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Digital Labour Market Model and Financial Opportunities in the Context of Sustainable Development in the EU Countries

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Abstract
Technological opportunities have a transformative impact on labour markets. In this article, we aim to study the ways in which digital technologies contribute to the development of the digital model of the labour market and digital platforms. We aim to highlight digital opportunities to support efforts to ensure the development of strategies, policies and labour market transformations. We intend to build the digital model of the labour market within the model of the systemic digital economy, in close connection with other digitalization models (business, financial markets, public finance, commerce, industry, agriculture, transport). An important part of the study focuses on the opportunities for sustainable financing of the digitized labour market, as financial services interact closely with labour market institutions, which reflect on labour outcomes. We propose that the digital model of the labour market in close correlation with the digital business model will developed with investments from employers in the training of employees in digitization, new modern professional knowledge, which will allow an integration of companies in global markets. The financial-monetary dimension of companies in the context of globalization also requires radical transformations to ensure companies' access to the international financial markets.

Keywords: Digital labour market model, financial opportunities, sustainable development

1. Introduction

The implementation of digital service platforms, of public data spaces through the application of artificial intelligence technologies, has a great impact on the entire space, and on the modern world. Digital communication, e-commerce, wide access to information, are part of modern life (Ladaru et al., 2022). The European Digital Agenda for 2020-2030 focuses on the creation of digital spaces, services, and the organization of platforms for the functioning of digital markets, the digital consolidation of Europe, with the goal of climate neutrality by 2050. Under the Treaty on the Functioning of the European Union, the EU can take action in the field of sectoral and horizontal policies. The priorities are oriented towards the development of digital services and markets, the development of quantum computing, the block chain strategy, the block chain-based trade policy, human-oriented artificial intelligence. Development of semiconductors (European Chip Law), ensuring cyber security, gigabit, 5G and 6G connectivity, European data space

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and infrastructure, setting global technology standards (Burlacu et al., 2021). In 2021, the EU approved the digital compass . The White Paper on Artificial Intelligence published in February 2020, states that Artificial Intelligence (AI) plays a key role, and will bring societal and economic benefits to a wide range of sectors. One of the priorities of the European Commission for 2019-2025, is organization and functioning of the European data space, in the conditions of the accelerated digitization process (Belostecinic et al., 2022); which will include nine priority sectors: health care, agriculture and the environment, energy and production, mobility and finance, skills and public administration (Radulescu et al, 2021). Another important moment is creating a single, secure and open digital market, protecting the fundamental rights of users, establishing fair relations (Balu et al., 2021). It is necessary to build trust in the activity of the online environment, which will ensure social and economic development (Sarbu et al., 2021). For these reasons, we intend to discuss the need to develop a digital labour market model that needs to be studied in different ways. In this article we aim to review the essential aspects for initiating the construction of the digital labour market model, projections on the digital labour market model, highlighting digital technological opportunities, developing digital platforms on the labour market, developing digital infrastructures and digital economy networks (Popescu et al. 2021).

2. Research Methodology

Starting from the evolution of the labour market in the European Union countries in the years 2015-2020 and taking into account the impact of the IT industry in the evolution of the last years, we proposed an analysis of the DESI inductions from the EU countries. The bibliographic study on the most important aspects of digitalization on the labour market and the discussion of the problem of the functioning of a digital model of the labour market in the EU countries. Designing a methodology for the organization and functioning of the digital labour market, and the need to promote the development of the digital economy, the organization of digital business models in close correlation with e-commerce models. Identifying opportunities for digital and sustainable technological transformations with an impact on the labour market in order to build a digital model of the labour market.

3. The Evolution of the Labour Market and the Digital Economy in the European Union

3.1 Evolution of employment in EU countries in 2015-2020

According to Eurostat, employment in the EU in recent years has marked a marked improvement, boosted by the dynamics of the economy, promoted macroeconomic policies and the global outlook. Employment has expanded; in 2019, it registered an employment rate of 72.7%, with a non-employment process in the ICT sector of 4.89 in 2019 according to Diagram 1.

