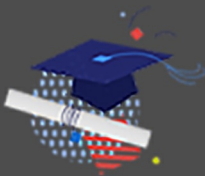




SUSTAINABLE DEVELOPMENT: MODERN THEORIES AND BEST PRACTICES



Teadmus OÜ

Sustainable Development: Modern Theories and Best Practices

Materials of the Monthly International Scientific and Practical
Conference (February 24-26, 2021)

Tallinn
2021

Sustainable Development: Modern Theories and Best Practices : Materials of the Monthly International Scientific and Practical Conference (February 24-26, 2021) / Gen. Edit. Olha Prokopenko. Tallinn: Teadmus OÜ, 2021, 79 p.

ISSN 2733-2942

Reviewers:

Doctor of Economics, Professor Hanna Obykhod, Department of Natural-Technogenic and Environmental Safety, Public Institution «Institute of Environmental Economics and Sustainable Development of the National Academy of Sciences of Ukraine», Kyiv, Ukraine

Doctor of Economics, Professor Illiashenko Sergii, Department of Marketing, University of Economics and Humanities, Bielsko-Biala, Poland

The collection consists of materials from the Monthly International Scientific and Practical Conference “Sustainable Development: Modern Theories and Best Practices”. They represent scientific research results in such scientific areas as financial and economic, managerial and legal, social and cultural, ecological and technical issues of sustainable development on local, regional and international levels. It is for scientists, lecturers of higher education institutions, students, graduates, and everybody interested in modern scientific and practical sustainable development problems.

Keywords: Sustainable Development, Financial Issues of Sustainable Development, Economic Issues of Sustainable Development, Managerial Issues of Sustainable Development, Legal Issues of Sustainable Development, Social Issues of Sustainable Development, Cultural Issues of Sustainable Development, Ecological Issues of Sustainable Development, Technical Issues of Sustainable Development, Regional Features of Sustainable Development, International Cooperation for Sustainable Development.

CONTENT

FINANCIAL AND ECONOMIC ISSUES OF SUSTAINABLE DEVELOPMENT

ALINA ARTOMOVA

ECONOMIC-MATHEMATICAL MODELING AND FORECAST OF MIGRATION FLOWS DEVELOPMENT AFTER THE CONSEQUENCES OF COVID-19 IMPACT	6
--	---

HANNA CHMIL

STAGES AND CONFIGURATORS OF THE CONSUMER MARKET ECONOMIC ENTITIES BEHAVIOR DIGITAL TRANSFORMATION	8
---	---

ОЛГА КАЛИНИНА

THE NEED TO IMPROVE LOGISTICS FOR SUSTAINABLE DEVELOPMENT QUALITY OF LIFE OF PEOPLE	9
---	---

ЕЛЕНА ЖИЛЯКОВА

ВЛИЯНИЕ СТРАХОВАНИЯ НА УСТОЙЧИВОЕ РАЗВИТИЕ СОЦИАЛЬНО-ЭКОНОМИЧЕСКОЙ СИСТЕМЫ СТРАНЫ	11
---	----

ВИКТОРИЯ КОЗУБ, ЛЮДМИЛА БОНДАРЕНКО

ПРОЕКТНЫЙ ХАРАКТЕР ПРОЦЕССА ВЫХОДА КОМПАНИИ НА ЗАРУБЕЖНЫЕ РЫНКИ	13
---	----

ТАТЬЯНА СТАВЕРСКАЯ

ФОРМИРОВАНИЕ ПРИНЦИПОВ УСТОЙЧИВОГО РАЗВИТИЯ ПРЕДПРИЯТИЯ	15
---	----

MANAGERIAL AND LEGAL ISSUES OF SUSTAINABLE DEVELOPMENT

NATALIIA PARKHOMENKO

BUSINESS SYSTEMS STRATEGY IN THE GLOBAL ENVIRONMENT AS A COMPONENT OF SUSTAINABLE COMPANY DEVELOPMENT	18
---	----

NATALIIA KASHCHENA

SCIENTIFIC AND APPLIED PLATFORM OF TRADE ENTERPRISES ECONOMIC ACTIVITY DIGITAL MANAGEMENT TRANSFORMATION	20
--	----

SOCIAL AND CULTURAL ISSUES OF SUSTAINABLE DEVELOPMENT

ВИКТОРИЯ МАЦУКА

ПРИОРИТЕТЫ УСТОЙЧИВОГО РАЗВИТИЯ ТУРИСТИЧЕСКО-РЕКРЕАЦИОННОГО ПОТЕНЦИАЛА РЕГИОНА	22
--	----

ENVIRONMENTAL AND TECHNICAL ISSUES OF SUSTAINABLE DEVELOPMENT

NATALIIA DUNA, ALINA PAVLENKO

CIRCULAR ECONOMY: ESSENCE AND MANIFESTATIONS IN THE CONDITIONS OF POST-CRISIS DEVELOPMENT	26
---	----

VALERII MYKHAILOV, ANDRII ZAHORULKO, ALEKSEY ZAGORULKO

DEVELOPMENT OF THE TECHNOLOGICAL PROCESS FOR THE PRODUCTION OF HEALTH-IMPROVING PRODUCTS BASED ON PLANT RAW MATERIALS	28
---	----

OLEKSANDR NOVIKOV, NATALIA POTRYVAIEVA, OLEKSII SADOVYI	
INTRODUCTION OF SPRINKLER IRRIGATION IS A GUARANTEE OF STABILITY OF DEVELOPMENT OF THE SOUTHERN REGION OF UKRAINE	30
OLEKSANDR CHEREVKO, VALERII MYKHAILOV, ANDRII ZAHORULKO, ALEKSEY ZAGORULKO	
PROSPECTS FOR THE DEVELOPMENT OF IR TECHNOLOGIES IN THE PRODUCTION OF DRIED SEMI-FINISHED PRODUCTS	33
IGOR MATYUSHENKO, ANNA GAVRILOVA	
PROSPECTS FOR ACHIEVING JOINT ECONOMIC SECURITY OF THE EU AND UKRAINE	35
YURIY KRAVCHENKO	
WORLD MOLLISOLS DIVERSITY AND THEIR CONSERVATION USE: GLOBAL AND LOCAL ASPECTS	38
ВАЛЕРИЙ МИХАЙЛОВ, ОЛЬГА САМОХВАЛОВА, СВЕТЛАНА ОЛЕЙНИК, НАТАЛЬЯ ГРЕВЦЕВА, ЕКАТЕРИНА КАСАБОВА	
ОБЕСПЕЧЕНИЕ УСТОЙЧИВОГО РАЗВИТИЯ ХЛЕБОПЕКАРНОЙ И КОНДИТЕРСКОЙ ОТРАСЛЕЙ ПУТЕМ СОЗДАНИЯ НОВЫХ РЕСУРСОСБЕРЕГАЮЩИХ ТЕХНОЛОГИЙ	41
ИРИНА ДЕРИД	
ПРОБЛЕМЫ УСТОЙЧИВОГО РАЗВИТИЯ СТРАН, ПОРОЖДАЕМЫЕ ХАРАКТЕРОМ И СТЕПЕНЬЮ ОБЕСПЕЧЕННОСТИ ЭНЕРГЕТИЧЕСКИМИ РЕСУРСАМИ	44

REGIONAL FEATURES OF SUSTAINABLE DEVELOPMENT

IRYNA HONCHARENKO	
EVALUATION OF THE LOCAL GOVERNMENT EFFICIENCY	47
ROMANA MIKHEL	
PROBLEMS OF CROSS-BORDER COOPERATION DEVELOPMENT IN UKRAINE UNDER THE CONDITIONS OF SUSTAINABLE DEVELOPMENT	49
TETIANA KIM, OLEKSII KIM	
SOCIO-PSYCHOLOGICAL ASPECT OF HUMAN DEVELOPMENT IN THE CONTEXT OF SUSTAINABLE DEVELOPMENT OF UKRAINE	52
OLENA DOVGAL, NATALIA POTRYVAIEVA, LYUDMILA BEZUHLA	
THE ESSENCE OF FORMATION AN INNOVATIVE MODEL OF ECOTURISTIC INFRASTRUCTURE DEVELOPMENT OF THE REGION	56
LARISA YAREMKO, SOFIYA YAREMKO	
THE CONCEPT OF SMART SPECIALIZATION AS A MAJOR FACTOR IN THE REGIONAL DEVELOPMENT OF UKRAINE	60
АНЗОР ДЕВАДЗЕ, ОЛЬГА ПРОКОПЕНКО, ЛЕЛА ДЕВАДЗЕ	
ОСОБЕННОСТИ УСТОЙЧИВОГО РАЗВИТИЯ АГРАРНОГО ТУРИЗМА	62
OLGA TOFANIUK, ALONA ZINCHUK	
CURRENT ISSUES OF STRUCTURAL CHANGE IN THE EU	65

INTERNATIONAL COOPERATION FOR SUSTAINABLE DEVELOPMENT

MARYNA DOMASHENKO, PAVLO LAZIS	
DEVELOPMENT OF THE MOST INFLUENTIAL DIGITAL COMPANIES IN THE WORLD	67
NATALIIA KRAVCHENKO	
FORMATION OF THE CONCEPT OF SUSTAINABLE DEVELOPMENT AND ITS MISSION	70

KATERYNA LADYCHENKO

SUSTAINABLE DEVELOPMENT STRATEGY OF REGIONAL TRADE AGREEMENTS 74

OLENA PORADENKO

THE MAIN TRENDS IN THE DEVELOPMENT OF TRANSPORT NETWORKS OF THE EUROPEAN
UNION 77

FINANCIAL AND ECONOMIC ISSUES OF SUSTAINABLE DEVELOPMENT

ECONOMIC-MATHEMATICAL MODELING AND FORECAST OF MIGRATION FLOWS DEVELOPMENT AFTER THE CONSEQUENCES OF COVID-19 IMPACT

Alina Artomova, Candidate of Technical Sciences, Associate Professor
National Aerospace University «Kharkiv Aviation Institute (KhAI)», Ukraine

Formulation of the problem. In the current realities of the COVID-19 pandemic, European migration policies are an important factor in the security of the European Union. The COVID-19 pandemic and the economic crisis have led to a significant increase in the number of unemployed in the labor market. In Ukraine, the unemployment rate and the number of registered unemployed amounted to more than 486 thousand (9.4%). Percentage and number of unemployed receiving benefits less than UAH 2,000. is 50 thousand (10%). Among the registered unemployed, 57% are women and 43% are men. More than 50% of the registered unemployed worked in trade and repair, agriculture and processing.

According to the survey of the rabota.ua platform, more than 58% of respondents do not work in their specialty, and according to the Employment Service, almost 50% of registered unemployed have higher education. More than 42% of the registered unemployed are over 45 years old. Today, this situation encourages Ukrainian citizens to go to work in European countries as never before.

Analysis of recent research and publications. Some aspects of the chosen research topic are presented in the works of O. Malinovskaya, T.O. Hnatyuk, Yu.P. Humeniuk, T. Melnyk, O. Loshenyuk, M. Pityulycha. Researchers have focused on determining the motivation of migrant workers and the relationship between the financial situation of those wishing to leave and the possibility of realizing such a desire. Researchers noted an increase in threats to Ukraine due to an increase in the migration rate of skilled labor.

It should be noted that in these scientific works not enough attention is paid to the methods of research of labor migration, because in modern conditions of development, the existing methods of statistical research need to be improved and adapted for the relevant object of study.

Unresolved components of the overall problem. However, many issues of statistical research of migrant labor, its causes and consequences for socio-economic development of the region remain debatable and require further research. This applies, in particular, to questions about the nature of labor migration, its causes and impact on the development of the region and modern research methods, which led to the choice of topic.

Formulation of gender goals. The purpose of the study is to determine the main factors and nature of labor migration from Ukraine to the European Union and the consequences of this process for the development of the Ukrainian economy. The

purpose of this work is to develop approaches to improve methods for calculating the number of migrants in each region of Ukraine depending on such factors as: the number of workers, average hourly wages and unemployment. The following methods were used in the study of the topic under consideration: generalization method, economic and statistical analysis, factor analysis, correlation analysis and graphical analysis.

Presentation of the main research material. International labor migration is the movement of labor between countries. It is a process of organized or spontaneous movement of the working population from one country to another. The main role in the modern international movement of the population is played by labor migration. Its scale is constantly growing, and almost all countries are involved in this process, but in 2020 these flows had some changes, and therefore it is important now to forecast these flows to stabilize the country's economy.

In our opinion, a very promising area is the use of production functions. Among the production formulas with partial replacement of resources, the Cobb-Douglas function is widely known.

