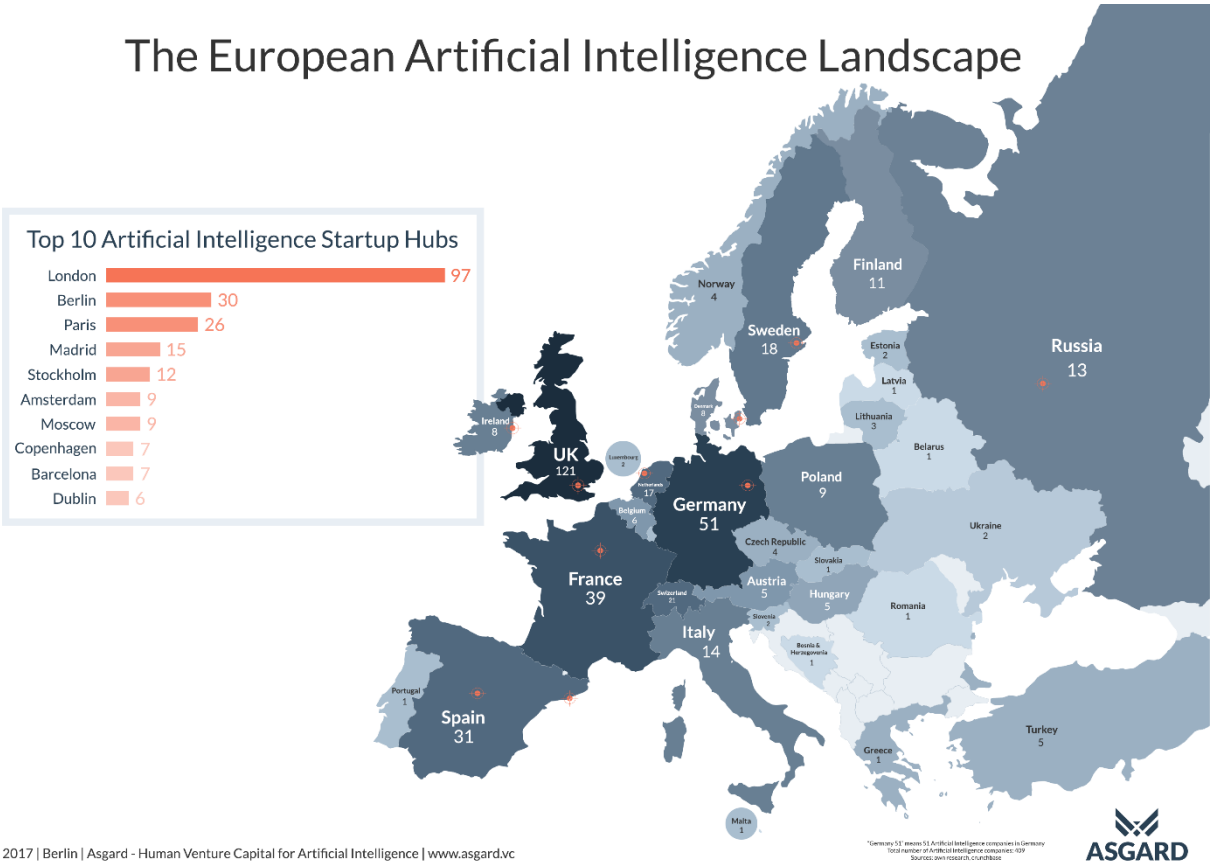
as for investment and productivity, if aging leads to lower savings rates and lower risk. The problem of public funding can be solved by reforming the social security and pension systems, while changing the structure of savings will be difficult to solve through policies (although using private pensions and lowering taxes on capital can help). The data below indicates an aging EU population.

How does artificial intelligence (AI) interact with the troubles affecting the EU work force market? Regulatory issues affect European artificial intelligence in two ways. On the one hand, regulatory costs enhance the incentives for automatization, as higher labor costs resulting from regulation make it more attractive to replace human labor with machines. Regulations, on the other hand, can impede the placement of capital and can also be an obstacle to the redistribution of surplus work to other activities. Structural problems are partly related to technological progress, and artificial intelligence will become directly vital. The spread of AI will accelerate labor market transformation, the need for re-education of the labor force, and also provide support for the income of unemployed and part-time workers. Artificial intelligence will also create new jobs for those with the skills to use new capital sources. By reducing transaction costs, AI and automation should create more opportunities for flexible operations. Finally, AI is the solution to the partial solution of demographic problems. As an EU citizen, you will need to offer low-cost services for the elderly, including medical and social services. These are non-tradable services that are not easy to import but can be automated. Artificial intelligence also allows the industry to do more with less labor and reduces the burden of higher dependency rates. In addition, AI makes work older, easier, and physically more comfortable for older people. Some people fear recent productivity growth declines to be permanent 4. However, these fears prevent high expectations for innovation because they fear that up to half of the machines

will be replaced. Work in developed countries . Even if machines can replace increasing labor quotas, production efficiency can not stagnate. Past performance indicators are always bad indicators of future trends. In fact, there is a reason to believe that the current stagnation of productivity growth will not continue: it indicates that applying artificial intelligence to transport and telemarketing in the United States alone will increase productivity growth by 0.30% annually for 10 years.