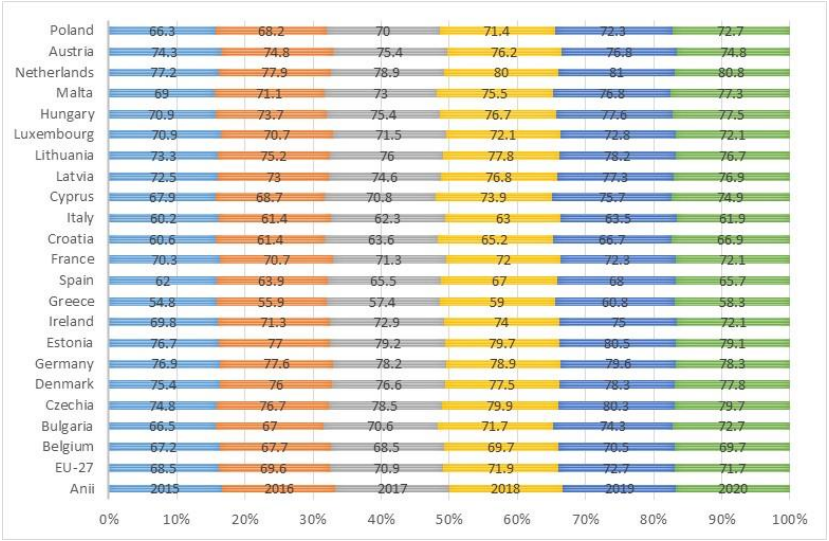
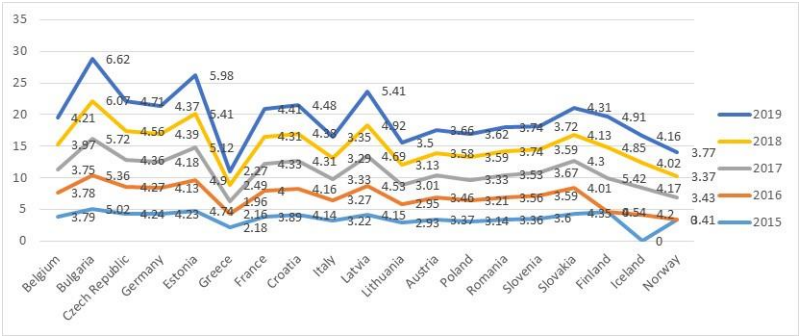


Diagram 1. Evolution of employment activity in the EU countries in the period 2015-2020 - annual data (from 20 to 64 years, % of total population)
Source: www.eurostat.eu/

Employment and activity by sex and age - annual data (from 20 to 64 years, % of total population) in EU. EU - 27, from 68.5% in 2015 to 71.7% in 2020. Germany has the highest shares - 76.9% in 2015 and 79.6% in 2019 and 78.3% in 2020, respectively. Estonia - from 76.7% in 2015, to 79.1% in 2020. The Czech Republic - from 74.8% in 2015, to 80.3 in 2019, with a small decrease of 80.3 in 2020. Romania, registers the share of 59.2% in 2015, respectively 65.2% in 2020.

3.2 IT sector evolution in EU

In the EU's information and computer technology (ICT) sector, value added in 2019 was 3.8% of GDP. Between 2014-2019, the benefit of ICT services in the EU increased annually by 27.5%, and the benefit of ICT production increased by 41.7%, according to Eurostat information.



Graph 1. Percentage of the ICT sector in the EU (2015-2019)
Source: www.eurostat.eu/

Percentage of the ICT sector in the EU in 2019 - 4.89%, Belgium - 3.79 in 2016, 4.21 in 2019. Bulgaria from 5.02 in 2015, to 6.62% in 2019, Estonia - from 4.9% in 2015, to 5.98% in 2019. Greece - from 2.18% in 2015 to 2.27 in 2019. Latvia - 4.15 in 2015, 5.41 in 2019. Lithuania - 2.93% in 2015, 3.5% in 2019. Malta has the highest figure, from 6.86% in 2015 to 7.66% in 2019. Romania - from 3.36% in 2015, at 3.74% in 2019.

3.3 The evolution of the digital economy and society index in the EU

Since 2014, the European Commission has been monitoring the evolution of digital development in EU countries, of the Digital Economy and Society Index (DESI). The DESI index measures the progress of EU countries towards a digital economy and society. The index brings together a number of important indicators on the digital policy mix in the EU. An important impact on the economy and society of the EU countries took place during the COVID-19 pandemic crisis. In table 1, we present the evolution of the DESI index.