This production function allows you to quantitatively and qualitatively analyze important economic dependencies in the field of migration flows, and its solution based on the original data of the regions allows you to explore and obtain specific models. The function presented by us is a model with three variable migration factors, which will reveal the relationship between the number of labor force (L), the average hourly wage (W) and the unemployment rate (U). $M = (AL^a)(W^b)(U^c)$, where M – is the number of migrants; A – production ratio, which reflects the level of technological productivity and changes when the basic technology changes; L , W , U – the number of labor force, average initial wage and unemployment rate; a , b and c – coefficients of elasticity for the migration factor, indicating the effect of processing factors on the resulting indicator of the i -th region.

To create a predictive modeling, we need to identify what indicators affect this migration flow. Based on the described relationship, we construct a multifactor model of the dependence of migration flow on the number of labor, average hourly wages and unemployment.

Thus, based on real static data, we built a multifactor linear model of the dependence of migration flows of the i -th region (M) on the number of labor, average hourly wages and unemployment of the i -th region, and estimated its parameters by the method of least squares. After that, we need to check the constructed model for adequacy (correspondence) to reality. Calculate the coefficient of determination by formula 15.

The coefficient of determination shows that the calculated model of formation of revenues from traffic regulations by 72.38% corresponds to reality.

After calculations of receipts from the uniform tax on multifactor model, we will bring the received sums in tab. 2, and compare these data with the actual revenues of the regions to determine the relationship between them.

Conclusions. It was determined that the reasons for Ukraine's migration to the EU countries are high unemployment, inflation, low wages, dissatisfaction with the standard of living in the country and so on. Construction and analysis of a multifactor linear model of the dependence of migration flows in the i -th region on the number of labor force, average hourly wages and unemployment rate of the i -th region allowed to present the rating of the number of migrants. The results showed that the model is as close as possible to reality, and the differences in the results of some regions are explained by the

influence of other migration factors not considered in the model.

The use of this method allows monitoring of changes in migration flows in order to resolve this problem. In general, the level of migration and outflow of labor from Ukraine is quite high, the situation is exacerbated by the economic crisis caused by COVID-19. This forces to attract the attention of the state and to deal with the regulation of migration processes at the legislative level and to create appropriate conditions for reducing the migration of Ukrainians to EU countries.

Державний сайт статистики України (2020). Загальна статистика. Date of visit. 25.10.2020. URL: <http://www.ukrstat.gov.ua/>

STAGES AND CONFIGURATORS OF THE CONSUMER MARKET ECONOMIC ENTITIES BEHAVIOR DIGITAL TRANSFORMATION

Hanna Chmil, PhD in Econ. sc., Associate Professor
Kharkiv State University of Food Technology and Trade, Ukraine

The changes activator of economic entities behavior at the consumer market is the digital transformation. Its driving forces are new technologies, business models and user habits. Digital transformation changes the traditional principles of doing business and thus produces unprecedented opportunities for value creation and new sources of profit, primarily through: new technological businesses start-up cheapening; new technologies spreading acceleration; effective work with data (insights) for management decisions making; flexibility because of new work styles and focusing on user needs rather than products.

Economic entities digital transformation carries out stages in the following sequence: recognition – digital transformation essence understanding, own needs analysis and business development opportunities; planning – digital transformation strategy defining, tools selection, plans and programs development; implementation – team selection, innovation initiatives and open innovations activating formats launch. The business entities economic behavior digital transformation effectiveness, in our opinion, is determined by configurators of changes clear identification.

On the base of the previous research results, we believe that the digital transformation configurators of the consumer market economic entities behavior are: customer service (Customer Centricity), innovation (R&D), value (Value), partnership and collaboration (Partner Centricity), work with data (Data Governance), HR-strategy and culture.

Thus, the continuous modernization of existing and creation of new digital and information technologies, changing the formats of business models and user habits lead to the business entities economic behavior digital transformation at the consumer market. The economic entities behavior model is determined by certain configurators and is subjected to the general targeted strategy of changes. Therefore, further research is focused on the economic entities behavior modeling at the consumer market.

- Davydova, O., Kashchena, N., Staverska, T., & Chmil, H. (2019). Digitalization of economic activity management and sustainable enterprise's development. *International Journal of Innovative Technology and Exploring Engineering*., 8. Issue 3C, 195–200.
- Davydova, O., Kashchena, N., Staverska, T., & Chmil, H. (2020). Sustainable development of enterprises with digitalization of the economic management. *International Journal of Advanced Science and Technology*, 29. No. 8s, 2370–2378.
- Krutova, A., Kashchena, N., & Chmil, H. (2020). Enterprises' economic activity stimulation as a driver of national economy sustainable development. *Економічна стратегія і перспективи розвитку сфери торгівлі та послуг*, 1 (31), 162–173.
- Savytska, N., Chmil, H., Hrabynikova, O., Pushkina, O., & Vakulich, M. (2019). Digitalization of economic activity management and sustainable enterprise's development. *International Journal of Innovative Technology and Exploring Engineering*., 9. No. 1., 63–76.

THE NEED TO IMPROVE LOGISTICS FOR SUSTAINABLE DEVELOPMENT QUALITY OF LIFE OF PEOPLE

Olha Kalinina, Candidate of Economic Sciences, Associate Professor
National Aerospace University «Kharkiv Aviation Institute (KhAI)», Ukraine

In the context of a changing economic situation in the world, it is increasingly necessary to consider the phenomenon of "sustainable development".

Sustainable development is a process of economic and social change in which natural resources, direction investment, orientation scientific and technological development, personal development and institutional changes are aligned with each other and enhance current and future capacity to meet human need. In many ways, we are talking about ensuring quality of life of people.

An important role in ensuring quality of life people play logistics as an integrated set of organizational and managerial and production and technological processes for the effective provision of various systems with commodity, material and information resources. Also, logistics is a single holistic mechanism that ensures the achievement of goals from supplier to consumer. Moreover, the main goal of any integration process in logistics is to reduce costs.

The oil products market is the most competitive and least regulated among other energy markets such as gas and coal. However, it requires constant development due to: increasing the volume of raw materials of its own production, increasing the efficiency of processing and the quality and competitiveness of oil products, creating reserve reserves of oil and oil products. This can be achieved by attracting significant investments in this sector of the economy, which will favorably affect the activities of enterprises that are engaged in transportation and sale of fuels and lubricants.

The quality of services provided by enterprises operating in this area depends on timely delivery by their own vehicles, high quality oil products, and flexible pricing policy. However, not every enterprise can achieve high values of the specified parameters

of competitiveness. Therefore, for this industry it is necessary to build an effective supply chain and designate a balanced scorecard for its management.

To accomplish this task, the SMART expert method was used, the types of logistics that have the greatest impact on the oil product market were identified, criteria were formed that determine the level of intra-industry competition, and a profile of the types of logistics was built.

The work took into account the following types of logistics: purchasing, distribution, transport, information, sales, warehouse and customs.

The main criteria that determine the level of intra-industry competition: the speed of delivery of fuels and lubricants to the customer, their cost, the uniqueness of the technologies used, the available material and technical resources, the smooth delivery of fuels and lubricants to the enterprise, the cost of transit services, qualified workers, transportation of fuels and lubricants in compliance with the rules for the transport of dangerous goods, the quality of petroleum products, the compliance of vehicles with fire safety standards, the compliance of containers for the transportation of materials with the established standards, the optimal route for the transportation of fuels and lubricants, the necessary documentation for transportation, a modern road convoy, a modern approach to accounting of materials, contracts with an oil refinery supplier, availability of our own oil depots, quality of fuels and lubricants, assortment, the price of petroleum products, additional services, the speed of response to the order, the level of brand recognition.

The studies carried out using the SMART-method showed that the following criteria received the highest quantitative assessment: the quality of oil products; modern motor transport convoy; the price of oil products, additional services; speed of response to an order; the level of brand awareness.

Each of the selected criteria has a certain influence on the type of logistics. It has been proven by calculations that transport and procurement types of logistics are the most important, and also have the greatest impact on the competitiveness in this industry. This means that the enterprise needs to improve and develop these types of logistics. This is what our further research will be aimed at.

Bowersox, D. (2005). Bowersox, D. Logistics: an integrated supply chain / D. Bowersox, D.J. Kloss; 2nd ed.; per. from English - M. Moscow: CJSC "Olymp-Business".

Gadzhinsky, A. M. (2012). Logistics: Textbook / A. M. Gadzhinsky. - 20th ed. Moscow: M.

ВЛИЯНИЕ СТРАХОВАНИЯ НА УСТОЙЧИВОЕ РАЗВИТИЕ СОЦИАЛЬНО-ЭКОНОМИЧЕСКОЙ СИСТЕМЫ СТРАНЫ

Елена Жиликова, Кандидат экономических наук

Харьковский государственный университет питания и торговли, Украина

В условиях стремления общества к устойчивому развитию особенно актуальна проблема развития рынка страхования как элемента финансового рынка и основы устойчивого развития социально-экономической системы страны.

Взаимосвязь страхования и устойчивого развития социально-экономической системы государства имеет двоякий характер. С одной стороны развитие страхового рынка снижает социальную напряженность в обществе за счет обеспечения страховой защиты имущественных интересов граждан, с другой – ресурсы страховых компаний имеют существенное влияние на развитие финансовой системы государства путем инвестирования в нее ресурсов страховщиков.

Согласно последних данных швейцарской компании «Swiss Re» в 2019 году объем украинского страхового рынка по сбору страховых премий составил 2222 млн долл. США, что подтверждается отечественными статистическими источниками, и составляет 0,036% от мирового страхового рынка и 0,19% объема страхового рынка стран Европейского Союза. Доля страховых премий в ВВП Украины в период 2010-2019 гг. снизилась с 2,1% в 2010 году до 1,5% в 2019 году, тогда как в странах ЕС в 2019 году она колебалась от 1,0% в Литве до 10,7% в Дании. Также в 2019 году страховые премии на душу населения в Украине составили 53 долл. США, минимальное значение этого показателя в странах ЕС относится к Словении и составляет 135 долл США.

Сравнительный анализ основных показателей развития страхового рынка стран Европейского Союза и Украины показал, что украинский рынок находится на ранней стадии своего развития, а показатели являются низкими для страны, учитывая ее географическое расположение и численность населения. Однако, на наш взгляд, такое положение вещей следует рассматривать скорее как потенциал развития украинского страхового рынка с учетом факторов, стимулирующих повышение спроса на страховые услуги.

В процессе реформирования системы охраны здоровья и пенсионной системы Украины существенно возросли роль и значение страхования в решении социальных и экономических проблем. На наш взгляд, к наиболее значимыми факторами, которые влияют на увеличение спроса на страховые услуги и являются потенциалом развития страхового рынка можно отнести:

- наличие поколения, которое из-за недостаточности страхового стажа, в будущем может столкнуться с отсутствием государственного пенсионного обеспечения;
- отсутствие обязательного государственного медицинского страхования.

Под воздействием влияния этих факторов повышается значимость личного страхования. Так, эффективность добровольного медицинского страхования стала очевидна в условиях коронокризиса и реформирования системы охраны здоровья, а

добровольное пенсионное страхование дает возможность обеспечить финансовую стабильность определенных групп населения в будущем.

Исследования современных ученых, посвященные анализу тенденций развития страхования в европейских странах, показали, что небольшие высокоразвитые страны с высоким уровнем жизни (Бельгия, Дания, Ирландия, Швеция, Люксембург, Финляндия) имеют несравненно большее среднее значение страховых премий на душу населения. Так же в этой группе стран удельный вес страховых премий по страхованию жизни в 2011-2016 гг. был выше чем в других европейских странах и варьировался в пределах 70-80%. Доля страховых премий по страхованию жизни на украинском страховом рынке имеет тенденцию стабильного роста и в 2019 году составила 8,7%, платежи по этой отрасли страхования в среднем ежегодно имеет прирост 22%.

На пути развития украинского страхового рынка, как важной составляющей устойчивого развития социально-экономической системы страны, стоит ряд проблем, среди которых низкий уровень платежеспособности населения, низкий уровень страховой культуры, несоответствие европейским стандартам, низкий уровень информированности населения о последствиях реформ и возможностях страхового рынка. Пути решения этих и ряда других проблем развития страхового рынка как части финансового рынка страны обозначены в стратегии развития финансового сектора Украины до 2025 года.

