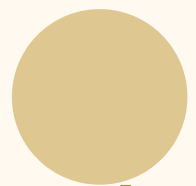
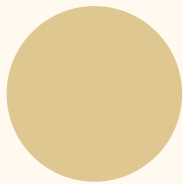




СТАЛИЙ РОЗВИТОК ЄС – КРАЦІ ПРАКТИКИ ДЛЯ УКРАЇНИ

Матеріали інтернет-конференції



Львів, Україна

22 лютого 2024 року



Co-funded by
the European Union



Сталий розвиток ЄС – кращі практики для України. Матеріали інтернет-конференції (22 лютого 2024 року). Львів: Національний університет «Львівська політехніка», 2024. 210 с.

Sustainable development of the EU – best practices for Ukraine. Materials of the Internet conference (February 22, 2024). Lviv: Lviv Polytechnic National University, 2024. 210 p.

Матеріали інтернет-конференції публікуються у рамках реалізації проєкту

Erasmus+ J.Monnet Chair

«Європейські студії для технічних спеціальностей в Національному університеті «Львівська Політехніка»

№ 101047462 – EUSTS – ERASMUS-JMO-2021-HEI-TCH-RSCH

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ЗМІСТ

<i>Льницька У. В.</i> ЄВРОПЕЙСЬКІ ЦИФРОВІ ТЕХНОЛОГІЇ ПАРТИЦИПАТОРНОЇ Е-ДЕМОКРАТІЇ».....	7
<i>Kashchena Nataliia</i> DEVELOPMENT OF A SUSTAINABLE BIOECONOMY: EXPERIENCE OF THE EUROPEAN UNION AND OPPORTUNITIES FOR UKRAINE».....	13
<i>Kravchenko S. A.</i> SINGLE DIGITAL MARKET AND DEVELOPMENT OF BUSINESS ENTITIES IN AGRICULTURE OF UKRAINE IN WARTIME CONDITIONS.....	18
<i>Майструк Н. О.</i> РИЗИКИ ЦИФРОВІЗАЦІЇ В УМОВАХ ТУРБУЛЕНТНОСТІ ТА ВІЙНИ.....	20
<i>Tetyana Nechyporenko</i> THE SINGLE DIGITAL MARKET: INDICATORS FOR UKRAINE.....	25
<i>Iryna Sukhorolska, Lidiia Kasha</i> ENVIRONMENTAL PROTECTION ISSUES IN EU CULTURAL DIPLOMACY.....	30
<i>Oleh Tsebenko, Olha Ivasechko</i> EU-UKRAINE COOPERATION IN CYBERSECURITY.....	34
<i>Nataliia Vovk, Oleksandr Markovets</i> EU EXPERIENCE IN THE DIGITAL TRANSFORMATION OF ADMINISTRATIVE SERVICES.....	38
<i>Абрат С.</i> ЯДЕРНИЙ ШАНТАЖ РФ ЯК ВИКЛИК ДЛЯ ЄВРОПЕЙСЬКОЇ СИСТЕМИ БЕЗПЕКИ	43
<i>Алексеева С.В.</i> ДІДЖИТАЛІЗАЦІЇ ОСВІТИ В ТЕОРІЇ ТА ПРАКТИЦІ ПЕДАГОГІЧНОЇ НАУКИ.....	47
<i>Бабич О.М.</i> ВПРОВАДЖЕННЯ ЕКОЛОГІЧНИХ ІННОВАЦІЙ У ПРОЕКТУВАННЯ ІНТЕРНАТНИХ ЗАКЛАДІВ.....	50
<i>Брославська Г. М.</i> ЕКОЛОГІЯ УКРАЇНИ - ПРОБЛЕМА СЬОГОДЕННЯ.....	52