Table 1. Evolution of DESI indices in the member countries of the European Union

	Human Capital			Connectivity			Integration of Digital Tec			Digital Public Services		
	2016	2018	2021	2016	2018	2021	2016	2018	2021	2016	2018	2021
EU	10.8	11.2	11.8	6.85	8.37	12.5	5.9	7.37	9.39	11.8	13.7	17.0
Finland	16.4	16.8	17.8	16.4	16.8	17.8	9.35	11.8	14.9	15.7	18	21.7
Sweden	14.4	15.9	16.1	14.4	15.9	16.1	9.05	10.5	14.1	15.1	17.5	21.0
Netherlands	13.2	14.7	15.4	9.85	10.7	17.1	8.7	10.4	12.7	14.1	16.3	20.0
Estonia	13.1	13.2	14.5	8.72	9.69	11.6	5.59	7.5	10.4	17	19.1	22.9
Luxembourg	12.3	13.1	14	10.7	11.6	15.2	6.06	7.71	9.86	15	17.1	19.8
Malta	12.7	12.6	12.3	7.19	9.24	13.5	7.5	8.92	12.7	15.7	17.7	21.0
Ireland	11.4	12.4	13.5	6.07	7.58	14.1	8.21	9.75	12	14.6	17.1	20.7
Austria	12.9	13.4	13.3	6.64	7.85	13.2	6.37	7.86	10.3	13.9	16.1	20.0
Spain	11.2	11.3	12.1	8.04	10.2	15.5	6.26	8.41	9.69	14.2	16.3	20.2
Belgic	11.9	12.3	12.7	7.19	8.47	12.1	8.11	9.82	12.4	11.6	13.5	16.5
Latvia	10.6	10.4	10.3	10.6	11.4	12.6	3.43	4.83	6.7	13.8	16.5	19.9
Slovenia	11.0	11.4	12.0	8.6	9.61	13.3	7.19	8.69	10.6	11.0	13.3	17.0
Germania	13.1	13.3	13.8	7.93	8.75	14.5	5.63	6.91	8.89	11.4	13.3	16.9
Lithuania	9.79	10.9	11.5	7.5	9.05	10.4	6.7	8.57	10.3	13.6	15.8	19.5
Portugal	9.92	10.1	11.4	7.38	9.54	12.1	6.62	7.91	9.14	12.8	14.5	17.2
Denmark	15.2	14.7	15.3	10.1	11.2	18.5	9.02	10.8	14.5	15.8	18.1	21.8
France	11.0	11.4	11.8	6.32	8.06	11.9	5.53	6.64	8.69	12.4	14.6	18.2
Czech	10.6	11.0	11.8	6.9	8.28	11.2	6.27	7.72	9.77	9.26	11.5	14.6
Slovakia	9.86	11.0	10.9	6.16	8.23	11.6	5.31	6.54	7.27	9.32	10.6	13.4
Croatia	10.6	11.3	11.7	5.13	6.82	11.4	6.0	7.17	9.99	8.36	9.97	13.0
Italia	8.39	8.61	8.78	4.97	7.17	10.6	5.78	6.98	10.4	10.6	12.5	15.8
Cyprus	9.48	10.1	9.92	4.63	6.22	10.5	5.26	6.21	7.63	10.1	12.1	15.5
Hungary	9.59	9.8	10.1	7.43	9.01	13	3.62	4.83	5.82	8.34	9.81	12.3
Poland	7.86	8.97	9.42	6.14	7.37	11.3	3.72	4.76	6.47	8.52	10.4	13.8
Bulgaria	8.23	7.99	8.18	5.41	7.78	9.52	3.29	4.22	5.12	9.05	10.9	14.0
Greece	8.65	8.83	10.3	3.84	5.1	9.43	4.67	5.95	7.13	6.39	7.87	10.5
Romania	7.38	7.5	8.26	8.35	10.5	13.3	3.53	4.51	5.94	5.94	3.18	5.37