World insurance premiums (2019). Дата обращения: 11.01.2021 <https://www.sigma-explorer.com/>

Пукала, Р., & Внукова, Н.Н. (2018). Анализ тенденций развития страхования в европейских странах. *Humanities and Social Sciences*, № XXIII, 25 (1/2018), 113-128, doi: 10.7862/rz.2018.hss.8

Стратегія розвитку фінансового сектору України до 2025 року (2020). Дата обращения: 16.01.2021 <https://bank.gov.ua/ua/about/develop-strategy>

Страховой рынок Украины: 2019 год (2019). Дата обращения: 12.01.2021 <https://forinsurer.com/stat>

ПРОЕКТНЫЙ ХАРАКТЕР ПРОЦЕССА ВЫХОДА КОМПАНИИ НА ЗАРУБЕЖНЫЕ РЫНКИ

Виктория Козуб, канд. экон. наук, доцент, доцент кафедры международной экономики и менеджмента

Харьковский национальный экономический университет, Украина

Людмила Бондаренко, канд. экон. наук, доцент, доцент кафедры международной экономики и менеджмента

Харьковский национальный экономический университет, Украина

Эффективное функционирование компании предусматривает необходимость учета в управленческой практике качественной информации, определяющей ее конкурентные преимущества. Для обеспечения устойчивого развития компании в течение длительного периода времени следует не только оценивать ее текущую хозяйственную ситуацию, но уметь выбирать правильные цели развития на рынке в будущем.

Наибольшее количество неудач в расширении внешнеэкономической деятельности украинских компаний относится к начальным стадиям процесса выхода на зарубежные рынки. Многие национальные компании выпускают достаточно конкурентоспособную продукцию по сравнению с ассортиментом, присутствующим на зарубежных рынках. Однако большинство проблемных ситуаций относится к подготовке и реализации процесса выхода компании на новый рынок, который носит проектный характер и предъявляет определенные требования к организации, проведению расчетов, анализу и управлению эффективностью такого проекта.

Проектный характер процесса выхода компании на зарубежный рынок имеет ряд существенных особенностей, учет которых дает возможность украинским компаниям достичь успеха в течение наиболее сложного начального периода освоения нового рынка, а именно: сбор, обработка и выбор оптимального соотношения большого количества различных данных; наличие динамичных изменений размера постоянных расходов до начала продаж; постоянный характер переменных расходов в течение всего расчетного периода продаж; постоянный размер цены продукции в течение всего расчетного периода; постоянная величина соотношения видов продукции в смешанных партиях.

На начальном этапе исследуется маркетинговая составляющая проекта. При этом разрабатывается программа проекта, предоставляется подробное описание продукции, оцениваются новые рынки сбыта с использованием набора традиционных и современных маркетинговых технологий, изучаются запросы иностранных клиентов, особенности продвижения продукции на зарубежные рынки с учетом местных традиций и барьеров, все аспекты международной конкуренции, разрабатывается стратегия маркетинга.

Для повышения эффективности маркетинговой составляющей проекта необходимо определить минимальную партию продукции при выходе компании на новый рынок, что является доказательством возможности продажи продукции определенного количества, в заданные сроки и по запланированной цене.

Ключевым в данном случае является установление количественных характеристик минимальной партии и сроков ее реализации. Только после достижения этих параметров, причем обоих одновременно, может идти речь о доходах компании. Такой объем продаж называют точкой безубыточности. Она, как общеизвестно, определяется как частное деление постоянных затрат на разницу между ценой и переменными затратами в единице продукции.

Управление процессом выхода компании на новый рынок имеет несколько важных аспектов, влияющих на результативность и успешность проекта. Первым из них является необходимость неизменности цены продукции в течение периода достижения объема продаж на уровне точки безубыточности. При соблюдении указанного условия будет получен минимальный размер партии продукции, после реализации которой за конкретный период времени будет преодолен «убыточный» период и начнется рост доходности проекта.

Второй важный момент в управлении проектом заключается в динамичном характере постоянных расходов. Динамика этих расходов проходит несколько этапов: в начале проектного периода они будут стремительно расти, затем их рост замедлится, дальше начнется период уменьшения и только после этого они будут носить относительно постоянный характер. Этот аспект динамичных изменений обязательно должен быть учтен при определении минимальной партии продукции для зарубежного рынка. Кроме этого, именно трудности такого учета постоянных затрат являются основной причиной недостаточно корректного расчета точки безубыточности.

В реальной практической деятельности компании выходят на зарубежный рынок не с одним, а с несколькими видами продукции, каждый из которых имеет свою цену и отличается переменными затратами, а следовательно имеет свой вклад в покрытие постоянных затрат. Для этого заранее должна быть определена доля каждого вида продукции в общем объеме продаж. В течение срока продаж минимальной партии (т.е. точки безубыточности) указанные доли также должны быть постоянными.

Успех указанного процесса требует обработки большого количества постоянно меняющейся информации, а также учета ее клиенто-ориентированности. Это приводит к необходимости использования современных информационных технологий, в частности, таких как ERP-система (Enterprise Resource Planning) и CRM-система (Customer Relationship Management).

Таким образом, начальный этап процесса выхода компании на зарубежный рынок требует особого внимания, поскольку носит проектный характер, требует значительных затрат, которые разнесены во времени, а также необходимости использования в процессе проведения расчетов современных информационных технологий, что позволит обеспечить устойчивое развитие компании в долгосрочной перспективе.

Впровадження CRM-системи. Роль технології у підвищенні ефективності бізнесу. TQM systems (2020). Дата обращения: 10.03.2020 <https://tqm.com.ua/likbez/article/vnedrenie-crm-sistemy-rol-crm-tehnologiy-v-povyshenii-effektivnosti-biznesa>

ФОРМИРОВАНИЕ ПРИНЦИПОВ УСТОЙЧИВОГО РАЗВИТИЯ ПРЕДПРИЯТИЯ

Татьяна Ставерская, Кандидат экономических наук
Харьковский государственный университет питания и торговли, Украина

На сегодняшний день темпы увеличения объёма использования природных ресурсов, глобализации экологических проблем, нарастания демографической поляризации представляют реальную угрозу для жизнеобеспечения планеты. Именно поэтому роль господствующей идеологии развития современного мира прочно закрепились за концепцией устойчивого сбалансированного социо-эколого-экономического развития. В 1972 г. генеральный секретарь первой конференции ООН по проблемам окружающей среды М. Стронг в своем докладе сформулировал и обосновал концепцию экоразвития «как экологически ориентированного социально-экономического развития, при котором рост благосостояния людей не сопровождается ухудшением среды обитания и деградацией природных систем», доказав необходимость перехода человечества от экономической к эколого-экономической системе». Концепция устойчивого развития отражает необходимость установления баланса между удовлетворением современных потребностей человечества и защитой интересов, который удовлетворяет потребности нынешнего поколения без ущерба для возможности будущих поколений удовлетворять свои собственные потребности, а от скорости решения проблем поиска баланса между тремя аспектами человеческой жизнедеятельности – экологической, социальной и экономической – зависит уровень благосостояния следующих поколений.

Основными требованиями стратегии устойчивого развития, выдвинутыми Всемирной комиссией по окружающей среде и развитию, предопределены трансформация и развитие:

- политической системы, обеспечивающей участие широких слоёв населения в принятии решений;
- экономической системы, обеспечивающей расширенное воспроизводство и технический прогресс на непрерывно укрепляющейся собственной базе;
- социальной системы, обеспечивающей снятие напряженности, которая возникает в результате негармоничного экономического развития;
- системы производства, ориентированного на сбережение эколого-ресурсной базы;
- технологической системы, обеспечивающей постоянный поиск новых решений;
- международной системы, которая способствует устойчивости торговых и финансовых связей;
- административной системы, достаточно гибкой и способной к

саморегулированию.

Имплементация выдвинутых требований, равно как и Целей устойчивого развития, обуславливает необходимость преобразования и переориентации всей системы общественных отношений, функционирование которой должно базироваться на всеобъемлющем осознании устойчивого сбалансированного социально-эколого-экономического развития не только как условия обеспечения благосостояния следующих поколений, но и их жизни.

На Конференции ООН по окружающей среде и развитию (Рио-де-Жанейро, 1992) и на XIX специальной сессии Генеральной Ассамблеи ООН (Нью-Йорк, 1997) были приняты принципы устойчивого развития, которые объединяют в одно целое экономическую, социальную, экологическую и другие сферы деятельности человечества. Традиционно принципы устойчивого развития делят на принципы первого (ответственности перед будущим; равенства возможностей развития и удовлетворения потребностей различных поколений; право человека на здоровую и деятельную жизнь в гармонии с природой, на жизнь в экологически чистой и благоприятной для него окружающей среде; обеспечение сбалансированности экономики и экологии (сохранения биосферы); справедливости и т.д.) и второго (сохранения окружающей среды; социально-экономического развития; сохранения культур всех народов; экологизации и идеологического обеспечения) порядка. Н.А. Уткина в своих исследованиях устойчивого эколого-экономического развития делит эти группы на два блока по вышеуказанному признаку: принципы как базовые положения концепции (принципы первого порядка) и принципы как стратегические направления (принципы второго порядка). При чем принципы каждой группы зачастую имеют различную значимость для различных региональных уровней: одни из них актуальны для человечества в целом, другие оказываются более весомыми на уровне региональном или локальном.

Однако, говоря о трансформации всех уровней общественных отношений следует отметить, что ведущим субъектом реализации целей устойчивого развития микроуровня являются предприятия. Данный факт актуализирует вопрос концептуализации и выделения принципов формирования механизма обеспечения устойчивого развития предприятий. Формирование принципов устойчивого развития предприятия определяется синергией категорий «экономика», «воздействие», «взаимоотношения», «ответственность» и «преобразования» - предприятие несет ответственность за степень своего воздействия на экосистему (окружающая среда, социальная и бизнес-среда). Ответственное воздействие на экосистему позволяет снизить уровень загрязнения окружающей среды, ресурсопотребление, повысить деловую репутацию и укрепить партнёрские отношения, повысить эффективность управления рисками. Необходимым инструментом реализации концепции устойчивого развития являются преобразования и инновации, обеспечивающие долгосрочные преимущества предприятию за счет использования инноваций, интеллектуального и реляционного капитала.

Исходя из вышесказанного, предлагаем выделять третью группу принципов устойчивого развития, наиболее значимых на микроуровне, а именно принципы: справедливости; системности мышления; инновационности и новаторства; сохранения окружающей среды; энергоэффективности; социальной ответственности; транспарентности управленческих решений; принцип

глобальности мышления («думать глобально – действовать локально»); адаптивности; партнерства; перманентности развития; рациональности и превентивности; социо-эколого-экономической сбалансированности.

Механизм функционирования предприятия на принципах устойчивого развития позволит сформировать сбалансированную экосистему, обеспечивающую эффективность и замкнутость экономической системы, снижение издержек, повышение стандартов конечного продукта, перманентность инновационного развития, рост социальной ответственности и защищенности.

Report of the World Commission on Environment and Development: Our Common Future (1987). Дата обращения: 12.01.2021
<https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf>

Декларация Конференции Организации Объединенных Наций по проблемам окружающей человека среды (1972). Дата обращения: 12.01.2021
https://www.un.org/ru/documents/decl_conv/declarations/declaratenv.shtml

Ставерская, Т. (2019). Стратегические ориентиры концепции устойчивой экологической экономики. Фінансові механізми сталого розвитку України : матеріали II Міжнар. наук.-практ. конф., 18 октября 2019, 234–236.

Уткина, Н.А. (2012). Принципы устойчивого развития: классификация, взаимосвязи, практическая реализация. Современные проблемы науки и образования, 3, Дата обращения: 15.01.2021
<https://journals.ala.org/index.php/ltr/article/view/4426/5143>

MANAGERIAL AND LEGAL ISSUES OF SUSTAINABLE DEVELOPMENT

BUSINESS SYSTEMS STRATEGY IN THE GLOBAL ENVIRONMENT AS A COMPONENT OF SUSTAINABLE COMPANY DEVELOPMENT

Nataliia Parkhomenko, PhD

Simon Kuznets Kharkiv National University of Economics, Ukraine

In the process of carrying out international activities, the business system determines its position in foreign markets based on certain criteria. Such criteria may be the degree of coverage of international markets, approaches to the formation of international strategy, the priority direction of development, available resources and so on. Successfully chosen strategy of the company ensures its sustainable development. Given the activities of business systems in a global environment, one should follow one of the existing approaches to the formation of business strategy, or a combination thereof.

The ethnocentric approach is the similarity of doing business in different countries. Companies that follow an ethnocentric approach to management use a strategy of duplicating the business model. An example is the French company Chanel, the Italian company Ferrari, which are known for their products around the world. Both companies export their products to about 60 markets in North and South America, Europe, Africa, the Middle East. The basis of their strategic development is the use of image and brand awareness. Positioning and advertising are duplicated in exporting countries, do not change depending on the consumer segment and market niche. Chanel's strategy is to duplicate the business model in the production and sale of related diversification products (clothing, haberdashery, perfumes), and Ferrari's strategy is to duplicate the model of behavior in different countries with a focus on one activity in the production of differentiated goods.