<i>Вербицька Г.Л.</i> ЗАБЕЗПЕЧЕННЯ ІННОВАЦІЙНОГО РОЗВИТКУ ЕКОНОМІКИ УКРАЇНИ ШЛЯХОМ ІНТЕГРАЦІЇ В ЦИФРОВИЙ РИНОК ЄС.....	58
<i>Дегтяренко О.О.</i> СУДОВИЙ ПОЗОВ ГРОМАДСЬКОЇ ОРГАНІЗАЦІЇ ЯК ІНСТРУМЕНТ ЗАХИСТУ ЕКОЛОГІЧНИХ ПРАВ: ВІТЧИЗНЯНИЙ ДОСВІД ТА ЄВРОПЕЙСЬКІ ПРАКТИКИ.....	60
<i>Дмитрів М.</i> ІННОВАЦІЇ У ВИВЧЕННІ ТА ВИКЛАДАННІ ЄВРОПЕЙСЬКИХ СТУДІЙ.....	67
<i>Зелінська Г.О., Андрусів У.Я.</i> СТАЛИЙ РОЗВИТОК УКРАЇНИ ЧЕРЕЗ ЕКОЛОГІЗАЦІЮ ІННОВАЦІЙНОЇ ДІЯЛЬНОСТІ СУБ'ЄКТІВ ГОСПОДАРЮВАННЯ.....	71
<i>Івасечко О.Я., Цебенко О.О.</i> ГЛОБАЛЬНА СТРАТЕГІЯ ЄС GLOBAL GATEWAY: ІМПЛЕМЕНТАЦІЯ ІНФРАСТРУКТУРНИХ ПРОЄКТІВ НА РІВНІ ЄС-АСЕАН».....	77
<i>Калейніков А.Г.</i> «ПОШУК БІОТЕХНОЛОГІЧНИХ ШЛЯХІВ ЗНИЖЕННЯ КОНЦЕНТРАЦІЇ НІТРИТІВ У ВОДОЙМАХ ДО ЄВРОПЕЙСЬКИХ СТАНДАРТИВ».....	82
<i>Клименко К.В., Ухналь Н.М.</i> ІМАНЕНТНІСТЬ СОЦІАЛЬНО-ЕКОНОМІЧНОЇ СИСТЕМИ НА ЗАСАДАХ СТАЛОГО РОЗВИТКУ.....	87
<i>Ковпак В. Ю.</i> ПРОСТОРОВО-ПЛАНУВАЛЬНА ОРГАНІЗАЦІЯ ТЕРИТОРІЇ ПРОВЕДЕ- ННЯ ОЛІМПІЙСЬКИХ ІГОР ТА СТАЛИЙ РОЗВИТОК : ЄВРОПЕЙСЬКИЙ ДОСВІД	92
<i>Конєва М.В., Мітрясова О.П.</i> ОЦІНКА ВПЛИВУ НА ДОВКІЛЛЯ ТВАРИННИЦЬКОГО ПІДПРИЄМСТВА З ПОЗИЦІЇ УТВОРЕННЯ ВІДХОДІВ.....	97
<i>Корольчук Л.В.</i> СТАЛИЙ РОЗВИТОК ЄС: СУЧАСНІ ВИКЛИКИ.....	102
<i>Кушнір Л. А., Кушнір В. О.</i> ТРАНСФОРМАЦІЯ СТРАТЕГІЧНОГО МЕНЕДЖМЕНТУ: КЛЮЧОВІ ВЕКТОРИ В УМОВАХ ЦИФРОВІЗАЦІЇ.....	105

<i>Semen Lebediev</i> HUMAN CAPITAL IN THE CONCEPT OF SUSTAINABLE DEVELOPMENT.....	111
<i>Лісовик В.Л., Василенко В.І., Шовкалюк М.М.</i> СПРИЯННЯ РОЗВИТКУ ПРИВАТНОГО БІЗНЕСУ В УКРАЇНІ ЧЕРЕЗ ПОПУЛЯРИЗАЦІЮ ІДЕЙ ЗЕЛЕНОГО ПІДПРИЄМНИЦТВА ТА СТАЛОГО РОЗВИТКУ В СИСТЕМІ ВИЩОЇ ОСВІТИ.....	116
<i>Маджд С.М.</i> ЕКОЛОГІЧНА СТІЙКІСТЬ - ІНДИКАТОР СТАЛОГО РОЗВИТКУ СУСПІЛЬСТВА.....	121
<i>Мартинюк М.С.</i> ЕКОЛОГІЧНІ АСПЕКТИ ДОСЯГНЕННЯ ЦІЛЕЙ СТАЛОГО РОЗВИТКУ В ПОЛІГРАФІЇ.....	124
<i>Мац А.Д., Смирнов В.М., Мітрясова О.П.</i> ВОДНА БЕЗПЕКА МІСТА МИКОЛАЄВА ЗА УМОВ ВОЄННОГО СТАНУ.....	129
<i>Біла А.О., Мельник О.П.</i> СТАЛЕ СПОЖИВАННЯ ХАРЧОВОЇ ПРОДУКЦІЇ В КОНТЕКСТІ СТРАТЕГІЇ ЄВРОПЕЙСЬКОГО ЗЕЛЕНОГО КУРСУ.....	134
<i>Минич Ю.В.</i> ІТ - НЕВІД'ЄМНА СКЛАДОВА СУЧАСНОГО БІЗНЕСУ.....	138
<i>Нагірний О.М., Василиця Н.Б.</i> ЄВРОПЕЙСЬКІ СТУДІЇ ТА ІДЕЇ «ЗЕЛЕНОЇ ЕНЕРГЕТИКИ» В УНІВЕРСИТЕТСЬКІЙ ОСВІТІ.....	140
<i>Піх М.Р., Шкіль А.П.</i> РОЛЬ ЦИФРОВИХ ТУХНОЛОГІЙ У РОЗВИТКУ ЕКОСИСТЕМИ STEM- ОСВІТИ.....	145
<i>Сахнюк І. О., Кириленко Л. В., Тітова Г. М.</i> ЗАСТОСУВАННЯ НАЙКРАЩИХ ПРАКТИК І СТАНДАРТІВ ПІД ЧАС РОЗВИТКУ ЦИФРОВІЗАЦІЇ.....	151
<i>Семерня О. М., Рудницька Ж.О.</i> ОСВІТНІЙ СЕКТОР ЯК ФАКТОР РОЗВИТКУ ЄДИНОГО ЦИФРОВОГО РИНКУ: ІНДИКАТОРИ ДЛЯ УКРАЇНИ.....	156
<i>Бунда О.М., Сілівончик А.В.</i> ЦИФРОВІЗАЦІЯ БІЗНЕС-ПРОЦЕСІВ В УКРАЇНІ.....	161