The European Commission has a positive attitude towards the evolving of AI in the EU economy. European companies are willing to benefit of new innovation. The "technical optimism" of the European Commission is very welcome, and will encourage the development in some Member States. At the same time, there are concerns about the current perception of AI in the EU. First, focus first on spending, not on regulation. The European Commission has several funding programs to encourage and allocate financial resources for AI and to facilitate industry transition, but the elimination of regulatory barriers to experimentation is equally important. Welcoming greater openness to cross-border data flows, but new platform requirements, including debt and contracts, may delay the adoption of new technologies. After this, an attempt is made to determine the regulation of robots and artificial intelligence at the level of the European Union (European Parliament 2017). Despite good faith, legislation at an early stage can limit growth and, consequently, diminish the profits of artificial intelligence. Finally, when many companies are already conducting research at Amnesty International within the European Union, EU strategic documents tend to designate foreign companies to Amnesty International as "competitors." It may seem that symbolism is opposed to this type of industrial nationalism, but under current conditions these trends can have a significant impact on politics. They must stop. However, concerns have arisen about the regulatory barriers to experimentation, the premature regulation

of robots, Amnesty International, and the hostility of the European Union towards foreign AI companies. Another problem is that there is a difference in the levels of developments of West part with the East part of Europe.



AI in Germany

In an interview, Federal Chancellor Angela Merkel said: "Germany and Europe should become leaders in the field of artificial intelligence in the future." She noted: "Our further prosperity largely depends on this, as well as the issue of protecting common European values, the most important of which are the dignity of everyone and the inviolability of privacy in the digital age." German Economy Minister Peter Altmeier commented on the draft strategy: "We want medium and export-oriented

German enterprises to become leaders in digitalization processes, since in this way we can achieve an increase in productivity and additional economic growth of about 1.3 percent." "This is more than after the introduction of any other innovation since the invention of the steam engine," he added.But there is another side of development AI in Germany. Germany has an influence in some Central and Eastern Europe countries such as Czech Rebuplic, Slovakia, Slovenia and especially Poland. Germany established factories and manufactures in these countries and by the evolving AI technologies, people may lose their jobs, and it can cause rising the level of unemployment at these states.

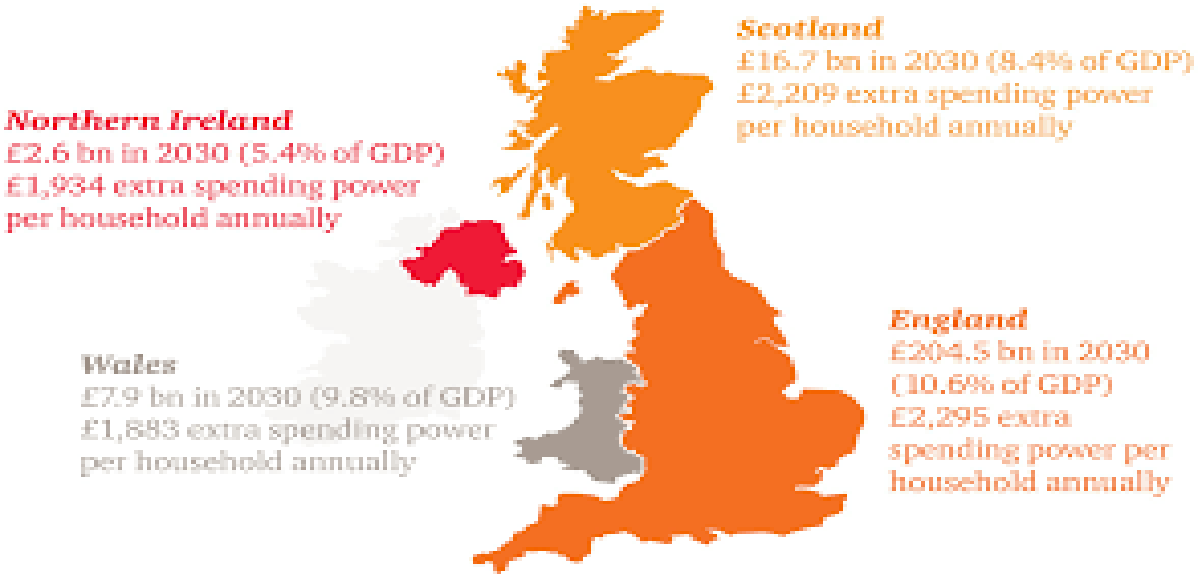
AI in United Kingdom

Artificial Intelligence (AI) can transform the potential of productivity and GDP in the UK. But we need to invest in different types of AI technologies for this to happen.

The studies show that the main contribution to the UK economic growth in the period from 2017 to 2030 will be improvements in consumer goods, stimulating consumer demand (8.4%). This is due to the fact that AI will enhance the choice of products, increase personalization and increase the availability of these products over time.

Increasing labor productivity will also stimulate GDP growth, as firms seek to "improve" the productivity of their workforce with the help of artificial intelligence technologies and automate some tasks and roles.

In all regions of the UK there will be a significant increase: England, Northern Ireland, Scotland and Wales will see the impact of AI in 2030 by at least 5% of GDP.



Obviously, mostly beneficial impact of AI will be in United Kingdom, because we should take into consideration the level of development, the size of the financial and economic market, and also the quantity of labor force. Ireland will also gain some profit. In our days this country is one of the fast developed not only in UK, but even in the world economic global market.