Source: www.eurostat.eu/

In the (RRPs - Recovery and Resilience Plans) of 22 EU Member States, EUR 117 billion or allocated to digital spending, which represents 26% of total RRF investments in those countries. Member States have decided to exceed the 20% target, averaging 26% of their digital investment. In countries like Austria and Germany, over 50% of total digital spending. In Ireland, Lithuania and Luxembourg, expenditure on measures to support digitization exceeds 30%. Multinational projects were discussed with Member States in the (RRF - Recovery and Resilience Facility) and included in the RRPs: 1. Cloud and data, provides for the creation of a common, interconnected pan-European platform; 2. Microelectronics; 3. Implementation of pan-European 5G corridors for advanced digital rail operations. 4. Acquisition of the latest generation computers and quantum computers; 5. Development and implementation of the ultra-secure system. 6. Implementation of the network of Security Operations Centres. 7. Connected public administration, based on the electronic Identification, Authentication and Trust Services (e-IDAS) framework; 8. European block chain infrastructure; 9. Completion of an EU-wide EDIH network; 10. Development of partnerships in high-tech fields for digital skills. 11. European reference genome and submarine cabling.

Digital Compass states: the number of IT specialists in the EU must reach 20 million (at least) by 2030, compared to 8.4 million in 2020(which is 4.3% of the workforce). The highest proportion of ICT in 2020 is in Finland - 7.6%, Sweden - 7.5%. Digital Compass provides that all populated areas by 530 will be covered by 5G. In 13 EU countries, since the middle of 2020, the commercial implementation of the 5G network has started, with a coverage of 14% in the EU. It is important for companies to integrate digital technology, according to the Digital Compass 2030 target, at least 90% of EU SMEs must be at the core level of digital intensity. 60% of SMEs have implemented digital technologies. Denmark and Finland are close to the EU target of 88%, Bulgaria and Romania lag behind (33%). At least 75% of companies will use AI, cloud and big data technologies by 2030. In 2020, digital public services accounted for 64% of internet users who interacted with online public administration, compared to 58% in 2015.

Human capital. In the field of human capital, we can rely on the workforce with qualified digital training, with solid knowledge in computer science and information technology, mathematics, automatic systems engineering. Human capital in DESI in 2021 has two sub-dimensions that represent internet user skills and advanced skills and digital development. Finland, as the leader in human capital, is followed by Sweden, the Netherlands and Denmark. Italy, Romania and Bulgaria are in last place, although they have good schools in the field of ICT. The largest increases in human capital are in Finland (+2.6 percentage points), Estonia (+1.7 percentage points), Greece (+1.6 percentage points). Regarding digital skills, we mention that since 2015, digital skills have grown slowly, 56% of individuals with basic digital skills, 31% - higher digital skills, 58% - with basic software skills. 80% of young adults (aged 16-24), 84% of people with formal higher education 33 and 87% of students have at least basic digital skills. Only 33% of the 55-74 age group and 28% of inactive retirees have basic digital skills. Regarding the use of the Internet, we mention that in 2020, 91% of households have access to the Internet at home; 86% of regular internet users (access weekly). Almost 80% use the internet either daily or almost daily. With regard to access barriers, we would like to mention that many Europeans use the internet regularly, but some barriers persist. The main reasons for not having access to

the Internet at home in 2019 were the lack of interest and the need to use (in 2019 45% of households without Internet access), insufficient skills (45%), equipment costs (25%), high cost barriers (23%). A priority issue is ICT specialists. In 2020, 8.4 million people worked as ICT specialists in EU countries. The largest number was in Germany (1.9 million ICT specialists), France (1.2 million), which accounts for less than 40% of the EU ICT workforce.

4. Bibliographic Study

According to the (World Economic Forum (WEF) Report2020), the pace of digital technology adoption will be accepted in areas such as cloud computing, big data, e-commerce, etc. According to the WEF Report, 43% of companies indicated their intention to reduce their workforce due to the integration of technology, 41% planned to expand their business, and 34% planned to expand their workforce from technological considerations. Based on WEF statistics, it is estimated that by 2025, 85 million jobs worldwide could be replaced by a change in the division of technological and robotic labour. 97 million new jobs can be created, being suitable for the new division of technological man-made work, with the implementation of machines and algorithms.