The polycentric approach is that companies focus on consumers from different countries, taking into account their tastes and preferences. The marketing strategy of this approach involves detailed product promotion and, accordingly, requires significant costs. Examples of the application of this approach are Unilever, Coca-Cola. Unilever uses a transnational strategy. Certain brands of the company are represented in the markets of all countries, and some - in separate markets. In addition, the same product may have a different name and logo, brand in different countries. In total, the company owns more than 400 brands around the world and successfully uses its achievements in terms of brand development strategy. Regarding the product strategy, Unilever uses a strategy of unrelated diversification, producing hygiene products, household chemicals, beverages, food. Coca-Cola uses a global strategy, focusing on one area of activity as a production of soft drinks. But Coca-Cola drinks have slightly different tastes in different countries.

The geocentric approach is characterized by absolute similarity of production and promotion in different markets. This approach is used by Starbucks, PepsiCo, and

Disney. Starbucks offers the same coffee and quality service around the world; the company's image can be distinguished and found in any country, which is the basis of its strategy. PepsiCo offers almost the same drinks, packaging, advertising campaign in all markets. These companies use a global strategy with a focus on producing one product. In this case, companies can use elements of several approaches to increase demand, taking into account market needs. For example, when building an amusement park in Japan, Disney made it similar to the American one, but the parks of China and France take into account national characteristics.

Therefore, a business system that seeks to develop an effective strategy must take into account a number of factors and make a large number of management decisions regarding the forms of choice and presence in foreign markets for sustainable development. The organization of the business system involves the choice of how to enter foreign markets, which has a certain sequence of steps associated with the corresponding costs, but provides the company with additional profits for development.

About Chanel (2021). Date of visit: 13.01.2021 <https://www.chanel.com/us/covid19-global-relief-efforts/>

Coca-Cola. Business and sustainability report 2019. (2019). Date of visit: 13.01.2021 <https://www.coca-colacompany.com/content/dam/journey/us/en/reports/coca-cola-business-and-sustainability-report-2019.pdf>

Ferrari. 2019 Sustainability report. (2019). Date of visit: 13.01.2021 <https://corporate.ferrari.com/en/2019-sustainability-report>

PepsoCo. Mission and vision. (2021). Date of visit: 13.01.2021 <https://www.pepsico.com/about/mission-and-vision>

Starbucks. Global social impact. Report 2019. (2019). Date of visit: 13.01.2021 <https://www.starbucks.com/responsibility/global-report>

The Walt Disney Company: Europe, Middle East and Africa. (2021). Date of visit: 13.01.2021 <https://thewaltdisneycompany.eu/>

Unilever. About our strategy. (2021). Date of visit: 13.01.2021 <https://www.unilever.com/sustainable-living/our-strategy/about-our-strategy/>

SCIENTIFIC AND APPLIED PLATFORM OF TRADE ENTERPRISES ECONOMIC ACTIVITY DIGITAL MANAGEMENT TRANSFORMATION

Nataliia Kashchena, PhD in Economic Sciences, Professor of the Department of Finance and Accounting
Kharkiv State University of Food Technology and Trade, Ukraine

Digital transformation is natural continuation of current trends and increasing effect of digital technologies on all aspects of society, fundamental changes catalyst in approaches to management, corporate culture, external communications, and leading driver of trade enterprise digital ecosystem development. This ecosystem formation effectiveness requires the digital identification of technologies and tools, digital transformation activity stages substantiation and trade enterprises economic activity management.

The most effective technology of enterprise management digital transformation according to is applied artificial intelligence, which is based on big data tools, and allows visualization, end-to-end planning, modeling and adjustment of the business process management in real time. In addition, this technology under integration with analytics applications and services for work with smart devices, hybrid networks and other components of the digital world allows optimizing business process management infrastructure and provides the possibility of digital platforms creation for information collection, its analytical processing and data transmission for decisions making.

Trade enterprise management system modernization and its transfer to «digital» should be carried out in stages:

1st stage – «Formation the communication system with customers» (understanding, analytics and customer experience tracking) under involvement of such tools as: mobile applications; service programs; portals; chatbots; customer experience analytics;

2nd stage – «Modern corporate culture formation» (new technologies, processes and skills introduction) through the tools of creative and critical thinking; Agile principles; mobility, etc. use.

3rd stage – «Business processes optimization and effective operating model formation» (new systems introduction, infrastructure restructuring, business applications and processes modernization) on the base of such tools as: data visualization and real-time analytics; HR and B2E programs; sophisticated industry software;

4th stage – «Updating the existing or forming new business model» (new product creating; logistics restructuring; changing the approaches to own positioning, etc.) with the involvement of such tools as: monetization new models; new products / services; modern digital processes.

For the complex problems solving of trade enterprises economic activity management digitalization it is necessary:

- to monitor new technologies and assess the digital adaptation possibilities effect of management tools on the enterprise economic activity stimulation;
- to identify priority areas of the business processes digital transformation and develop appropriate measures of their implementation at the management cycle each

stage;

- to minimize restrictions (financial, legal, technical, technological, personnel, environmental, infrastructural, securitized, etc.) and risks of business relationships formation with stakeholders while expanding the influence opportunities on business processes in real time;

- to provide the digital initiatives integration which are focused on the prospect of positive effect obtaining, and the strategy development of enterprise economic activity digitization management;

- to assess the possible digitalization effect, adjust the chosen strategy and determine future priorities.

The instrumental basis of the applied model of trade enterprises economic activity management digitalization consists of freely distributable information content (social networks, Internet resources, market information, etc.), own databases (in particular, customer base), open software business process management information system that implements the integration data technology and digital applications.

In conclusion, we note that the trade enterprises economic activity digital transformation management requires clear goal orientation, strategy and action plan formalization and implementation by team of specialists with the necessary competencies and skills. Therefore, further research is focused on these issues solving.

Davydova O., Kashchena N., & Staverska T., Chmil H. (2019). Digitalization of economic activity management and sustainable enterprise's development. *International Journal of Innovative Technology and Exploring Engineering*, 8. Issue 3C, 195–200.

Davydova O., Kashchena N., & Staverska T., Chmil H. (2020). Sustainable development of enterprises with digitalization of the economic management. *International Journal of Advanced Science and Technology*, 29. No. 8s, 2370–2378.

Krutova, A., Kashchena, N., & Chmil, H. (2020). Enterprises' economic activity stimulation as a driver of national economy sustainable development. *Економічна стратегія і перспективи розвитку сфери торгівлі та послуг*, 1(31), 162–173.

SOCIAL AND CULTURAL ISSUES OF SUSTAINABLE DEVELOPMENT

ПРИОРИТЕТЫ УСТОЙЧИВОГО РАЗВИТИЯ ТУРИСТИЧЕСКО-РЕКРЕАЦИОННОГО ПОТЕНЦИАЛА РЕГИОНА

Виктория Мацука, Кандидат экономических наук
Мариупольский государственный университет, Украина

Туризм и рекреация как виды экономической деятельности позволяют решить ряд проблем социально-экономического характера, таких как: рост занятости и сокращение безработицы населения, развитие предпринимательства, увеличение доходов населения и, как итог, рост доходов бюджета региона. Но всё-таки, туризм не первостепенная потребность людей и необходимость в путешествиях появляется в определенных жизненных условиях, которые связаны прежде всего с доходами, продолжительностью свободного времени, политической ситуацией, образованием, культурой, эстетическими потребностями населения и т.д. Исходя из этого, развитие туризма в регионах связано с развитием других отраслей экономики.

В отличие от других отраслей экономики туризм зависит от природного, культурно-исторического потенциала, что требует тщательной его диагностики. Так, для развития туризма и рекреации в регионе целесообразно объединить разные тенденции: сохранить и преумножить туристский потенциал, экологию, культуру в регионе, а также увеличить туристские потоки и прибыль. В рамках стратегии устойчивого развития туризма существуют принципы, разрешающие вышеуказанное противоречие между удовлетворением потребностей в туристических услугах населения и рациональным использованием природного, социального, экономического потенциала региона.

Таким образом, основными негативными последствиями развития массового туризма и рекреации являются:

нарушения в экологическом равновесии: при организации туризма в регионе интенсивнее используются все природные ресурсы, увеличивается загрязнение атмосферы, больше потребляется энергии;

проблемы социально-культурной среды, потому что меняется образ жизни и традиции населения, возможен конфликт культур, который вызывается экономическим неравенством туристов и местного населения. Испытанию подвержены объекты культурно-исторического наследия, растет преступность, часто туризм могут использовать как возможность незаконной миграции, так организация туристической деятельности в регионе вызывает целый ряд проблем для местного населения и органов власти;

изменения в экономике, а именно, рост расходов на совершенствование инфраструктуры, в основном, за счет средств местных бюджетов, увеличение цен на товары (услуги), использование неквалифицированного персонала, уменьшение зарплаты в туристической индустрии и т.д.

Вышеизложенное позволяет утверждать, что негативные последствия туризма могут смягчать системные мероприятия, которые реализуются в рамках стратегии устойчивого развития регионов. Термин «устойчивое развитие» закрепился в конце XX столетия и обосновывал необходимость рационального использования природного потенциала для его сохранения. Будущие поколения имеют такие же права на благоприятную окружающую среду, как и современное поколение. Более того, человечество обязано ее сохранить. Исходя из этого, провозглашается основа устойчивого развития: бережное отношение к мировым ресурсам и экологии планеты. Но нельзя ограничивать термин устойчивое развитие только обеспечением экологического равновесия. Современное поколение должно заботиться о дальнейшем развитии общества сохраняя природный потенциал, бережно относясь к экономическим ресурсам, уменьшая процент бедности населения, рационально используя ресурсы, результаты научно-технического прогресса, учитывая интересы будущих поколений человечества.

Возможность реализации стратегии устойчивого развития туризма и курортов на практике способствует обоснованию количественных параметров этого развития. Разработчики вопросов измерения устойчивого развития, часто предпочитают использовать для этого стоимостную оценку. Но точная оценка устойчивого развития с помощью денежных показателей пока еще никому не удалась, потому, что устойчивое развитие рассматривают как одномерную цель. Реалистичным, является многокритериальный подход, позволяющий дать оценку существующему развитию как устойчивому или неустойчивому. Такими критериями в данном случае могут быть:

1. Экономическая эффективность. Основным показателем в этом случае является окупаемость расходов доходами. Нужно акцентировать внимание на необходимости сократить сырьевые отрасли экономики как в объемах деятельности, так и в размерах вложений капитала и обратить внимание на не сырьевые сектора экономики, способные обеспечить определенный уровень развития экономики как отдельных государств, так и всего мира в целом;

2. Экологическая устойчивость. Этот критерий обеспечивает долгосрочность существования экологических систем, создание условий для естественного возобновления природного потенциала, переход на альтернативные энергетические источники, малоотходные и ресурсосберегающие технологии, что приведет к уменьшению уровня загрязнения окружающей среды и соответственно экологическому равновесию;

3. Социальное благополучие. Данный критерий способствует удовлетворению культурных, материальных и духовных потребностей человечества в равной степени, речь идет о межрегиональном равенстве, эталоном которого может быть настоящее состояние стран. Но следует обратить внимание, что социальное потребление противоречит возможностям биосферы, и в связи с этим нужны определенные ограничения в потребностях в товарах и услугах.

В современных условиях важным аспектом организации и функционирования туристического бизнеса считается применение выше рассмотренных критериев устойчивого развития на практике, но одновременно нужно учитывать негативные социальные, экономические и экологические последствия развития туризма и рекреации. Популярность и известность многих туристических регионов базируется на экологических аспектах и самобытности местной культуры, таким

образом, следование принципам устойчивого развития должно обеспечить рациональное развитие туристического бизнеса.

Вопросы, связанные с осуществлением анализа влияния развития туризма на устойчивость, являются дискуссионным в науке и имеют нечеткую методологию и недостаточную связь теории и практики.

Одним из основных подходов, который используется при анализе является интерпретация оценки степени влияния туристической деятельности на туристическо-рекреационный потенциал региона, напрямую зависящей от его пропускного потенциала.

При изучении терминологии, выявлено, что существуют разные объекты оценки туристического потенциала. Так, довольно часто встречается термин «туристический потенциал», который определяется как – емкое понятие, которое охватывает совокупность природных, этнокультурных и социально-исторических ресурсов, а также хозяйственную и коммуникационную инфраструктуру региона, служащую предпосылкой развития определенных видов туризма. Туристические ресурсы – ключевое понятие при определении территорий приоритетного развития туризма и инновационного обновления.