2.2. Artificial Intelligence in labor market of BRIC countries

BRIC countries (Brazil, Russia, India and China) have long been regarded as a hope for the world economy. Investors are expecting long-term profitability because of rising raw material extraction and the outsourcing of many Western industries to low-wage countries. However, the demand for raw materials is very low at this moment, which makes Brazil and Russia more attractive. With the technical development of production robots, many companies that manufacture in low cost countries will carry their production sectors to countries where they originated. Emerging countries in Central and South America will also not benefit from the tendency of the fourth industrial revolution. It should be feared that these countries,

such as North Africa and Indonesia, are not equipped for automation and digitalization because a significant portion of the population is untrained, not invested in (digital) infrastructure, and lack of a legal framework. The further complication of this problem is the increase in the birth rates of North Africa and Arab countries. This will cause to high unemployment rates among young people.

Situation in Brazil

According to a new survey, automation technologies, such as artificial intelligence, has a possibility to make the majority of the usual business vacancies irrelevant in Brazil. This data consists 95% of government functions in the country and contains information such as income from work, social situation, and demographics.

About 1,125 professions were divided into 5 groups, depending on the level of skills demanded to perform different tasks. According to the survey, which also includes an assessment of 65 local researchers specializing in AI, the device receives from 60 to 80 percent of community has a risk of canceling work through innovation.

The Challenges for Russia

Today, Russia has a rare window of opportunity to take part in the development of a new economy on more or less on an equal footing and stake its claim to certain sectors of the rapidly growing new markets while the leaders in the AI race have not yet pulled too far ahead. Of course, the United States has a significant lead here, but this does not mean that it is destined to win this new race. A wonderful book published recently provides grounds to believe that China could catch up with and even overtake the United States in this race. China's strategy is based on its natural competitive advantages – the fact that it is a leader in model payments and e-commers, the abundance of data generated in the country, and the highly competitive environment for small and medium-sized businesses. In any case, older workers are often not suitable for work based on new technologies. The dilemma of the pension reform regime — which lowered Putin's favor ratings to the extent they can be trusted — is created by itself, because on the eve of every election since 1996, the government increased the size of pension benefits, but all the time, the government

was not so aggressive in investing in the new human capital (education and health) .16 On the contrary, the government, for political reasons, expelled into exile a very large number of people with whom it helped to train the bloodshed lish capital (shortage of skilled workers is high). Moreover, strong pressure on the state budget (a deficit of 7 out of 8 and 8 years between 2009 and 2016 and a reduction in fund spending) is causing some analysts to predict a 20 percent reduction in spending on education and on health care by 25 percent, expenses for the three years 2017-2019.

What can save the situation for Russia? Higher productivity is another solution (besides increasing labor) for a shortage of labor. Labor productivity in Russia is extremely low compared to other industrialized countries, where there is much room for improvement. Paradoxically, if Russia used robots, its productivity problems could be solved, and its demographic deficit could become strong, because workers displaced by robotization would face less competition for other jobs. The widespread use of robots on production lines in Russia seems far away. Today, Russian robotics is found primarily in the army, where Russia has been deploying unmanned aerial vehicles for some time.

Risks for China and India.

With its biggest tech companies driving momentum for R&D, China is one of the leading global hubs of AI development. Its vast population and diverse industry mix have the potential to generate huge volumes of data and provide an enormous market. Wide adoption of AI technologies could be crucial to China's future economic growth as the nation's population ages, heightening the need to accelerate productivity growth. Some of the required building blocks include a more open data environment and well-trained data science talent. But AI also poses complex social and economic questions that will require careful consideration.

AI represents a significant opportunity for China to accelerate productivity growth, which is a crucial concern as the population ages. However, policy makers will also need to consider and prepare for the potential labor market disruptions it could unleash. In the past few decades, China has benefited greatly from a "demographic dividend," as its expanding labor force fueled economic growth. But China will lose that momentum as its population ages. The country's working-age population has already peaked and will continue to shrink in the decades ahead. This demographic trend implies that China would fall well short of the workforce needed to sustain economic growth at current productivity levels. The only alternative for maintaining momentum would be to sharply accelerate productivity growth. A large share of the Chinese economy consists of accommodation and food services, manufacturing, agriculture, and other sectors in which disproportionate share of the work consists of routine tasks that can be automated. According to an MGI report, AI-led automation can give the Chinese economy a productivity injection that would add 0.8 to 1.4 percentage points to GDP growth annually, depending on the speed of adoption. AI has the potential to dramatically boost productivity growth, but that may come at the expense of greater income inequality. Fewer people will be needed in roles such as customer service; consider, for instance, how Alibaba has incorporated AI customer support in its mobile payment app. Overall, AI will increase the trend of so-called "skillbiased technological change"—that is, there will be a new premium on digital skills but at

the same time, there will be reduced demand for medium- and low-skill workers. This may decrease total labor demand, and while the average income may rise, the distribution may become even more skewed toward people with the right skill sets. Overall, China has more labor associated with activities that can be technically automated than any other country in the world. MGI estimates that 51 percent of work activities in China can be automated, affecting the equivalent of 394 million full-time employees.