The author (Polozhikhina, M.A., 2018), analyses the history of the evolution and development of the digital economy in different countries and regions. The general trends of these processes and their particularities are revealed. Digitization is seen in terms of the role it plays in establishing the new world economic system. According to the authors (Zhang, W., Zhao, S., Wan, X. and Yao, Y., 2021) digital economy, has become a force in promoting the economic growth of various countries. The results show: (1) The level of development of the digital economy in China increases year by year, the growth of digital infrastructure; slow development of the digital industry; (2) Digital infrastructure, digital industry and digital integration have positive effects on the total productivity of regional factors. (3) The mechanism of transmission from the digital economy to high quality economic development has the effect of mediating technological progress. (4) In terms of spatial distribution, the development of the digital economy in eastern China is making greater progress than other regions. (Minford, P., 1988) argues: "Most of the new classic models, such as the Sargent (1976) model in the USA, argue that most models do not contain explicit equations of labour supply and demand, rather an equation of aggregate production supply, which is derived from some equations, which it implicitly refers to the labour market and productive technology." In the paper, the new method of identifying tasks that can be automated by any technology is developed.

The author (Zimmermann, H.D., 2000) argues: "The evolution of the digital economy will have an elementary impact on economic systems and on the way in which economic values will be created. All sectors of the economy have applied information and computer technologies to increase productivity, expand sales markets and reduce operating costs. In almost all OECD countries, universal digitization for large enterprises reaches 90% or more in smaller firms".

Author (Heil, M., 2018) reviews empirical research on finance and labour markets. In the author's opinion: "Funding can interact effectively with labour market institutions in order to establish labour outcomes." Companies with high advantage have a higher volatility in

employment during the cyclical period of fluctuations. The advantage is the strength of the company's negotiation in the process of labour negotiations. The aim of the paper (Fumagalli, A., et all, 2018) is to analyses the characteristics of digital work related to the economy of platforms. Many business models, based on digital platforms, are based on the new composition of capital, capable of capturing personal information, and which can be transformed into big data. The authors (Bran, F. et all, 2022) analyse the impact of telework on economic growth in the EU in 2010-2019 using an econometric model using the Feasible Generalized Leasts Squares method. The results of the study reflect a greater impact of telework on economic growth than the rate of the employed population who do not work from home, the effect being manifested through the channel of labour productivity.

According to the authors (Szabó-Szentgróti, G., et all, 2021) the purpose of the study's research is to examine the changes in the issue of technological unemployment, to evaluate Keynes's theory, based on the analysis of the literature on the fourth industrial revolution. For the design of new business activities, work in public institutions we aim to list the following: (1) Distance employment and job opportunities. (2) Productivity and surveillance. (3) Preferences for distance work, and increased flexibility of professional life (4) Training skills. (5) The relationship between education and technology. (6) Future occupations and industry. (7) Digitized course corrections. The growing interest in machine learning has led to the brand change of many organizations: (9). Pandemic resilience versus future resilience. (10) Tasks and companies, in the future, digitization, automation and remote control, employment can further disaggregate the creation of goods and services. (11) *Preparation for the future of work. Policies that need to develop, design and manage the future of work are part of work-sharing agreements; subsidies for labour transition and technological adoption; raising the minimum wage; signification related to care, social and unpaid domestic work; as well as training, infrastructure, and growth strategies.* (12) Contribution of partnerships business development and education. (13) Access to finance and the development of new opportunities.

5. Projections on the Digital Labour Market Model

5.1 Formulation of policies for the development of the digital economy and the need to create the digital business model - correlated with the e-commerce model

Creating the digital model of the labour market. The need to create the digital model of public services, the digital model of public finance. The general functioning model of the digital economy - coordinated and monitored by the Government Digitalization Agency, the Ministry of Information technologies e-government, e-administration. We aim to build the digital model of the labour market within the system of the digital systemic economy, in close connection with other digitalization models.