«Пропускной потенциал» при этом – комплексное понятие, основными элементами которого есть рекреационная устойчивость, рекреационная нагрузка, пропускная способность, а также туристический социальный потенциал. Обновление данных элементов может обозначить методику анализа влияния туристической деятельности на регион.

Основной целью стратегии развития туризма и курортов является создание благоприятного климата для активизации деятельности в сфере туризма согласно международным стандартам качества и европейским ценностям, обеспечивающим высокую рентабельность, интеграцию в мировой рынок туризма, ускоренное социально-экономическое развитие регионов и страны, повышение качества жизни, гармоническое развитие и консолидацию общества, популяризацию государства в мире.

Приоритетами устойчивого развития туристическо-рекреационного потенциала региона можно назвать:

1. Создание конкурентоспособного национального туристического продукта за счет сертификации туристических объектов и туристической инфраструктуры; совершенствование имеющихся туристических продуктов; развитие инфраструктуры туризма и курортов, интеграция местных туристических ресурсов в комплексное туристическое предложение; гармонизация развития туризма в регионах в соответствии стилю жизни, традициям и культуре местного населения для сохранения подлинности.

2. Развитие человеческих ресурсов в интересах туризма, а именно активизация образовательной деятельности для формирования общественного сознания о роли устойчивого развития туризма и курортов на местном, региональном и национальном уровнях; усовершенствование системы подготовки кадров туризма и др.

3. Сохранение туристическо-рекреационного потенциала, формирование туристической привлекательности, для обеспечения рационального и эффективного использования туристических ресурсов, разработка схемы и генерального плана развития туристических регионов; совершенствование системы управления

туристическим потенциалом; внедрение платы за использование туристическо-рекреационных ресурсов; развитие транспортной инфраструктуры, способствующей туристической доступности регионов.

4. Формирование информационного пространства сферы туризма и рекреации путем внедрения интегрированной информационной системы в сфере туризма, обеспечение доступа к туристической информации, создание сети туристических информационных центров.

5. Создание единой конкурентоспособной системы маркетинга в сфере туризма и маркетинговая поддержка национального и региональных туристических продуктов. Маркетинг туристических продуктов должен включать мероприятия, пропагандирующие ценные туристические ресурсы государства; доминирование туристических продуктов в соответствии с потребностями целевых групп потребителей; создание позитивного имиджа национального туристского продукта; участие в международных специализированных симпозиумах, семинарах, конференциях, выставках-ярмарках для изучения и внедрения новейших технологий в сфере туризма; проведение рекламных кампаний национального и региональных туристических продуктов на мировом туристическом рынке.

6. Расширение международного сотрудничества в целях обеспечения устойчивого развития туризма и курортов путем заключения международных соглашений о сотрудничестве в сфере туризма; внедрения прогрессивного международного опыта государственного управления, законодательного, организационного и финансового обеспечения высокоэффективной индустрии туризма.

Подытоживая вышесказанное, отметим, что ожидаемые результаты реализации стратегии развития туризма и курортов позволят: повысить конкурентоспособность национального и региональных туристических продуктов; улучшить качество жизни населения путем обеспечения экономического роста, экологической безопасности, предоставление доступа к туристической информации; создать новые рабочие места, увеличить занятость и самозанятость населения; создать современную туристическую инфраструктуру.

Заячковская, Г. (2011). Концепция устойчивого развития сферы туризма как средство послекризисного восстановления отрасли. Вестник Тернопольского национального экономического университета, 5-2, 345-350.

Михайличенко, А. И. (2013). Туристический потенциал: методы оценки и инновационное развитие. Проблемы экономики, 1, 115-123.

Об утверждении Стратегии развития туризма и курортов на период до 2026 года (2017). Дата обращения: 2021-01-17 <https://zakon.rada.gov.ua/laws/show/168-2017-%D1%80#Text>

Пенкина, Н.В. (2017). Устойчивое развитие туризма в регионе: подходы к анализу проблемы. Дискуссия, 10 (84), 23-28.

Пенкина, Н.В., & Шахова, О.Ю. (2016). Подходы к оценке устойчивого развития туризма в регионе. Дискуссия, 5 (68), 38-43.

ENVIRONMENTAL AND TECHNICAL ISSUES OF SUSTAINABLE DEVELOPMENT

CIRCULAR ECONOMY: ESSENCE AND MANIFESTATIONS IN THE CONDITIONS OF POST-CRISIS DEVELOPMENT

Nataliia Duna, PhD in Economics

V. N. Karazin Kharkiv National University, Ukraine

Alina Pavlenko, A Student of 1st Master's Program Year in Economics and Political
Economy

V. N. Karazin Kharkiv National University, Ukraine

The high level of globalization influence on almost all countries of the world and its ambiguous consequences have led to the phenomenon of irrational excessive consumption. Of course, experts from different fields of science directed their efforts towards preventing such global problems as depletion of resources, their irrational use, and it became necessary to adapt production, aimed at saving and replenishing resources.

Circular economy – in a general sense, is an economy based on the renewal of resources, an alternative to the traditional linear economy (creation, use, waste disposal).

The basic principles of the circular economy are based on the renewal of resources, the processing of secondary raw materials, the transition from fossil fuels to the use of renewable energy sources. Also, this type of economy is considered as part of the Fourth Industrial Revolution, as a result of which, in general, the rationality of the resources use, including natural resources, is increasing, the economy becomes more transparent, predictable, and its development is rapid and systemic.

The main idea of the economic approach to the concept of circular economy is to break the link between increasing wealth and overexploitation of primary natural resources.

A circular economy involves the sharing of products and the purchase of services rather than goods. Materials are used several times, things are designed for a long service life. The material from which homogeneous goods are made is reused when their service life expires or at an intermediate stage. The amount of waste in the production and use of goods is minimized.

Circular economy seeks to change the paradigm of a relatively linear economy by limiting environmental impact and waste of resources, as well as increasing efficiency at all stages of the commodity economy.

Three key principles underlying the circular economy are:

1) Waste & pollution design. This principle involves thinking about how to design production systems so that they minimize or even avoid waste or pollution (buildings can be more energy efficient).

2) Content of raw materials and materials in use. This refers to the maximum possible retention of the materials value in terms of duration through more rational business models (extending product life and reuse, such as recycling waste water to

energy).

3) Reconstruction of the natural system (renewable resources).

These principles are already being implemented in developed countries, and the extension of solar photovoltaic systems in residential buildings has become a solid turn towards renewable energy sources, but the potential disadvantage is that there may be an issue of e-waste because of solar photovoltaic panels use.

However, in turn, e-waste can provide an opportunity for the recovery of precious metals in solar panels, since the world cost of the resources spent on the production of all electronic devices in aggregate is three times the annual production of all silver sources in the world.

Implementation of measures aimed at ensuring that materials “circulate” in the technosphere longer is fundamental for more efficient use of resources and reducing the negative impact of the economy on the environment.

The world population is still growing so in this situation developing countries get richer, and the whole planet is under environmental constant and never-ending pressure. Around the world, billions of tons of raw products are in use every year. This figure is predicted to almost double in 40 years. In general, more than 100 billion tons of resources enter the economy annually, and more than 60% ends up in waste or emissions.

Almost 20 percent of the waste is going through recycling, while the rest - 80 percent is still under the process of disposal.

Adopting a circular economy could decrease greenhouse gas emissions by 30 % in further 30 years compared to the current linear model which harms the whole world and will help achieve the goals of the Paris Agreement. Moving to circularity is a great step to achieve more than ten out of seventeen UN Sustainable Development Goals, and this also could improve global GDP growth of more than four billion dollars in 10 years.

Adopting the components of circularity and implementing them into countries' strategic plans will help organizations:

- reduce costs because of reducing the use and necessity for raw materials;
- decrease energy consumption in the value chain;
- improve security of recourses;
- rise the supply chain resilience.

The circular economy has 7 complementary production and consumption types:

1. Sustainable purchases: developing and implementing responsible policies.
2. Ecological design: decreasing the impact on the nature of a product or service.
3. Ecology in cooperation, where the waste of company A can become the resources for company B.
4. Functional economy: a collaboration economy (preferences of use over ownership and tendency to sell services related to products).
5. Rational consumption and food selection in accordance with social and environmental criteria.
6. The bigger duration of use: because of reuse.
7. Recycling: the constant vital process.

Circularity is vital for a faster recovery from the COVID-19 pandemic. The negative influence of this pandemic is highly visible, with a large number of deaths, diseases, let alone job losses. Nevertheless, this is one of three Earth crises that the world today has: the eco a.k.a. climate crisis, the world's nature crisis, and the pollution & waste crisis.

In Nigeria, UNEP is currently cooperating with the country on Extended Producer Responsibility legislation to rise the amount of recycling of the almost 900,000 tonnes of e-waste that is produced every year. Also, Colombia, the 1st of all Latin American countries with an impeccable circular economy strategy who will recycle more than fifteen percent in 10 years. Such methods and goals should become normal, not the surprising and unbelievable exception.

Conclusion. The circular economy aims to replace the classic linear production model by concentrating on products and services that decrease waste and pollution. The circular economy helps to minimise greenhouse gas emissions by reducing energy required by diverse industrial production types to convert primary different raw materials into usable products.

Bonnifet F., & Eveillard P., Hermine J. (2016). Circular economy measures and potential emissions reduction in a circular economy in high impact sectors. Deloitte Sustainability: Circular economy potential for climate change mitigation, 1, 18-27.

DEVELOPMENT OF THE TECHNOLOGICAL PROCESS FOR THE PRODUCTION OF HEALTH-IMPROVING PRODUCTS BASED ON PLANT RAW MATERIALS

Valerii Mykhailov, Doctor of Technical Sciences, Professor
Kharkiv State University of Food Technology and Trade, Ukraine

Andrii Zahorulko, PhD, Associate Professor
Kharkiv State University of Food Technology and Trade, Ukraine

Aleksey Zagorulko, PhD, Associate Professor
Kharkiv State University of Food Technology and Trade, Ukraine

The rapid change in the living conditions of the population of Ukraine and many other European countries is caused not only by the deterioration of the ecological situation in the Universe, but also by today's pandemics, which requires the introduction of new approaches to the problem of strengthening the body's defenses and strengthening the human immune system. One of the most affordable and effective ways to strengthen the immune system is the formation of food rations for the population based on high-quality food products with health-improving properties. The nature of the diet largely affects the health of people, and first of all those in extreme conditions, including the military and medical contingent.

Providing high-quality, healthy food requires the development of innovative programs for wellness prevention and prevention of the negative impact of environmental factors. They may be based on the use of domestic organic raw materials with a high content of biologically active substances (BAS) and functional and physiological ingredients for multifunctional health food. Daily nutrition with the inclusion of such products in the diet will increase the resistance of the human body to chronic, infectious, cardiovascular, oncological diseases, and the like.

According to the data of 2019, the processing of organic raw materials in Ukraine is only 15% of the total volume of its collection from the area of farm enterprises (540 thousand hectares). One of the reasons for this situation is the lack of scientifically substantiated both technological and technical solutions for the processing of organic raw materials, which would take into account the peculiarities of its composition, physicochemical and other properties. In the process of processing organic raw materials, especially at the stage of heat exchange processing, when using existing technological equipment and generally accepted modes, significant losses of valuable components are observed, which does not allow full use of its natural potential.

Considering the existing modern problem of high-quality, healthy nutrition, as well as the aforementioned shortcomings about the utilization of organic raw materials and the production of food products based on them, the direction of research should be directed to the development of the latest resource-saving technological and technical solutions in the production of multicomponent health-improving pasty and dried semi-finished products and finished food products from high biologically active and therapeutic and prophylactic properties to meet human needs. Such technologies can be successfully used both in various branches of the food industry and in the pharmaceutical industry.

The advantages of using dried vegetable semi-finished products are speed and ease of preparation, increased nutritional value, high energy value for a small mass volume, high digestibility of nutrients, the ability to be stored for a long time without loss of quality and without specialized energy-consuming devices and technologies. The introduction of innovative low-temperature infrared equipment and processes for the production of health-improving products based on organic raw materials (concentrated pasty, dried and pastel-marmalade products), subject to a rational organization of the technological process, will ensure the development of the direction of processing organic products of long-term storage in Ukraine and abroad.

The obtained organic concentrated pasty, dried semi-finished products and pastel-marmalade products of increased nutritional value on their basis can be used not only for the needs of the civilian population, but also for feeding the military personnel of the Armed Forces of Ukraine, which is especially important in today's conditions. To date, there is no systematized scientific data on the processing of organic plant raw materials and methods of its use in the food industry to create products of increased nutritional value and with therapeutic and prophylactic properties. The existing thermal equipment has significant structural and technological disadvantages, in particular, energy and metal consumption, complexity in managing the structural and technological process, etc.