However, even in an early adoption scenario, in which ~90% of work activities will be automated by 2055, China may still face a shortfall of the labor needed to meet its GDP growth target of 4-5 percent. This would leave the nation looking for additional levers to enhance productivity. China has achieved remarkable economic development in recent decades, with an average annual GDP growth rate of about 10%. Population growth is certainly a factor, but it is changing now

China is aging fast. Rural migrants will play an important role in overcoming future labor shortages, but inequality is a major problem. The evidence indicates rural Immigrants are making low-wage unwanted work in urban labor markets, indicating inefficient work distribution and discrimination that may continue to hinder migration from one country to another

Table 1 - Estimated job displacement and job creation from AI and related technologies in China (2017-37)

	Job displacement		Job creation		Net effect	
	(%)	(million)	(%)	(million)	(%)	(million)
Services	-21%	-72	50%	169	29%	97
Construction	-25%	-15	48%	29	23%	14
Industry	-36%	-59	39%	63	3%	4
Agriculture	-27%	-57	16%	35	-10%	-22
Total	**-26%**	**-204**	**38%**	**297**	**12%**	**93**

Source: PwC analysis (% figures are shown as a share of estimated employment in 2017)

The statistics above indicate the possible losses for Chinese labor market. As China is the strongest country by the quantity of labor force, and also the salaries in this country is low, the majority of developed countries investing financial resources to

China and also establishing factories and manufactures due to cheap labor force. AI can eliminate low-medium skills required jobs. But obviously, China has a great technological fundament and potential, which will cause the creation of new work places but as we observing from chart above new jobs will not compensate previous abolished ones, and a significiant part of the population, can suffer from the unemployment. As China has a great affect to the other South-Asia states: Philiphinnes, Thailand, Vietnam, Kambocia and others, such countries can also experience the economic recession period, because the majority of foreign investment comes from Chinese companies. Singapoure will be the most beneficial country, because of low population and high-developed technology.

2.3. Artificial intelligence and the development of the labor market: the pros and cons

The majority of the individuals thinks that world is on the verge of developing a superhuman artificial intelligence that will reserve human workforce. The views that AI represents the portrayal of a serious threat or a mysterious turning point in the history of our species has become religious of nature in the Silicon Valley. AI is making progress and influencing the majority of industries, but nowhere is it at the level of general human capabilities? Some people see artificial intelligence as a form of relief, while others interact with anxiety. The policy of fear, as a rule, is unreasonable and repressive. The response to job creation for disruptive innovation is to create a flexible economy that can quickly adapt to changes in technology. First of all, we need to be more mobile and promote movement and participation in high-growth economies.

Secondly, we should make it easier for entrepreneurs to create new companies and attract more people to new types of work. Wealth is created only in ascending order, and free people use their clear human creativity to find ways to serve and hire others. To ensure the creation of new jobs, the daily budget is more than one million bases,

which destabilizes the economy and impedes the formation of new enterprises, reduces the daily load of unique places and quickly develops the market in unique conditions. You need to find a new use.

Fear is the wrong solution to technical unemployment. Economic flexibility and adaptability - focusing on eliminating barriers that we accidentally create to concentrate the mobility of the working class is the right solution to a technological collapse. This is a measure. With a healthy policy in a free and open society, future success in the field of AI will significantly reduce the cost of living in a good life, and we hope that this will increase wealth and opportunities for all.

Technological unemployment is terrible for the victims. But they are always closely related to the progress of the economy. Over the next several decades, we will spend billions of dollars on this process and continue to develop new ways to entertain, educate, serve, and admire others. Populists are supposed to lack innovation: fear and hate are powerful political weapons. However, since our society thrives in absolute terms and raises the level of definition by defining poverty, we will continue to create opportunities for people from all walks of life. The human mind and body continue to be the most complex and powerful machines on Earth, and we adapt and develop into a world where technological change is accelerating. We owe our grandchildren to continue their innovation.

As you can see, there are big differences in the choice of people in the future.

Technological Unemployment

The risk of widespread technological unemployment can be reduced for various reasons. First, new jobs will emerge as technology applications develop and with the growth of other sectors, while the number of new jobs created directly by the ICT sector cannot pay full compensation for jobs moved elsewhere Decrease and increase in income and welfare, even if the latter may take some time to come true. Indeed, some estimates show that for each work created by the high-tech industry, about five additional jobs have been created. Second, business automation

assessments are usually based on the theoretical feasibility of technology related to existing jobs, but they ignore the fact that these technologies are actually being adopted, which can lead to a reassessment of the overall impact of technology on the total number of jobs in the economy. Indeed, the introduction of new technologies is a slow process because of economic, legal and social barriers, so technological replacement usually does not happen as expected. Finally, even if the labor force is less necessary in a given country, this may cause to decreasing in the work hours and some quantity of jobs should not be reduced. This has been the experience of many European countries in recent years .Although the risk of technological unemployment can be reduced, changes will take place in the workplace and in the professional structure, as well as in restructuring. The scale of these changes will vary from country to country, reflecting a combination of industry structure, business organization and work skills. These changes can have a negative impact on workers who cannot move to new jobs. If the labor market becomes more polarized, some workers may get stuck in low-income workers with low wages, not being able to participate in jobs that provide a growing difference, adequate income and well-being. More flexibility in work or greater insecurity? The Internet contributes to a more effective combination of demand, supply of products and tasks. This creates more opportunities for employees to use the flexibility and advantages of freedom and supplement their income with additional work in other jobs. Service providers can be divided into complex tasks, a series of inexpensive, conventional mini-tasks designed for workers around the world. This trend led to the development of "game", "ondemand-", "exchange" or, more generally, "platform economy" (AirBnB, Uber, Lyft, Blabla Car, Nubelo, Amazon Mechanical Turkish, Task) Rabbit, YoupiJob, Frisbeez and others). Although relatively small, the "economic platform" is largely based on non-standard operating mechanisms and, in particular, on independent work. As for ordinary wage and salary employment, workers in non-standard jobs tend to have fewer rights to social protection, fewer vocational training, often worse promotion, inability to access mortgages and other forms of credit, as well as greater