5.2 Technological opportunities have a transformative impact on labour markets

In this article, we aim to study the ways in which digital technologies contribute to the development of the digital model of the labour market, of digital platforms. We aim to highlight the digital opportunities to support the efforts of labour market institutions in ensuring the development of strategies, employment policies, and the digital agenda. The

author (Lipaev, V., V., 2011) for the construction of a functional digital economy a fundamental role of the economy of the production of complex high quality software products, which was based on the traditional principles and methods of the economy of development of complex technical systems. The creation of such software products associated with high costs determines the need for strict planning, formalization and standardization of their production processes, as well as economic control and maintenance, similar to those used in the production of other large industrial products.
In the study "Digital Technologies for a New Future" (UN, 2022) for the development of a sustainable digital society, the following must be respected: (1) The impact of sustainable digital - systemic disruption; (2) Ensuring a balance between digitization and sustainability (which is difficult); (3) The launch of 5G networks: essential for new models of production and industrial organization; (4) The mass takeover of new technologies requires investment in infrastructure. The authors (, N.R. and Shirinkina, E.V., 2019) argue that the level of digitization of industries in % of the ratio of working hours. However, no one can predict all directions of future application of innovative technologies, and in 2025, the value created may significantly exceed our current estimates.
Mobile Internet, Automation of Intellectual Work, Internet of Things Cloud Technologies, Advanced Robotics, Self-Management and Semi-Autonomous - are revolutionary transformations in the world of work in the last decade, and have led to the emergence of digital online work platforms. This new form of work has disrupted business models, but also the employment model, on which these business models were based. Working on digital platforms offers employees the opportunity to work from anywhere, at any time, to get any job that suits them. Opportunities, the risks that employees face, raise many questions about the motivation of workers to accept that form of work. Those motivations vary in different parts of the world. An important issue today is the consequences for workers in this form of work. Consequences are social, psychological, institutional and financial in some cases.

5.3 Digital work platforms

The great technological transformations that have taken place in the last ten years that have also influenced work have greatly changed the human mentality, organization and management in various branches and activities have led to the development of digital platforms in the economic field, including online work. This form of work organization radically changes the existing business development models, new models of selection, recruitment and employment. The authors (Meng, X., Junankar, P.N. and Kapuscinski, C.A., 2004) argue that labour economists have become very interested, what is the impact of technological change on employment and unemployment? What evidence will they face? However, the predominant focus of empirical studies has been on employment and unemployment stocks, while technological change is more likely to affect workflows. *Model specification.* This study is distinguished by the fact that it also analyses the mobility of an individual along the technological scale. In other words, the model explains the behaviour of individuals in relation to the transition from a low-tech job (compared to the current position) to a high-tech job, from high-tech (again, relative to the current position) to a place of low-tech work or moving from one job to another without changing the level of technology.

Authors Steininger, D.M., Kathryn Brohman, M. & Block, J.H. (2022) states: "Identifying and exploiting opportunities are at the heart of entrepreneurial activities. Opportunities can also arise through new digital technologies." Theoretical implications of digital entrepreneurship through the development of key topics, highlights areas where existing theory may or may not be applied to new forms of digitized organization and activity. Technology infrastructure within and between companies is a priority for digital entrepreneurs - value creators, and secondly, digital entrepreneurs need new competent intellectual human capital to create new digital business models. Secondly, by capitalizing on the multi-layered architecture of digital innovation (Yoo et al. 2010), value creation and delivery have become dependent on partners who contribute to a complete user experience.

The authors (Fumagalli, A., Lucarelli, S., Musolino E., and Rocchi, G., 2018) analyse the characteristics of digital work viewed through the prism of the platform economy. Starting from the example of the Facebook business model, we explain the valorisation process at the base of platform capitalism, emphasizing the relevance of digital work.

The development of cloud technologies has led to structural changes in the labour market, which have led to the institutional transformation of market relations, which continues today. Therefore, new forms of types of labour relations have appeared changes in the activity of work and in the modelling of the development of these activities.

Model building. On the traditional labour market, the mechanism of labour supply and demand was formed. The key rule of marketing is that a product is all that can be offered to the market to meet certain desires and needs for compensation. The revolutionary nature of Cloud discovery does not lie in the emergence of new intermediaries, although it is important. The complex development of information technology has led to a faster reduction of market costs for the implementation of labour functions compared to intra-company costs.

