

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
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Імус

Матеріали
*V Всеукраїнської науково-практичної
Інтернет-конференції студентів та магістрантів
за підсумками наукових досліджень 2018 року
«ПЕРШІ КРОКИ ДО НАУКИ»*

Мелітополь, 2019 р

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РЕДАКЦІЙНА КОЛЕГІЯ:

1. Ломейко Олександр Петрович – проректор з науково-педагогічної роботи, к.т.н., доцент
2. Сосницька Наталя Леонідівна – завідувач кафедри вищої математики і фізики, д.п.н., професор
4. Максимець Оксана Миколаївна – завідувач кафедри суспільно гуманітарних наук, к.філол.н., доцент
5. Симоненко Світлана Вікторівна – в.о. завідувача кафедри іноземних мов, старший викладач
6. Рогач Юрій Петрович – завідувач кафедри охорони праці та безпеки життєдіяльності, к.т.н., професор, заслужений працівник освіти України, академік міжнародної академії безпеки життєдіяльності
7. Білоус Наталія Володимирівна - старший викладач кафедри іноземних мов
8. Виноградова Маргарита Сергіївна - старший викладач кафедри іноземних мов
9. Іванова Віта Анатоліївна - старший викладач кафедри іноземних мов
10. Кашкар'юв Антон Олександрович – к.т.н., доцент кафедри електроенергетики і автоматизації
11. Щербина Валентина Вікторівна – к.б.н., старший викладач кафедри екології

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Адреса редакції:

ТДАТУ, Рада молодих учених та студентів

Просп. Б. Хмельницького 18,

м. Мелітополь, Запорізька обл.,

72312 Україна

УДК 004.896:811

ANALYSIS OF ROBOTIZATION PROSPECTS FOR GLOBAL ECONOMY DEVELOPMENT

Tereshchenko V., 31KH

e-mail: viacheslaw.tereshcchenko@gmail.com

Zaitseva N.V., language adviser

e-mail: nataliia.zaitseva@tsatu.edu.ua

Dmytro Motornyi Tavria State Agrotechnological University

*This article discusses the impact of robotics development
on the labor market and the economy.*

Problem setting. Nowadays we perceive robots as a technology miracle, which can greatly facilitate our lives. But experts at the World Economic Forum in Davos warned that robots would soon take our jobs. And yet this forecast is not considered bad. Nearly 50% of large multinational companies admitted that they plan to reduce the number of full-time employees by 2022 as part of labor automation. However, a quarter of companies expect automation to create additional jobs. The Swiss think-tank assumes that by 2022 robots all over the world will have 75 million jobs, but at the same time 133 million new jobs will be created [1]. Thus, due to robotization in the next five years 58 million new jobs will appear. In addition, they will significantly improve the performance of existing jobs.

Analysis of recent research shows that not only scientists but also global brands are aware of coming changes in productiveness increase because companies around the world are implementing robots. According to the International Federation of Robotics (IFR), the global average for industrial robots per 10,000 manufacturing workers grew from 66 robots in 2016 to 74 robots in 2017, to 85 in 2018, it accounts for 15 percent increase in the last year in comparison to marked 5 percent growth rate acceleration from 2015 to 2016 [1]. Korea was the world's largest adopter of industrial robots in 2018, with 710 robots per 10,000 workers, while Singapore took the second position with 658 robots per 10,000 workers, Germany was the third in the rating with 322 robots, Japan was the fourth with 308, and Sweden was the fifth with 240 robots. The United States ranked the seventh with 200 industrial robots per 10,000 workers. Among the countries surveyed, Russia and India ranked last with just 4 and 3 robots per 10,000 workers, respectively [2]. But the decision to install and run a robot is often based on the cost savings that can be achieved when a robot can perform a task instead of a human worker – and those cost savings are directly related to the compensation levels of manufacturing workers.

The purpose of the article is to determine the prospects and trends of robotization development in every professional sphere and especially in the industrial production.

Basic material research. Discussion of such a scenario has been carried out for a long time, and certain types of work have already been successfully delegated to machines today. Do people have to be afraid of losing their job or is everything not so scary? A recent analysis of eight hundred occupations, published by a group of American scientists, showed on the one hand a predictable, and on the other hand a strange result. All considered professions were divided into tasks, which turned out to account for about two thousand. Some tasks turned out to be more time consuming than others, and are more promising in terms of transferring their performance to robots. In the foreseeable future, other tasks will remain under the human competence only. In this case, the distribution was far from always obvious. The modern economy allows workers to receive a salary, although in half of the cases this work would be more efficient and cheaper performed by robots. The brightest representatives of such tasks: data collection, data processing, tasks using physical labor. In the transport sector, in the production of more than half of the tasks can be automated.

To a large extent, areas related to food, logistics, tourism, analytics and many other processes can be automated. On the other hand, it turned out that only every twentieth of the professions reviewed can be fully automated today. And this is despite the fact that among tasks a similar indicator is more than 20 percent. This means that in the next decade the range of tasks of many professions will be narrowed, but the professions themselves will not disappear anyway.

Interestingly, even in such activities as management, up to a quarter of the existing management tasks can be transferred to machines. Another question is whether companies will use these opportunities, because it may cause a wide resonance in society. Whereas in the countries with an aging population, automation compensates for the natural causes of a slowdown in economic growth, in emerging markets hundreds of thousands of people working with their hands or doing other monotonous jobs will lose their jobs. And it already threatens a global human labor force scandal with consequences.

On the Internet, there is a project implemented by an agency of strategic initiatives, where the appearance of a hundred and fifty new ones and the disappearance of fifty existing professions are predicted. It is captivating first of all, because along with obviously promising professions, for which the market has not yet accumulated enough technical and scientific resources, activities have been added to one heap that can be carried out even now, but nobody needs it, the example of such jobs is a designer of airships.

Conclusion. Summarizing, we can say that thanks to automation, productivity increase will grow by 1-1.5% annually. It is unlikely that the mechanisms will conquer the labor market, because even today, in a number of industries, the limit of computer capabilities is visible. Attempts of even theoretical artificial intelligence creation have never been successful. There are serious assumptions that AI implementation simply cannot be done, which means that people will always have their work. So, the research proves that higher education is still vital for career in most spheres globally; moreover, countries like Ukraine which develop their robotics gradually will need human specialists for at least five further decades.

References

1. The future of work: How humans and machines are evolving to work together [Електронний ресурс]. – Режим доступу: <https://www.businessmodelsinc.com/machines/>
2. Robots will transform, not replace, human work [Електронний ресурс]. – Режим доступу: <https://www.computerweekly.com/opinion/Robots-will-transform-not-replace-human-work>.

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