the degree of insecurity. It is too early to say whether this reflects the inherent insecurity of the functioning of the platform economy or that workers in more dangerous conditions are probably too represented in these new forms of business. Unfortunately, the available employment data are not currently suitable for developing how to grow in new ways of working and how they are associated with greater insecurity. Current data show that in the EU-28 region, between 2011 and 2013, the share of self-employed workers fell by 0.5% in employment between the ages of 18 and 64 .Nevertheless, this demonstrates the importance of the agricultural sector as an independent worker with a high share of employment. By profession, the self-employed accounted for the growing share of all jobs between technical specialists and assistant specialists. In Germany, the Netherlands and the United Kingdom, there are also some differences between countries with a long-term increase in self-employment in general employment.

Change in self-employment by age and labor force in Europe Percentage change between 2011 and 2013 in the EU-28. Independent or self-employed (individual entrepreneurs, independent contractors) do not differ from those considered self-employed (diversified employees), although they are employees, among independent workers who work independently of self-employed persons. or an employer who worked freely with a regular or temporary job. The most common sources of data on self-employment do not differentiate between independent workers who do independent work as their primary or only activity (freelance business owners, independent contractors), from those that consider themselves freelancers although they are also employees (diversified workers) or from those that had an employer and did some freelance work on the side of a regular or temporary job (moonlighters or temporary workers). Between 2014 and 2015, the share of diversified workers in total employment increased from 6% to 9% in the United States, while other forms of independent work declined during this period in the United States.

In ASEAN countries such as Malasia, Indonesia and Thailand the situation is complex. The majority of population, especialy female part of labor force, working in agriculture and light industries, which are requiring physical skills. Such type of labor has the highest possibility replacing to mechanization.

How to create balance between AI and Human Labor Force.

The solution of this issue is very vital for future. Managing the impact of the trends shaping our Four Worlds of Work won't be easy. It requires corporate from governments, non –governmental organizations and society at large.

Governments and society should work together to evolving a responsible approach and policies that manage the influence of technology and automation on job places – including a clear discussion on the ethics of AI. Governments should collaborate with organizations developing the use of AI at all stages of policy making, to create a pool of thought leaders with a deep understanding of the interplay between technology and its effect on society.

Look for innovative ways to address unemployment caused by technology

All governments will need to address the problem of unemployment that caused by technology. This could include testing social safety nets such as universal basic income and identifying new sources of the revenue for citizens. Underdeveloped countries that will increasingly struggle to catch up with the rest of the world will need to go further and consider radical new approaches. In the long run, they will need to create their own internal markets as their primary sources of income.

Since the "typical" linear career pathway ceases to exist, the perception of the value of the new standard of the "portfolio career" should be changed. Time very much changes thinking, but stimul are also needed. For many workers, the mobility of jobs, stable retraining and rotation will be the key to increasing their adaptability and ability to work using more benefits to society. But most people feel tired of their recent career and work because of pressure on debt and "stickiness" of benefits - whether it's student debt, mortgage loans or loans or non-transferable benefits such as health care or pensions financed by employers. This also affects society in a

broader sense. Important incentives are important for the development of mobility and skills development. Likewise, AI will always require that people program and program machines, leading to a new wave of innovation and jobs that will pay more. Now we need to focus on education and training to give displaced workers the skills they need to keep up with the work of tomorrow. Today, there are three things that the government, business world leaders and workforce need to do to prepare for the future:

AI growth will pave the way for new business in science, technology, engineering and mathematics (STEM), but stop only math and science neglected in the math and interest of competent American high school students in their STEM careers: math and science. This is not surprising, as most students rate existing mathematics and science lessons with a view that is boring and unrelated to their daily lives. In order to reverse this tendency, such as the creation of robots or the design of clothes and light sensors, it is necessary to make a mockery of STEM for students by investing in practical, creative educational initiatives that will overcome lifelong interest in these areas.

"There is some concern around the consequences for the industrial revolution, and it can achieve the point of overflow.

Last week Silicone Valley published an article about the digitalization of the economy that calls for changes in public policies and new organizational models that account for the share of risk capital and fast technological changes in this period of management.

Presentation of the researcher Wendell Wallach at the February 2015 at the Carnegie Council on Ethics and International Relations indicated us the seriousness of this issue. Wendell Wallach said technological progress is currently abolishing more work places rather that forming.