5.4 The digital model of the labour market

The digital model of the labour market, daily data (online) are collected from various sites, including all major job sites, such as trudvsem.ru, hh.ru and others. Algorithms process all available stations. Employers are identified; duplicates and dubious vacancies are removed. The project of a digital labour market can have several operating modules. The most important at the first stage of operation are the analysis module, in which a digital portrait is formed for a certain locality: Personnel imbalances are revealed when there is an overabundance or a serious deficit of specialists. The program takes into account current labour market trends in a particular locality (village, town, region, district), Simulation Module. This mode allows you to change the data in your current digital portrait, how these changes affect or will affect the labour market in the near future. The model of the structure of the labour market is quite complex, it consists of the synthesis of the results of several different methods. Why does the analysis of vacancies not provide a real picture of the structure of the labour market? Nevertheless, does the vacancy structure reflect the real structure of the labour market? It is important to note that: 1) Large number of professions have seasonal fluctuations in demand. Thus, the structure of the labour market is dynamic, changing, and cyclical. 2.) Not all professions, including the relatively mass ones, 3) the jobs themselves are heterogeneous; different types of

professions can dominate them. 4) In addition, despite the distinct types of cities, some localities have a unique labour market structure. 5) Some sites publish obsolete and irrelevant vacancies, which distorts the structure of the labour market if you focus only on the structure of vacancies. 6) The process of introducing new technologies into industry is growing, which dynamically changes the structure of the labour market even in relatively inert industries. Model of formation of a portrait, of a settlement (village, city, region, region). Model of the distortion of personnel on the labour market - large quantities of rarity or unclaimed work mass. Assessing the relevance of the vocational education system to the needs of the market. Creating a model of potential industry threats focused on the macro indicators industry. 1. Defining economic models and the weight of macroeconomic proportions. 2. The analysis distributes the settlements on not only conditioned "traditional", industrial and post-industrial areas, the structure of the employers and their needs in a certain locality. 3. Business directors and directors; 4. Official bases of legal entities, entrepreneurs, self-employed. Statistical data - educational, demographic and others; 5. Information on the specialties and capacity of professional education institutions (universities, colleges, courses, etc.). 6. Received information is processed: Objects are identified and duplicate data is deleted; binding objects on the map of the settlements; 7. Assigning "weight" and markers to various parameters; 8. Preparing data for visualization In the new conditions of the digital data economy (United Nations, The report on the digital economy, 2021) concepts such as property rights and sovereignty become blurred. Digital sovereignty is often associated with the need for data storage within national borders, but the relationship between the geography of data storage and development is unclear. The digital economy has great potential to increase productivity, income and social welfare (OECD, 2016). Digital technologies allow the development of production with a diverse range of goods, less labour-intensive services, and expose some workers to the risk of unemployment, or lower wages. Most businesses have a broadband and web connection, but few use advanced ICT applications, such as enterprise resource planning software, e-commerce, cloud computing, or radio frequency identification. Public procurement, public-private partnerships can stimulate investment in ICT and digital adoption and can support the emergence of new digital markets.

5.5 Development of digital infrastructures

In order to develop the digital infrastructure needed for a digital labour market model, it is important to consider: (1) Broadband connectivity. The targets for broadband connectivity by 2030 include gigabit coverage for all households and 5G in populated areas. (2) Broadband coverage. A basic broadband network has been available to all households in the EU since 2013, given major technologies (xDSL, cable, fibre to headquarters - FTTP, Fixed Wireless Access - FWA, 4G and satellite). *Fixed broadband download.* (77%) of EU households had a fixed broadband subscription in 2020, after steady growth (annual growth rate of 2.1%) over the last 8 years. *Mobile broadband use.* In 2019, 71% of the population used a smartphone to access the Internet, compared to 49% in 2015. In 2020, 12% of EU households accessed the Internet via mobile technologies: Finland (38% of households), Italy (26 %), Latvia (26%). The *Broadband Price* Index measures basket prices for fixed, mobile, and converged broadband offers. Romania, Poland and Latvia had the lowest broadband prices, while Cyprus, Portugal and Belgium

- the highest prices, when fixed, mobile and convergent baskets are taken into account.