In this regard, the development of technological processes and innovative low-temperature infrared equipment for the production of multifunctional (concentrated pasty, dried) semi-finished products and confectionery (pastel-marmalade) products of increased nutritional value using organic raw materials is an urgent task to meet the needs of people in general, and especially those who are in extreme conditions – military and medical contingent.

Misra, N.N., Koubaa, M., Roohinejad, S., Juliano, P., Alpas, H., Inácio, R.S., Saraiva, A., & Barba, F. (2017). Landmarks in the historical development of twenty first century food processing technologies. *Food Research International*, 97, 18-339.

Zhaoli Wang, Jun Li, Chengguang Lai, Raymond Yu Wang, & Xiaohong Chen, Yanqing Lian (2018). Drying tendency dominating the global grain production area. *Global Food Security*, 16, 138-149.

INTRODUCTION OF SPRINKLER IRRIGATION IS A GUARANTEE OF STABILITY OF DEVELOPMENT OF THE SOUTHERN REGION OF UKRAINE

Oleksandr Novikov, Doctor of Economics, Professor
Mykolaiv National Agrarian University, Ukraine

Natalia Potryvaieva, Doctor of Economics, Professor
Mykolaiv National Agrarian University, Ukraine

Oleksii Sadovyi, Candidate of Technical Sciences
Mykolaiv National Agrarian University, Ukraine

The article analyzes and shows aspects of sustainable development of agriculture in the southern region of Ukraine on the basis of irrigated agriculture. The advantages and disadvantages of modern irrigation systems in production are presented. It has been determined that modern sprinkler systems require the introduction of energy-saving technologies based on the automation of the irrigation process and autonomous renewable power sources.

Key words: regional development, agriculture, irrigation, energy and resource conservation.

Agriculture in Ukraine is a key sector of its economy. The main branch of specialization of the country's agriculture is crop production, especially technical and fodder (sugar beets, sunflowers, etc.). In terms of their physical, mineralogical, chemical and agrochemical properties, the Ukrainian black lands are considered the best in the world.

In Ukraine, black land covers an area of 60.4 million hectares, of which almost 42 million hectares (about 69 %) are cultivated, of which about 33 million hectares of black land, i.e. one third of Europe's arable land

According to FAO, Ukraine's agricultural potential can feed 450-500 million people. However, today its capabilities are used only by a third. This is due to a number of factors, primarily related to climate change, which is characterized by virtually unchanged rainfall, causing the growth of drought and the development of desertification in the steppe zone.

Since 1991, the area of dry and very dry zone in Ukraine has increased by 7%. At the same time, the area with excessive and sufficient atmospheric moisture decreased by 10% and occupies only 7.6 million hectares. Thus, almost 25 million hectares need constant irrigation.

According to forecasts, further climate change will worsen the conditions of natural moisture supply.

As a result, the role of irrigation in agricultural production will only increase. Irrigation, in the complex of water land reclamation, is one of the global strategic directions of intensification of agriculture in different countries, including Ukraine,

ensuring sustainable production of crop products, especially in years with adverse climatic conditions.

Food security, economic and environmental aspects depend to a large extent on the efficient use and conservation of irrigated land. In arid regions of the world, including the Southern Steppe of Ukraine, the most effective and reliable measure to stabilize agriculture is artificial wetting, which stabilizes crop productivity and prevents a catastrophic decline in gross crop yields in years with adverse weather conditions (no precipitation, high rainfall). air temperature, dry winds, etc.)

In the agro-economic aspect, the efficiency of production in irrigated agriculture depends on two groups of factors. The first group includes factors that are formed at the level of the state, local governments, local features of relations with public authorities and do not depend on producers. The main ones are: price, credit and tax systems, support for the industry at the state and regional levels, regulation of property relations, development of science and others.

The second group includes factors that depend directly on the manufacturer. These are the development, improvement and implementation of irrigated agriculture systems, modern irrigation methods, new agricultural and irrigation equipment, competitive crops, high-yielding, adapted to irrigation varieties, fertilizer and plant protection systems, soil moisture control and timely irrigation.

The development of irrigation in Ukraine requires a systematic approach with mandatory scientific justification and support.

Research on improvement taking into account energy, resource and environmentally friendly technologies and optimization of irrigation systems are priority areas of research in the Mykolaiv region, namely in the Mykolaiv National Agrarian University.

Currently, sprinklers are the most promising for the south of Ukraine, but in accordance with current regulations in Ukraine: the Verkhovna Rada of 22.02.2001. № 2274 – 111 (2274 - 14) "Energy Strategy of Ukraine for the period up to 2030"; Of the Cabinet of Ministers dated 03.04.2006 № 412 "On ensuring the efficient use of energy resources" and dated 22.10.2018 № 935 "On the organization of state control over the efficient (rational) use of fuel and energy resources", the industry of Ukraine must make a significant contribution in solving energy conservation issues and creating their own competitive products.

The existing irrigation systems in Ukraine, which currently cover an area of 2.17 million hectares, are operational and do not meet modern requirements for technological and operational reliability. Existing irrigation systems use mainly obsolete types of multi-part sprinklers, which have exceeded their planned service life by 2 times. Today, about 5.5 thousand sprinklers are in working order, which can provide irrigation on an area of about 600-700 thousand hectares. Today, foreign companies have started to operate actively on the Ukrainian market: Sigma (Czech Republic), R. Bauer (Austria), Valley (USA). Among the proposed models - stationary sprinkler systems with circular and frontal trajectories, a wide range of drum sprinklers. Such systems are characterized by wide functionality, provide sprinkling at low water pressure, supply through the pipeline with water intake from the open or closed network, as well as the use of a diesel generator or electric drive makes the system independent in use and reduces energy use.

At the same time, along with the positivity of solving this issue, there are also negative factors: the high cost of the latest sprinkler systems and complexes; lack of

regional centers for providing information on agroecological quality of rain, uniformity and quality of irrigation, organization of erosion-safe irrigation; lack of specialists in land reclamation and optimization of water resources in the south of Ukraine; lack of own production of competitive energy-efficient sprinklers.

These shortcomings lead to the environmental problem of irrigation, unregulated use of natural resources, energy consumption, increasing the cost of agricultural products and reducing guaranteed yields.

Sprinklers are a significant reserve for reducing water consumption, energy conservation and fertilization, as losses in the irrigation system are over 30%. Therefore, increasing the energy efficiency of sprinklers by even 10% is justified. One of the ways to solve the problem of reducing the cost of production is the introduction of energy-saving systems and complexes in the irrigation system.

A promising direction is the creation of new irrigation systems and sprinklers of a new generation based on autonomous renewable power sources, automated irrigation systems. Such systems and machines must be low-pressure, provide high-quality irrigation by optimizing the algorithm of water supply with simultaneous supply of water, fertilizers and chemical ameliorants for soil structuring.

Conclusions. Sustainable development of the agro-industrial complex in the southern region of Ukraine is possible under the following conditions: stimulation of higher education institutions for the training of quality specialists to work in the agro-industrial complex; creation of regional advisory centers to provide information to farmers on the latest technologies for growing agricultural products, agroecological quality of rain, uniformity and quality of irrigation, organization of erosion-safe irrigation, which will increase yields and product quality; creation of own production of competitive, energy-efficient equipment for irrigation systems of sprinklers; introduction of automated irrigation systems and energy-saving technologies based on autonomous renewable energy sources.

- Alimov O.M., & Danylenko A.I., Tregobchuk V.M. (2005). Economic development of Ukraine: institutional and resource provision: monograph. Kyiv: Joint Institute of Economics of the National Academy of Sciences of Ukraine.
- Ivashchenko O.O., Rudnyk O.I. (2011). Directions of adaptation of agricultural production to climate change. Bulletin of Agrarian Science, 8, 10-13.
- Prysyazhniuka M.V, Zubtsya M.V, Sabluka P.T, & Mesel – Veselyaka V. Ya., Fedorova M.M. (2011). Agrarian sector of the economy of Ukraine (state and prospects of development). Kyiv: NSC IAE.
- Shebanin V.S, & Novikov O.E, Karpenko M.D. (2020). Substantiation of expediency of introduction of sprinkler irrigation in modern conditions. Ukrainian Black Sea region agrarian science, 1, 4-10.
- Vozhegova R.A., Bilyaeva I.M. (2016). Substantiation of expediency of introduction of sprinkler irrigation in modern conditions. Irrigated agriculture: Interdepartmental thematic collection of scientific works, 65, 29-32.
- Vozhegova R.A., & Kokovikhin S.V., Bilyaeva I.M. (2015). Prospects of using information systems for agrometeorological support of irrigated agriculture in the south of Ukraine. Irrigated agriculture: interdepartmental thematic scientific collection., 64, 5-8.

PROSPECTS FOR THE DEVELOPMENT OF IR TECHNOLOGIES IN THE PRODUCTION OF DRIED SEMI-FINISHED PRODUCTS

Oleksandr Cherevko, Doctor of Technical Sciences, Professor
Kharkiv State University of Food Technology and Trade, Ukraine

Valerii Mykhailov, Doctor of Technical Sciences, Professor
Kharkiv State University of Food Technology and Trade, Ukraine

Andrii Zahorulko, PhD, Associate Professor
Kharkiv State University of Food Technology and Trade, Ukraine

Aleksey Zagorulko, PhD, Associate Professor
Kharkiv State University of Food Technology and Trade, Ukraine

One of the promising areas of development of the food industry is the use of innovative infrared technologies in the concentration of semi-finished products from vegetable raw materials. Food products from dried vegetable semi-finished products are especially valuable due to the content of vitamins, macro-microelements, organic acids, phytoncides, pectin, fiber, etc. and is the main and almost the only supplier. An important factor is the preservation of nutrients and compounds in the final products and beverages, ie technological processes and modes in the processing of food raw materials of plant origin should be optimal in terms of energy and resource conservation, and in terms of preservation of biologically active substances.

Powdered semi-finished products from raw fruits and vegetables are widely used in pharmacology for the production of dietary supplements; cooking – for fillings, sauces, jelly, sauces, coloring creams, etc.; in various branches of food (confectionery, dairy, meat, bakery, pasta, etc.) industry; in catering establishments; they are also part of baby and diet food, which allows to significantly expand the range of products with natural content of biologically active substances.

However, it should be noted that the drying process is one of the most energy-intensive in food production. Thus, during drying, the specific heat consumption is 3...6 MJ. Only 40...50% of the generated heat is useful, because a significant amount of it is removed with the spent coolant, as well as through the surfaces of the structural elements of the device.

The analysis of literature sources shows that many scientists are engaged in the development of technologies for obtaining powdered semi-finished products from vegetable raw materials, namely the problems of improving the quality of dried plant foods and reducing specific energy consumption, which are associated with a reduction in the duration of drying, ie the duration of thermal exposure to the product and depends on the uniformity of heating of the material, the maximum reduction in humidity during drying. All of them differ in both design parameters and methods of moisture removal and have their advantages and disadvantages.

Today, the method of thermoradiation treatment of natural raw materials using infrared energy of different band waves is widely used. The use of infrared radiation as one of the methods of processing natural raw materials provides the use of 98% of the supplied thermal energy directly to the natural component of the raw material, providing

high efficiency and simplicity of equipment, in contrast to other known drying methods.

Thermal radiation drying is carried out in the field of IR radiation and allows, in comparison with convective drying, to significantly intensify the process due to the increase in heat flux density on the surface of the product and the penetration of rays into the dried raw materials. Most often, drying by IR radiation is combined with other methods to intensify the process.

On the basis of Kharkiv State University of Food Technology and Trade for drying vegetable raw materials the design of a roller IR dryer was developed due to the use of a modern electric heater as a heat generating device, namely a flexible film resistive radiator of the radiating type (GPReNVt). The use of the proposed device based on GPReNVt provides an opportunity to significantly reduce the duration of heat treatment of products and use low-temperature drying modes (45...65 °C), which will ensure the preservation of the original properties of natural raw materials and improve the quality of the product.

The device is used in the food industry, belongs to IR dryers which are applied to drying of natural pastes (puree), their processing into dried semi-finished products, can be used at the food enterprises for production of dried food semi-finished products and finished products from natural raw materials and in other industries.

Thus, given the shortcomings of existing industrial equipment for drying vegetable raw materials and due to the tendency to increase the cost of energy, no less important are the tasks related to the development of measures to improve energy and resource efficiency, improving the performance of equipment used to ensure high quality of dried preparations.