"This is an unprecedented situation and I think that these people can only lead to various disorders that will start to realize that we are indeed in the middle of the

unemployment caused by technological progress", - said Wallach, Counselor of Moral and Bioethics at Yale's Interdisciplinary Center.

Martin Ford owner of Silicon Valley, recently published the book "Robots Rise" to create a speech about the future of the unemployed.

He does not bother, he says. Most people do not understand the "amazing" speed that technology has developed.

Ford Business Insider says, "People imagine factories when they talk about robots, but factory work has been going on for decades."

In May, a manufacturing company from China, willing to replace 95% of its 1,900 employees with machinery. 200 employees without pink longings will be undertaking a new role - supervising the robot workforce.

If this is not worrying enough, consider working at Oxford University "Future employment: how to buy jobs" Computing can be automated in 47% to two years in the United States.

Bloke has more than just "dangerous, dirty and boring" tasks. Technology is also ready to name a few "white-collar workers" such as lawyers, journalists and financial analysts. Although certain sectors like health and education are much safer than others, Ford believes that most industries will eventually be at risk.

With creative calculations, even the most artful businesses can be at risk. Ford now says that algorithms can write symphonies and draw original pictures.

Ford says, "We need to worry." "Above all, we have no alternative for individuals to disappear their work places.

“We are not saying that this technology is useless. It's good if robots to do all our work, so we didn't need to work. The problem is that your work and your income mobilize together. According to him, the economic results can be exciting. Work consumes consumption and stimulates our economy of consumption.

“If we do not have a consumer, we do not have an economy. No matter how talented you are, you must have a sales outlet as an individual ”says Ford. “We need a large

number of people to be high-skilled, and if we have a dynamic consumption economy, we generally need a reasonable level of prosperity."

Obviously what Ford sees as a catastrophe is what others see as a chance. Recently, the New York Times has paid special attention to research conducted by the McKinsey World Research Institute, for which more stringent predictions have been made.

Other experts point to the industrial revolution, which will eventually lead to an increase in employment, as well as occur in the era of the emergence of a second car. As computing power increases, some people discover that old jobs come to life and offer new ones, leading to "zero cleanliness" or even business expansion. But Ford does not think that it will predict the future in the past. "On January 5, 2011, the Washington Post newspaper reported that the first decade of the 21st century created a new job from scratch," said the "Growth in the number of robots". In other words, it was expected to be created within the first 10 years, but there were about 10 million missing jobs that never appeared. "It's not easy to solve this problem.

Before that, when unskilled labor force lost their work places on technology, they were better educated and trained, and they always had to go to the office to find smarter office work. According to Ford, this solution will not be effective because the technology follows these very talented companies: "Investing in education and training is unlikely to solve our problems. The root of this solution is to efficiently rebuild our system. Ford provides a guaranteed income. You give people a minimum of money - a living income. Many of you want to work part-time, so you want to get a more traditional job, they are not so generous to just sit and do something, or find a small business.

Ford is not alone in such extreme changes. Scott Santens, leader of the basic income movement, which has thousands of lawyers around the world, acknowledges that employment growth is not keeping pace with technology and encouraging revenues that governments provide as a remedy. "It's not just about getting a basic income in the future; Now we need him, Santens said in the Atlantic:" People do not see it, but

we already see the effects around us, we accept payment at work and pay, hours we accept, overpricing inequality is the end of consumer spending. "

It is unlikely that Ford and Santance's offer will become a reality at least in the near future. "In today's environment, such a radical solution is totally unthinkable," admits Ford. "But paradox is what we need in the future. We are not sure how to get there."

At this point, maybe it's time to think about the strategies to stay in front of the robots before coming to work.

Other ways to protect vulnerable groups of workers

As an alternative to unconditional basic income, governments can bring higher minimum social standards by revolutionizing the progressive tax system by distributing subsidies or coupons or by offering prizes / awards. As an alternative, the American economist Richard Freeman suggests that workers should buy the robots they need to do their jobs, or invest in the development of new IT systems. The advantage of these alternatives for unconditional basic income is that the work was not repulsive. Instead, the state can reduce the maximum working time by law, so that existing jobs are distributed to several employees. In this context, it can be considered 30 or 35 hours a week or 4 days a week. The employment crisis can also be avoided by reducing the working age population. However, the introduction of a 35-hour work week in France or in the German metal industry did not result in an increase. Evidence suggests that a reduction in working hours not only contributes to a reduction in unemployment, but also contributes to a reduction in unemployment. In addition, as a legislator, a state can determine what jobs only people need to perform. (for example, do not look at the child). The state can create a kind of "human quota" in any sector and decide what kind of social and philanthropic work it wants to support, and how much it intends to raise a tax or a label for "human use". Another alternative for machines is the introduction of social security funds, such as the oil industry in Alaska, where smart plant operators can pay or pay for several decades. The phase of the foundation is particularly suitable

for this purpose. Modernization of the economy can only be transferred with the advent of new ideas to the market. Work can only be created if these ideas cannot be torpedoed by state bureaucracy or financial problems at constitutional stages, because only then can the economy use all its potential for adaptation. Any of the proposed proposals discussed here will be economically acceptable and socially "just." These are ideas that only deputies should think about in the coming years.