5.6 Financing the labour market

Labour market financing is a subject that requires a separate study, but in order to ensure the complex functioning of the digital labour market model, we are of the opinion to include this dimension. The author's studies (Heil, M., 2018) suggest that: (1) Labour protection legislation is closely linked to funding, in order to influence employment outcomes; (2) Financial development contributes to stimulating employment growth in non-OECD countries. Additional funding does not have this effect in OECD countries; (3) The process of financial globalization, with an impact on wage growth in emerging markets, can help reduce the share of national wages in OECD countries; (4) Bank deregulation helps to reduce income inequality, increases employment opportunities in countries with developed institutions. (5) Employment in companies is manifested by changes in industrial production; (6) Internal financial development and global financial integration contribute to the increased volatility of working hours; (7) Leveraged buying firms tend to have lower job growth rates and lower wages. According to the authors (Burlacu, S., et all, 2021) in the financial sector, digitalization has an accelerated impact on financial services, with various products, applications, Digitization will streamline managerial activity by designing managerial, technical and technological tasks. The integration of the digital model of financial services, the integration of the digital model of digital services on the money and financial markets is both an opportunity for the future digital model of the labour market and a necessity in the new complex construction of the digital economy. The integration and interaction of the digital platforms of the labour market with the digital platforms of the public financial services, and of the digital financial services from the platforms of the national and international financial markets will ensure an efficient functioning of the markets.

5.7 The network economy in the digital economy - and the foundation of the digital labour market

The current socio-economic theory ignores the informational approach of human activity, and does not have the necessary tools to study the network forms of common human activity, of the network economy. Network economy - we call the state of the economy, which occurs when the infrastructure that serves the functioning of the economy of a country, a group of countries, is based on the use of Internet technologies. Both the economic system and the individual elements change their properties. The executive saves time, saves money, and has a diverse access to operational information in all areas. Because of the use of Internet technologies in the activities of companies in the general economic environment, we notice multiple changes: new business models are formed; start using the new principles of business management.

5.8 The sustainable model of the digital labour market

Digitization has a major impact on sustainable development. Smart systems are applicable to sustainable development, through the application of the Internet of Things, generate opportunities for a sustainable approach to development in line with the United Nations Sustainable Development Goals to ensure the development of an equitable,

environmentally sustainable and healthy society. The use of smart technologies is designed as tools through which their integration benefits the essential elements: the elements of the food-water-energy link: (i) sustainable food production; (ii) access to drinking water; (iii) generating the use of green energy. The role of digitization and technologies associated with the Internet of Things (IoT) has been discussed for its potential, for food-water-energy and for developing Industry 4.0, improving social welfare and reducing the effects of climate change.

6. Conclusions

The development of digital platforms in the field of public data services, with the support of information technologies, artificial intelligence has a massive impact on the economic space of modern society. Digital communication, e-commerce, wider access to information are all part of modern life.

In these conditions of rapid modernization, especially after the Covid-19 pandemic crisis, it was necessary to develop the Digital Decade Program, which establishes the new form of governance with the Member States. We need the transformation of digital work - a real social media revolution and fully social.

In the last decade, digital work platforms are major transformations of online work. This new form of work not only disrupted existing business models, but also the employment model on which those business models were based.

Digitization must be approached proactively, with a foundation on anticipating change, on providing skills for workers, with the preparation of digital platforms for companies and enterprises in the field of production, agriculture and services with the full range of diversification (e-transport, e-commerce, e-tourism, e-financial services, e-medical services and e-education, e-culture, etc.).

Some technologies for digitizing work, creating digital platforms, lead to low contractual stability. It is necessary to ensure the monitoring of the quality of employment by the decision makers (politicians, administration and executives).

Job creation triggered by new profiles, adapted occupations, new technologies, increasing demand for technology-based products and services due to low prices, new markets and different customer groups.

Digital business through the development of online platforms will provide the opportunity to meet consumer demand. The development of internet technology, of telecommunications, has propelled the whole world.

By capitalizing on the potential for digital transformation (internet, mobile, wireless technologies, etc.) the banking and retail sectors will be able to expand ease of use, customer comfort, for shopping, banking. It is necessary to eliminate the bureaucratic, institutional, legislative obstacles that stand in the way of digital business developers in retail, banking, etc. services.

The perspective includes digitizing the benefits of digitization to catalyse the transition to sustainable production practices and improve the health of citizens by providing digital access to care, especially for disadvantaged communities to catalyse the transition to sustainable production practices and improve citizens' health by providing access digital care, especially for disadvantaged communities.

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