Misra, N.N., Koubaa, M., Roohinejad, S., Juliano, P., Alpas, H., Inácio, R.S., Saraiva, A., & Barba, F. (2017). Landmarks in the historical development of twenty first century food processing technologies. *Food Research International*, 97, 318-339.

Zhaoli Wang, Jun Li, Chengguang Lai, Raymond Yu Wang, & Xiaohong Chen, Yanqing Lian (2018). Drying tendency dominating the global grain production area. *Global Food Security*, 16, 138-149.

PROSPECTS FOR ACHIEVING JOINT ECONOMIC SECURITY OF THE EU AND UKRAINE

Igor Matyushenko, Dr.Sc. of Economic, Prof.
V.N. Karazin Kharkiv National University, Ukraine
Anna Gavrilova, Master
V.N. Karazin Kharkiv National University, Ukraine

The problem of ensuring a decent level of economic security, which characterizes the ability of a country to withstand the destabilizing effects of various internal and external threats, as well as to maintain the sustainability of its development in the world economic system is relevant in the context of globalization. The gradual entry and integration of the national economy into world economic processes increases the vulnerability of the economic system and exacerbates competitiveness issues.

The concept of "economic security" is characterized by a complex internal structure. This is confirmed by the variety of its constituent elements. It is economic security that plays a crucial role in the formation of market relations and the successful functioning and sustainability of each individual state, as well as the formation of requirements for preventive measures to increase the independence of the national economy from the world system and associated foreign economic threats. A well-constructed and well-coordinated socio-economic mechanism, on which the living standards of the population depend, is the defining basis for all other components of national security.

According to most scientists, we can identify components of economic security:

- internal economic security: resource, energy, military-economic, food, social, demographic, environmental, technological. Also, financial security is sometimes singled out as a separate component.
- foreign economic security as the ability of the state to resist external threats, to realize economic interests in any markets.

Analyzing the existing approaches to determining the economic security of the state, we can define economic security as a set of conditions and factors that can ensure the independence of the national economy, stability and sustainability of its development, the ability to continuous renewal and self-improvement.

Analysis and assessment of the country's economic security, like any economic category, is based not only on theoretical approaches but also on empirical data, and this, in turn, requires the use of a system of evaluation indicators.

In the scientific literature to determine the level of economic security there are about two dozen indicators, with the approach of the indicator to the limit value indicates an exacerbation of instability, and exceeding these limits - to undermine economic security.

Currently, in international practice, the most relevant method of assessing the level of economic security is to assess its components: directly economic, political, social and environmental. This method is based on the principles of aggregation and synthesis of certain features into a single indicator. As a result, the state of economic security of the national economy of the EU is best assessed using an indicative approach, taking into

account the sub-indicators specified in international indices and ratings. All sub-indicators should be divided into four main components of economic security: economic, political, social and environmental.

When assessing the level of economic security of Ukraine in the context of European integration, it is advisable to analyze the main macroeconomic indicators of the country's development and compare them with the thresholds that are acceptable in the EU. It is shown that Ukraine's economic security does not have a stable positive value, ie for most of the thresholds, Ukraine is much worse than the EU, which requires a change in the priorities of economic policy and stimulate the development of economic security management.

It is established that the indicator of the political component of Ukraine's economic security indicator is several times lower than the EU indicator, in addition, the dynamics of this indicator in Ukraine is also negative, indicating a serious imbalance and vulnerability of the political system. and destabilization of the political situation).

It is shown that the social component of Ukraine's economic security indicator does not reach the required level (in 2019 the EU indicator was 0.550, and in Ukraine it barely reached 0.167), which necessitates the restructuring of Ukraine's social system (while the average wage in the EU is almost higher today). 9 times more than in Ukraine, and the average labor force in the EU has twice as much pay as in Ukraine, while the national economic system is characterized by a significant imbalance in the use of natural resources and their reproduction, which threatens the economic security of the country.

According to the results of the cluster analysis, Ukraine cannot be attributed to any of the selected three clusters, because the indicators of Ukraine's economic security components differ significantly from even the weakest EU member states. The level of economic, political and social components is also strikingly low (no more than 0.2). The state of Ukraine's economic security in the process of EU integration is unsatisfactory and has a negative trend, while EU countries strengthen the level of economic security annually (if the overall EU figure in 2019 was 0.611, the level of Ukraine was several times lower - 0.088).

There are a number of common threats facing the EU and Ukraine in the way of further development of their economic security in the conditions of association. Among these threats are: corruption, bureaucracy, migration problems and "brain drain", organized crime and terrorism, instability, declining corporate culture, the disappearance of basic socio-moral values. It is shown that Ukraine must also neutralize the impact of its own internal and external threats, the most important of which are the high level of income differentiation, outdated material and technical base, lack of investment income, growth of the shadow economy, high public debt, commodity exports and high dependence on imports.

Based on correlation-regression analysis, there is a strong relationship between economic security and GDP per capita (there is a direct relationship of 77.95%). It is shown that among the components of economic security it is impossible to single out the one that will be most affected by the GDP indicator, but the constant growth of correlation values confirms the interdependence of these parameters.

It is determined that among the individual indicators of the components that have a significant impact on the further development of economic security are: (1) economic (commodity on the labor market, the state of the financial system, innovation, the level of

decline and uneven development); (2) political (rule of law, corruption, government orientation and favorable business environment); (3) social (social globalization and capital, "brain drain"). It is shown that we can identify 9 main scenarios for further development of economic security of Ukraine, which differ in duration and probability of implementation, as well as the most favorable way of development in terms of integration, which is to implement a medium-term scenario - scenario "Rapid development of the national economy."

Thus, the adaptation of the experience of EU countries in ensuring economic security is one of the priorities of Ukraine's foreign policy not only in terms of achieving stability and efficiency of the national economy, but also in terms of long-term national development strategy. First of all Ukraine needs to create a clear concept for further economic security and focus on the following improvements: increasing innovation capacity, improving competitiveness, creating a favorable business environment, harmonizing the government system, reducing the class gap, eradicating corruption and attracting new investment.

It is proved that the basis of the country's economic security is the purposeful activity of the state to create the necessary conditions for: (1) maintaining the competitive advantages of leading sectors of the national economy in domestic and foreign markets by improving and developing all determinants of "national diamond" (human and natural resources, capital, scientific and information potential, infrastructure); (2) achieving the European (international) level and quality of life of the country's population.

- Grigorova-Berenda, L. I. (2004). Foreign economic security: essence and threats. *Problems of the economy*, 2, 39–46.
- Kozhenovsky, L. (2004). Security Management. *Current economic problems*, 1, 147-154.
- Kyzym, M. O., Ivanov, Y. B., & Gubareva, I. O. (2018). Assessment of the Level of Economic Security of Ukraine and the EU Countries. *Finance. Ukraine*, 4, 7-18.
- Martynenko, V. V. (2015). Theoretical and methodological principles of assessing the economic security of the national economy. *Economic space*, 93, 131-140.

WORLD MOLLISOLS DIVERSITY AND THEIR CONSERVATION USE: GLOBAL AND LOCAL ASPECTS

Yuriy Kravchenko, PhD

National University of Life and Environmental Sciences of Ukraine, Ukraine

Abstract summary. Mollisols make up of 7 % of the world's ice-free land surface and are known as Chernozems (Canada, Ukraine, Russia, FAO), Isohumosols or Black Soils (China), Brunosols and Argisols (Uruguay). Mollisol region, the world's natural granary basket, is mostly situated within 39° to 54° of northern and 30° to 55° of southern latitudes. The common recommended for Mollisols conservation practices are not appropriate for all regions: – shallow minimum tillage in semi-humid areas may provoke a secondary carbonate enrichment; – chisel tillage will be useful for humid areas, while in the dry steppe areas is desirable to combine no-till with subsoil tiller and even disking. Sunflower growing in Ukraine as well as soybean growing in China, USA and South American regions may dry soil moisture out from deep soil layers and requires implementation of water saving practices. Mollisols are the most fertile soils but they require additional organic/mineral fertilizers inputs. Mollisols are tender to erosion processes and their conservation management requires an adoption of a “Contour – ameliorative” system of farming, crop (bio) diversity rotations, inter/cover/strip cropping, etc. Obviously, further usage of world Mollisols should be based on conservational resilient practices, adopted to soil/climate changes and supported by world/government policies and strategies.

Keywords: Mollisol, Chernozem, Soil Conservation, Diversity, Erosion, Soil Organic Carbon

Introduction, scope and main objectives. On a global scale, soil scientists generally refer to four main major regions of Mollisols. One is located in the North America, crossing the central plains of the United States and southern Canada. Other two appear as a discontinuous belt which extends across southeastern Europe and central Asia. The fourth region corresponds to the Parana-La Plata basin in South America (Kravchenko et al., 2011). USA, Canada, Ukraine, Russia, China, Argentina, Uruguay, Brazil are countries composing these regions. They are the major world cereal producers are knowing as bread basket countries. Mollisols, inherently productive and fertile soils, have been intensively used in these countries for many centuries. Thus, these soils are prone to soil erosion, soil organic matter and nutrients losses, degradation, compaction, contamination, etc. Thus, there is a strong need for a conceptual change of sustaining effective Mollisols productivity while restoring their natural quality. In this context, conversion to a regularly conservation agriculture (CA) may be an important strategy of sustainable intensification of agroecosystems while restoring soil health and the environment as a whole. To be generally recognized, CA implementation must also be addressed the increasing of crop yields and getting profits by farmers (Lal, 2018).

Methodology. This paper introduces the world Mollisol diversity in terms of their geographical distribution, use and management policy. The discussion herein rests mostly on author findings, a large-scaled soil survey data, monitoring studies, literature, stock and instructional materials.

Results. European Mollisols are located mainly in Ukraine and Russia extending westward through Romania, Hungary and ending in/around of Serbia. Based on Ukrainian and Russian genetical soil classification, such soil types as: Chernozems, Kashtanozems and Dark Forest soils may be associated with Mollisols. Chernozems are the most productive soils among other soils which are spotted in Steppe and Forest Steppe areas on 27.8 million ha in Ukraine and 145.4 million ha in Russia. These Mollisols are developed primarily on loess and loess like sediments, having a dominant coarse-silt fraction (0.05-0.01 mm) in loamy textured classes. Quartz – is a main mineral of coarse fractions, while clay fraction composes of 60 to 85 % - hydromicas, 3 to 29 % - kaolinite, 10 to 46 % mixed layer silicates and 2 to 20 % chlorite. Soil organic matter content, bulk density, porosity, pH, CEC, readily hydrolyzed nitrogen, available phosphorus and exchangeable potassium in the surface layer ranges from: 3 to over 5.5%, 0.9-1.3 g cm⁻³, 50-60 %, 6.7-7.3, 25-50 meq 100 g⁻¹, 127 to 347 mg kg⁻¹, 70 to 150 mg kg⁻¹ and 100 to 370 mg kg⁻¹ respectively.

The Mollisols of Asia are primarily located in northeast China: Heilongjiang Province, Jilin Province, Liaoning Province and the Hulunbeier League of the Inner Mongolian Autonomous Region. Chinese Mollisols are developed from quaternary loess-like sediments extended to 10 to 15 m downward the soil profile. Both soils and their parent materials are generally slightly acid to alkaline. The soil texture ranges from loam to light clay, with most sola being predominantly clay loam. The main clay mineral is illite although some chlorite and montmorillonite are found in some profiles. SOC content in the surface layer (0-17 cm) of the typical Black Soil in the area is 28.1-54.4 g kg⁻¹, CEC is 31.5-45.8 meq 100 g⁻¹, while soil bulk density is around 1.39-1.09 g cm⁻³ (Liu et al., 2012).

North American Mollisols covering more than 200 million ha in the United States, more than 40 million ha in Canada and about 50 million ha in Mexico. Mollisols in North America extending from the prairie provinces of Canada across the USA's Great Plains and into eastern Mexico's semi-arid grasslands (Soil Survey Staff, 2010; Soil Landscapes of Canada Working Group, 2011). These soils are associated with till, loess and alluvium parent materials. Typical characteristics of some Mollisol soil series from Wisconsin ranges within: 24.4-39.9 % (clay), 49.0-71.7 % (silt), 2.86-4.8 % (SOC), 22.2-56.1 (cmol(+)/kg), 85-100 (Base sat. %), 6.1-7.6 (pH H₂O) (Hartemink, 2017).