Polarization of the professional structure in highly qualified and low-skilled workplaces, as well as between vague and different atypical forms of employment, can lead to further polarization of the wage structure in high-paid and low-paid jobs. In some countries, the decline in demand for middle-class workers increased competition for low-paid jobs, which led to a reduction in wages in the lower half of the income distribution. At the same time, wages increased at the top of the distribution due to the high demand for highly skilled workers. These events can increase the risk of poverty in working life and constant low income levels .The transition to capital-intensive production can also lead to a further reduction in the share of labor in GDP and further increase in inequality. Changes in the professional structure can lead to regional inequalities, as new jobs are created in cities with a high concentration of highly skilled workers, who are usually cities other than displaced persons, or losses at work.

Influence of the AI to the financial institutions

Artificial intelligence (AI) is changing rapidly, as financial institutions operate and are regulated. Of course, some functions are well suited to AI, as well as many types of risk management and daily tasks of financial supervision. Another picture emerges when we look at the stability of the entire financial system, in which AI can increase the types of risks that lead to financial crises. AI promises significant cost savings and operational efficiency for risk managers and microprudential regulators, which are mainly related to the day-to-day operations of financial institutions. This

is due to the fact that AI is particularly useful for managing an existing system with sufficient data and clear risks, such as risk management and monitoring of microdrives. There is no need to control risk in the entire financial system or in the bank as the only optimization problem, instead we can focus on each subcomponent of the system individually. Such local optimization leads to an acceptable solution to the global problem, risk management for the bank or the financial system. This means that we can usually assume that the risk is exogenous and should not take into account how this happens. None of this relates to macroprudential standards that are oriented toward systemic financial risk. By individually monitoring the risk in each local area of banks, we can easily increase the risk that we are trying to limit, since the most dangerous types of risks usually arise at the junction between the seeming different parts of the system. It is necessary to model and control the risk of the entire financial system as the only optimization problem that is complex, because the financial system is almost infinitely complex. In addition, financial crises are rare, less than all 42 years for OECD countries, and give AI small historical data for training. Assuming that the risk is exogenous, extreme outcomes are ignored, and policymakers must consider the endogenous nature of financial risk. The complexity of the problem means that existing approaches to AI are inadequate if AI has to penetrate into macroprudential policy. Significant improvements are needed. Such AI should show how it justifies. There are not so many conceptual problems with daily risk control, since we can support the operation of the AI engine, observing repeated results. It does not matter how the engine got an answer, and we can let it work basically serene.

Risks to Decision-Making, Security and Safety

In any complex and chaotic system, including AI systems, potential threats include mismanagement, design weakness, accidents and unforeseen events. They create serious problems for the safety of people, governments, and business. It can be

tolerated that the error results in the application of the mobile phone AI blocking or misunderstanding the request, but if the AI weapon system or an autonomous navigation system detects an error in the code line, the results can be fatal.

Machine learning algorithms can also develop their own prejudices depending on the data they analyze. For example, the experimental Twitter account run by the AI application was demolished for socially unacceptable utterances, search engine algorithms were also aimed at unreasonable racial outcomes. Solutions that depend in part or in part on AI systems Control protocols should be considered to avoid or correct such results.

AI systems in the cloud are especially troublesome due to management and control problems. Some experts believe that reliable AI systems should work in a sandbox - an experimental room that is separated from external systems, but some cognitive services already depend on their connection to the Internet. For example, an authorized ROI KI must have access to electronic databases. IBM Watson addresses electronic journals, provides services and even teaches the university course via the Internet. The TextRunner data extraction program is successful because it is mandated to investigate the Internet and leave its own conclusions without attention. On the other hand, AI can help solve cybersecurity problems. Currently, AI applications are used to detect cyber- attacks and possible fraud using the Internet. Whether AI applications can learn, attack or protect better, determine whether online systems will become more secure or vulnerable to successful cyber- attacks. AI systems are already analyzing large amounts of data from telephone applications and carriers; as the sensors find their way in our clothes analyzing, the security of our data and accounts becomes more important. In the physical world, AI systems are also used to monitor and monitor video and audio to identify crimes, help fight terrorism and report unusual activities. How much they reduce confidentiality, in general, is a real problem.

Summary

Artificial intelligence - a risk or an opportunity for future employment?

The question arises as to how AI can be judged in the form of autonomous operating systems, production and auxiliary robots or self-propelled vehicles labor point of view of labor legislation.

1. Risks and disadvantages

For AI employees, there are short-term shortcomings. In sectors with a low and medium skill level, several million jobs are threatened around the world, and it is not necessarily that they can be rearranged into other areas. For these workers there cannot be employment opportunities in other sectors, since they are not sufficiently trained. Thanks to the introduction of new machines and intelligent IT systems, people are becoming increasingly irrelevant for work processes. This, as well as the dangerous transition to unemployment and the gap between the rich and the poor, can lead to social conflicts. Even the most complex system can make mistakes inherent in the system itself or caused by human activities,

Solving emerging problems requires creative solutions from representatives of employees, national legislators, and enterprises. For example, the Italian law on participation in the economy is one of the possible ways to solve the problems of the new labor market. A threshold of 10,000 euros per year is set at a lower rate of 10 percent. On the other hand, such a new legal framework will raise new legal issues, such as the distinction between a platform and real business or the definition of certain criteria for distinguishing between staff on-call "and" traditional workers "in the service sector

2. Advantages

At the same time, AI opens up new opportunities for companies and individuals. The person adapts and creates new jobs. Using intelligent IT systems helps reduce the time spent on a product or service and the associated costs. The saved time, especially for hazardous work, can be used by people for other work or leisure. Therefore, AI should lead to an increase in well-being. This is particularly true for high-wage countries, where production robots can produce at lower costs.