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HUMAN CAPITAL IN THE CONCEPT OF SUSTAINABLE DEVELOPMENT

Crisis phenomena in the world economy, which periodically occur during the last two centuries of observation, require scientists-analysts to create a theory of economic growth that would not only adequately explain existing trends, but also allow for long-term forecasts. In the era of globalization, this problem becomes especially important for every country, since the processes taking place in any country in one way or another affect the state of the entire world economic system. And for Ukraine, this problem is even more acute, taking into account the state in which our country found itself as a result of Russian aggression. In connection with this, an urgent task is the construction of a model of economic growth, which would be oriented towards the sustainable development of each country as an element of the world economic system, as well as the definition of indicators by which it is possible to monitor the progress of the country according to this scenario.

One of the first attempts to build a system dynamics model is the work of Jay Forrester. Based on a qualitative analysis (by phase trajectories) of mathematical models known as World1 and World2, he considered possible scenarios of the global evolution of humanity, combining three such components into a single system: nature, society and economy. Later, this mathematical model was improved by Dennis Meadows. The World3 computer model had three times more parameters than the previous ones, which made it possible to carry out quantitative analysis on its basis, not just qualitative. According to all the scenarios considered on the basis of this model, it was shown that if the growth rates that existed at the end of the 20th century are maintained, the load on the environment will increase, which will lead to exceeding the Limit to Growth, when life on Earth will be incapable of self-support. Meadows estimated the population of the Earth,

after which the growth limit will be exceeded, at 4.5 – 5.0 billion people. However, already in 2000, the population increased to 6 billion people. As a result of this, the so-called an Ecological Footprint, which is defined as the area of land that is necessary for the extraction of the required amount of resources and the disposal of household waste, already exceeds by 20% the level of use of land resources that would not violate the ability of our planet to sustain itself. Therefore, the human load on the natural environment already exceeds the permissible limit, which requires humanity to transition to an ecologically safe method of production. The main conclusion emerging from the analysis of the World3 computer model is the presence of three key factors that affect the probability of a global catastrophe [1]. This is the presence of a growth limit, constant desire for production growth and the gap in time (latent period) between the approach to the growth limit and society's reaction to this approach. If the system has these three factors, sooner or later it will collapse. In order to return to the limits of sustainability, it is necessary to change social aspirations. Awareness of this problem led to the adoption of the Sustainable Development Strategy, which was announced in 1992 at the United Nations Conference on Environment and Development (Earth Summit). Currently, 178 countries have already signed this Declaration.

The modern stage in the development of a global socio-economic development program aimed at eliminating the negative consequences of exponential growth is the Declaration "Transforming our world: Agenda for sustainable development until 2030", which was considered at the 2015 UN Summit. And also 17 Sustainable Development Goals (SDGs) were formulated. It should be emphasized that SDG 4 in this list is the provision of quality education for all and the provision of opportunities for Lifelong Learning. This approach ensures the continuous development of human potential with its subsequent transformation into human capital. At the current stage of economic development, which is defined as the knowledge economy, it is human capital together with physical capital and labor that determine economic growth.

As for our country, in 2018 the law "On the Strategy of Sustainable Development of Ukraine until 2030" was developed. According to this law, the Association Agreement

between Ukraine and the European Union is the basis for the introduction of innovative transformations that would contribute to the sustainable development of our country. In this sense, the decisive factor for the success of the implementation of this Strategy is to direct the development of the Ukrainian economy to the widest possible application of the latest technologies in all branches of production. Therefore, in modern conditions, human capital becomes the basis that is able to ensure the recovery of the Ukrainian economy, its innovative development, the realization of the concept of sustainable development, thereby creating the conditions for Ukraine's entry into European space.