In addition, technical changes will lead to better integration of older workers and workers with disabilities; while machines can perform dangerous work. Despite occasional gloomy forecasts, most jobs are expected to move to another area of work. New working models that will develop in the field of AI, digitization and global labor integration will provide opportunities for the younger generation, more free time to create and create an individual working atmosphere. Even if some of these new jobs (for example, working in the crowd or some jobs in the exchange economy) mean a loss of tax revenue and social security, they will crowd working to prevent unemployment

While people actively participated in the production in the past, they will monitor this now. In this area, AI is thus seen as an improvement in technical capabilities. People who become superfluous will use their time intensively to develop and implement innovative services. They can focus solely on their core competencies, that is, on adaptation to the environment and training.

Highlight

In the past, a significant part of the population initially worked in the main sector (the production of raw materials, such as agriculture and mining). Following the first industrial revolution, this trend has changed a large part of the working population, which has moved to the secondary (production) sector. However, from the world wars until today, there has been a trend towards a service sector. Today, for example, 70% of the workforce in this sector works. Some of the opinions voiced by the authors point to the fourth and fifth sectors. These sectors should include services that require high intellectual standards or that relate to recycling. Other authors integrate all information services in these sectors. It makes sense to keep the traditional division into three sectors, as they are complex, both service and research, it is still a service in which a person uses his individual efforts to provide services to someone else. The question arises, in which sector these jobs can be postponed, as automation and digitization workplaces are shrinking not only in the manufacturing sector, but also in the service sector, as shown above. The only alternative seems to

be unemployment or targeted training for those affected in the tertiary sector. Training should only make sense in the IT field. Not only employees, but also companies that previously had little in common with IT and data processing in the form of large data, must adapt to technical innovation in order to remain competitive. The new labor market is rapidly approaching. Only those who first discover, develop or even bring to market a new service model will bring greater profits. In addition, new and profitable services quickly become obsolete due to rapid technological development. They are replaced by other services based on more advanced services, and creative solutions are found to meet the needs of customers that are not served by legacy services.

However, the situation on the global labor market should not be overly dramatized. The famous economist Keynes predicted a similar development of the labor market before the "second industrial revolution" in 1930. You could always observe a great wave of unemployment, despite crises and wars and the already-occurring "third industrial revolution" through new areas of activity and a growing surplus of production profits. Until then, productivity growth that arose after the advent of AI and robotics led to an increase in orders and profits, and staff will not be dismissed. For many employers, an intelligent factory without human resources is not an alternative.

Experts do not agree with when there will be a noticeable fundamental impact of industry . Some economists expect tangible changes over the next five years, while others note that the phenomenon of industry will not be widespread until 20-30 years. However, technical changes are already visible today. An example of this phenomenon are robots that can handle complaints from customers by talking to them on the phone. This requires - like simultaneous translation - the degree of intelligence.

For more accurate statements, an individual analysis of the relevant sector, country and region is needed. The level of production automation, for example in the automotive, chemical or agricultural sectors, is well developed, and production in

the garment sector is still being transferred to low-wage countries and significantly behind in terms of automation. In the services sector, IT, media, finance and insurance are particularly well-digitized, and the public catering, construction and health sectors are lagging behind in the US. In different countries in the field of robotics there are various research areas. In the US, for example, research is mainly focused on space-based robotic technologies; in Japan, humanoid robots; In Germany, the focus is on assembly robots. Depending on the industry, digitization and automation are creeping processes that have already begun.

It is clear that the blue and economic sectors will be affected by the potential loss of employment and that digitalization (and automation) of services is a global phenomenon. However, this phenomenon represents a far-reaching and diverse field of consultations, especially in the field of labor law. It would be desirable that future laws, which we hope will be backed by common standards at international level, will respond to technological developments.

Conclusion

An overview of business processes involves more than just the introduction of AI technology. It also requires a great deal of commitment to rewarding employees, using what we call "integration skills". First of all, people need to learn how to delegate tasks to new technologies, for example, when a doctor trusts a computer to help them interpret X-rays and MRIs. Staff also need to know how to combine their unique human skills and smart machine skills to achieve better results than any of them can do on their own, as with automated surgery, and they should be able to

train smart clients on new skills and must be trained to work Well in the process that has been improved by AI. For example, they need to know the best way to ask questions to Amnesty International agents in order to get the information they need. Also, like Apple's security staff, there must be employees who ensure that their artificial intelligence system is used responsibly, not for illegal or immoral purposes.

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In the future, the role of the company will be changed around the desired outcome of the revised process, companies are expected to be organized around different types of skills, rather than the most rigorous professions. AT & T has already begun its transition from switching from fixed line services to mobile networks and retraining 100,000 employees to new jobs. As part of these efforts, the Company has fully revised its organizational structure. About 2,000 jobs were collected in very few broad categories, including similar skills. Among these expected skills (such as data science and data analysis skills) are less obvious (eg, the ability to use simple tools for automated learning of cross-selling services).

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