According to the UN methodology [2], the evaluation of the country's human potential is carried out according to the Human Development Index (HDI), which is defined as the geometric mean of three basic components. These components are: indicator of health, indicator of the possibility of acquiring knowledge and indicator of well-being. In the light of the concept of Sustainable Development, the second component of the HDI is of interest, namely the indicator that characterizes the possibility of acquiring knowledge. It is a composite characteristic that includes the average number of years of education for adults who have already reached the age of 25 and the number of expected years of education for children entering school. It should be noted that for each of these two components, Ukraine is ahead of the world average during the entire measurement period, that is, during 45 years.

In EU countries, provision of adult education is considered as one of the most important problems. So, almost 40 % of European employers face difficulties in finding specialists with the skills necessary for the innovative development of the economy. The European Commission believes that the efforts of all EU countries should be combined to implement the Lifelong Learning paradigm. Thus, within the framework of the Digital Europe Programme 2023/2024, the training of specialists in such fields as data science, artificial intelligence, and cyber security is provided, with the subsequent wide implementation of technologies based on them in all sectors of the economy. Therefore, the development of digital skills of the population is becoming important.

Since 2014, the European Commission has been using the Digital Economy and Society Index (DESI) to objectively assess the level of digitization. DESI [3] is calculated based on the results of measuring 37 indicators, which are then grouped according to five main directions of digitalization policy: network connection, use of the Internet, digital public services, human capital, integration of digital technologies. For EU countries, the indicators defining the sub-dimension "Human capital" reach such a level. As of 2023, the average internet user is 88.59% of the population, 53.92% have at least basic skills, 26.46% have more than basic skills, 4.6% are ICT professionals, and the number of graduates who obtained a diploma of an ICT specialist is only 4.2%.

At the international level, for 13 years in a row, an international ranking has been compiled to determine a country's achievements on the path of innovative development, in which the country's place is determined by the value of the Global Innovation Index (GII). The methodology for measuring this index is proposed by the World Intellectual Property Organization [4]. The ranking is based on a total of 82 indicators, which is related to the multidimensional aspects of innovation. These indicators are formed in the following areas: investments in science and innovation; technical progress; technology implementation; socio-economic influence. According to each of these groups of indicators, as well as according to the overall value of the GII, the countries participating in the rating are divided into four categories: countries with a high level of income; countries with an income indicator higher than the average; countries with lower-than-average income; low-income countries. All indicators included in the GII are combined into two groups: innovation costs and innovation efficiency. The table shows the results of the GII rating for Ukraine among 132 participating countries.

Rankings for Ukraine

GIYR	GII	Innovation inputs	Innovation outputs
2020	45	71	37
2021	49	76	37
2022	57	75	48
2023	55	78	42

As can be seen from the table, Ukraine is more successful in the field of innovation efficiency, but is inferior to other countries of its group in terms of investment in innovation, which can lead to negative consequences in the near future, when the country exhausts the entire resource of existing innovative technologies. According to the level of income, Ukraine belongs to the group of countries for which this indicator is lower than the average level. Among the 36 countries of this group, in 2023 Ukraine took third place after India and Vietnam. It should be noted that despite the fact that the level of income in Ukraine is lower than the average, its place in the overall rating is relatively high (our country belongs to the third quartile of the rating).

In Ukraine, on September 5, 2023, the Cabinet of Ministers adopted the order "On approval of the list of indicators of the Digital Economy and Society Index (DESI)" and presented a plan for the development of the digital economy [5]. According to this plan: 100% of public services should be available online for both citizens and businesses; 95% of transport infrastructure and social facilities of all settlements must have access to high-speed Internet; 6 million citizens of Ukraine need to be involved in the digital skills development program; the share of the IT product in the GDP of Ukraine should be at least 10%. Also, within the framework of the EU4Digital program, the improvement of the national policy on ensuring access to digital innovative technologies for small and medium-sized businesses, as well as the development of the system of startups in the field of ICT to improve their financing conditions.

The given data are refreshing, that according to the level of human capital, which is the leading factor of sustainable development, and, accordingly, according to the ability to create effective new technologies, Ukraine occupies a worthy place among other European countries. Therefore, Ukraine's cooperation with EU countries is beneficial for both parties, and the effect of such cooperation can be synergistic.

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СПРИЯННЯ РОЗВИТКУ ПРИВАТНОГО БІЗНЕСУ В УКРАЇНІ ЧЕРЕЗ ПОПУЛЯРИЗАЦІЮ ІДЕЙ ЗЕЛЕНОГО ПІДПРИЄМНИЦТВА ТА СТАЛОГО РОЗВИТКУ В СИСТЕМІ ВИЩОЇ ОСВІТИ

Викладачі освітніх закладів – рушійна сила у підготовці висококваліфікованих фахівців для економіки України. Заклади освіти здатні впливати на сталий розвиток суспільства також шляхом формування відповідних цінностей. Крім того, ЗВО – «дослідний майданчик», на якому із залученням наукового потенціалу викладачів і студентів закладу можна інтегрувати нові технології у організаційно-навчальний