South American Mollisols cover about 8.87×10^7 ha, 1.3×10^7 ha and 4.3×10^6 ha in Argentina, Uruguay and Southern Brazil respectively. The Quaternary parent material of Pampean Mollisols are loess and loessoid sediments to the east and aeolian sands to the west of the region (Duran, 2010). Quartz content ranges between 50–70 % in the light textured fractions, while such primary minerals as: pyroxenes, amphiboles, K-feldspars or plagioclases are usually abundant in the heavy fractions. Illite is the dominant mineral in Pampa Mollisols with minor amounts of kaolinite, smectite and interstratified illite-smectite are appeared in the east, close to the Parana River. Most Uruguayan Mollisols are lacking of smectite. Soil organic matter content ranges from 1.6 % in La Pampa to 5.53 % in Buenos Aires provinces (Duran, 2011). Mean clay content is 25-45 % in the A horizon and 36-55 % in the B horizon (Liu et al., 2012). pH H₂O and CEC changes from 6.0 and 20.0 cmol (+)/kg – in Hughes, Santa Emilia, Manucho area to: 7.5 and 19.1 cmol (+)/kg – in Campbell area (Pilatti et al., 2006).

Discussion. Mollisols regions are used mostly for: japonica rice, corn, and soybean

– in Northeast China, winter wheat, corn, barley, sunflower, soybean and rape – in Ukraine and Russia, wheat, corn, sorghum, barley, soybean and sunflower – in South America, maize, soybean, sorghum and wheat – in North America (Xu et al., 2019). In the more humid regions rotations are composed with maize, soybeans, pea, lupine, flax, rye; in semi humid regions: maize, sugar beet, leguminous, oat, buckwheat, barley, rye and soybean; in the semi-arid regions: cereal grains, oilseeds, sunflower, maize, alfalfa, sorghum, chickpea. In regions where precipitation exceeds 700 mm, they are used chisel, moldboard plowing, deep minimum- and rotatory till. Under precipitation ranged 450-700 mm is widely used minimum/reduced till and no-till, no-till and shallow minimum till and even disking is used in regions with precipitation less, than 400 mm. Regarding soil fertility, South American and Ukrainian Mollisols undergone by low fertilization rates for a long cropping period, while in China, for the last 25 years amount of applied fertilizers has increased from 200- to 438 kg ha⁻¹ NPK. In 2010 typical fertilizer regimen for maize in Iowa was N₁₅₀P₃₀K₈₀ (Liu et al., 2012; Duran, 2010; Kravchenko et al., 2011; Burras et al., 2010). Soil organic carbon (SOC) content can be recovered or even increased by applying cattle/pig/poultry manure, compost, peat, sapropel, green manure, plant residues, and cover crops. The use of crop seeds pre-treatment with colloidal metals in combination with foliar application may approach the crop yield level higher than soils and fertilizers can supply. Common practices, are used on eroded Mollisols, could be: plowing along the lines of the contours, 1-3 m buffer strips; 6- 8 m wide forest belts along the field margins; contour ridges or channels established at 160 m intervals; mulching with cover no less than 65 per cent of the soil surface; growing multiple crops for use in rotations, and application of an additional 10- 15% chemical fertilizers. For steeper slopes with very erodible Mollisols, the top priority practices are: growing perennial forage and pasture crops.

Conclusions. World Mollisols are identified by thick, friable, very dark-colored, organic-rich, surface horizon (mollic epipedon) with lower boundary deeper 18 cm. It characterizes with a high cation exchange capacity, a high base saturation throughout the profile, leaching is not intense, calcic and duripan horizons are known to occur (Soil Survey Staff, 2010). In spite of common Mollisols features, they are also varied in their properties, depending on local conditions they were formed. This evidence requires an addressed approach in Mollisol management guided by exclusive policies, most effective in certain natural conditions.

Burras, C.L., Veenstra, J.J., Ibrahim, M., Cruse, R.M., & Fenton, T.E. (2010). Black soils of the USA – a brief introduction. *New Advances in Research and Management of World Mollisols.*, 1, 46-55.

Burras, C.L., Veenstra, J.J., Ibrahim, M., Cruse, R.M., & Fenton, T.E. (2010). *Proc. Intl. Symp. Soil Quality & Management of World Mollisols.* Northeast Forestry University Press. Harbin: *New Advances in Research and Management of World Mollisols.*

Duran, A. (2010). An overview of South American Mollisols: soil formation, classification, suitability and environmental challenges. *New Advances in Research and Management of World Mollisols.*, 1, 31-45.

- Duran, A., Morris, H., Studdert, G., & Liu, X. (2011). Distribution, properties, land use and management of Mollisols in South America. *Chinese Geographical Science*, 21, 511–530.
- Kravchenko, Y., Zhang, X., Liu, X., Song, C., & Cruse, R. (2011). Mollisols properties and changes in Ukraine and China. *Chinese Geographical Science*, 21, 257–266.
- Lal, R. (2018). Sustainable intensification of China's agroecosystems by conservation agriculture. *International Soil and Water Conservation Research*, 6 (1), 1–12.
- Liu, X., Burras, L., Kravchenko, Yu., Duran, A., Huffman, T., Morris, H., Studdert, G., Zhang, X., Cruse, R., & Yuan, X. (2012). Overview of Mollisols in the world: Distribution, land use and management. *Can. J. Soil Sci.*, 92, 383–402.
- Pilatti, M., Imhoff, I., Ghiberto, P., & Marano, P. (2006). Changes in some physical properties of Mollisols induced by supplemental irrigation. *Geoderma*, 133, 431–443.
- Xu, X., Pei, J., Xu, Y., & Wang, J. (2020). Soil organic carbon depletion in global Mollisols regions and restoration by management practices: a review. *Journal of Soils and Sediments*, 1, Date of visit: 13 January 2020, doi:10.1007/s11368-019-02557-3. <https://journals.ala.org/index.php/ltr/article/view/4426/5143>

ОБЕСПЕЧЕНИЕ УСТОЙЧИВОГО РАЗВИТИЯ ХЛЕБОПЕКАРНОЙ И КОНДИТЕРСКОЙ ОТРАСЛЕЙ ПУТЕМ СОЗДАНИЯ НОВЫХ РЕСУРСОСБЕРЕГАЮЩИХ ТЕХНОЛОГИЙ

Валерий Михайлов, Доктор технических наук, профессор
Харьковский государственный университет питания и торговли, Украина
Ольга Самохвалова, Кандидат технических наук, профессор
Харьковский государственный университет питания и торговли, Украина
Светлана Олейник, Кандидат технических наук, доцент
Харьковский государственный университет питания и торговли, Украина
Наталья Гревцева, Кандидат технических наук, профессор
Харьковский государственный университет питания и торговли, Украина
Екатерина Касабова, Кандидат технических наук, доцент
Харьковский государственный университет питания и торговли, Украина

Мировоззренческая парадигма устойчивого развития является современной политической и практической моделью развития мира, ориентированной на возможность удовлетворения потребностей нынешнего поколения без ущерба для возможности будущих поколений удовлетворять свои собственные потребности. Стратегия устойчивого развития включает системный комплекс целей, задач и принципов, направленных на сбалансированное решение народнохозяйственных социально-экономических проблем с сохранением природно-ресурсного потенциала.

Известно, что в структуре потребностей человека важнейшее место занимает физиологическая потребность в бесперебойном обеспечении продуктами питания.

Важную роль в этом вопросе играют хлебопекарная и кондитерская отрасли, продукция которых пользуется большой популярностью у населения большинства стран мира. В Украине объем производства хлебобулочных и кондитерских изделий составляет значительную долю в суммарном объеме продукции пищевой промышленности Украины.

Решающее влияние на процесс развития пищевых предприятий, в том числе хлебопекарных и кондитерских, оказывают следующие научно-технические факторы:

- быстрые изменения сырьевой базы,
- развитие новых трендов и новые запросы потребителей,
- возрастание конкуренции,
- изменение человеческих и развитие информационных ресурсов и т.д.

Среди основных направлений практической реализации концепции устойчивого развития предприятий хлебопекарной и кондитерской отрасли является создание и внедрение новых ресурсосберегающих технологий. Кроме того, мировые тенденции свидетельствуют, что потребители сегодня отдают предпочтение продукции с «чистой этикеткой» («clean label»), то есть изготовленной из натуральных и экологически чистых ингредиентов, что определяет это направление в число ведущих.

В той связи учеными Харьковского государственного университета питания и торговли проводятся системные научные исследования в области создания технологий хлебобулочных и кондитерских изделий с использованием нетрадиционного сырья.

Важным направлением развития мало- и безотходных технологий является применение в производстве хлебобулочных и кондитерских изделий вторичных растительных сырьевых ресурсов с высокой пищевой и биологической ценностью, что обеспечивает максимальное использование природного потенциала исходного сырья.

Для производства хлеба оздоровительного назначения представляют интерес шроты плодов шиповника, зародышей пшеницы и овса – побочные продукты производства соответствующих масел. Они имеют статус диетических добавок, выпускаются в промышленных масштабах. Шроты являются источниками витаминов, минеральных веществ, пищевых волокон, антиоксидантов, а зародышевые - и биологически ценного белка. В результате изучения химического состава шротов, их влияния на процессы, происходящие при производстве хлеба, установлено, что с технологической, экономической и физиологической точки зрения целесообразным является совместное использование зародышевых шротов совместно со шротом плодов шиповника. Такой подход позволяет существенно повысить пищевую ценность изделий и обеспечить высокое качество продукции при незначительном увеличении ее себестоимости. Выявлено, что за счет высокого содержания в шротах некрахмальных полисахаридов, изделия при хранении лучше сохраняют свежесть по сравнению с контрольными образцами. Это подтверждается данными о меньших потерях мякишем влаги, а также менее заметным ухудшением его структурно-механических свойств при хранении. Разработан ассортимент пшеничного и ржано-пшеничного хлеба со шротами плодов шиповника, зародышей пшеницы и овса, который рекомендован как для массового, так и для оздоровительного питания.

В последние годы большой популярностью пользуется специальная диетическая продукция, в том числе и безклейковинная. Такие изделия необходимы для диетического питания при нарушениях белкового обмена и непереносимости отдельными людьми глютена пшеницы. Предложены мучные кондитерские изделия, которые характеризуются отсутствием пшеничной муки, которая является источником структурообразующих клейковинных белков. Изучена возможность создания безклейковинных маффинов на основе шрота зародышей пшеницы. При отсутствии клейковины, как основного структурообразователя в тесте, в качестве загустителей используют гидроколлоиды полисахаридной природы. Исследовано влияние микробных полисахаридов ксантана, энпосана и геллана на показатели качества и формирования структуры маффинов, изготовленных на основе шрота зародышей пшеницы без добавления пшеничной муки. Внесение микробных полисахаридов в количестве 0,1% к массе изделий приводит к улучшению органолептических и структурно-механических показателей качества. Это обусловлено тем, что применение гидроколлоидов позволяет улучшить структурно-механические свойства безклейковинного теста, приближая его к свойствам пшеничного теста. В силу высокой гидрофильности присутствие этих добавок также способствует стабилизации показателей качества продукции при хранении.

На украинских винодельческих предприятиях при изготовлении вина в больших количествах накапливаются выжимки винограда, являющиеся источником антиоксидантов полифенольной природы, а также пищевых волокон, макро- и микроэлементов, витаминов. Из них получают порошки отдельно из кожицы и косточек с высоким содержанием биологически активных соединений. По цвету и дисперсности порошок виноградных косточек подобен порошку какао. Это позволило рекомендовать порошки в качестве альтернатив какао порошка в технологии кондитерской глазури, сдобного печенья и бисквитных полуфабрикатов. Их использование позволяет получить продукцию с высокими показателями качества и содержанием биологически активных веществ. Значительное количество антиоксидантов способствует замедлению процессов окисления кондитерских жиров в изделиях, а замена импортного какао порошка отечественными вторичными сырьевыми ресурсами приводит к снижению себестоимости продукции.

Одной из важнейших характеристик обогатительных растительных добавок является максимальное сохранение биологически активных соединений исходного сырья. Предложен способ переработки плодово-ягодного сырья путем его концентрирования при низких температурах. Для получения многокомпонентных композиций использовано сырье с высоким содержанием пищевых волокон, витаминов и минеральных веществ, а именно: яблоко, ежевика, клюква, боярышник. Установлено, что полученные пасты по химическому составу и структурно-механическим характеристикам превосходят яблочное пюре, традиционно используемое в технологии пастильных изделий. Использование многокомпонентных паст позволяет ускорить процесс структурообразования пастилы и зефира, получить изделия с высокими показателями качества, существенно увеличить содержание биологически активных веществ, исключить из рецептуры изделий красители и ароматизаторы.

Таким образом, разработка новых ресурсосберегающих технологий является действенным инструментом реализации концепции устойчивого развития

хлебопекарных и кондитерских отраслей пищевой промышленности.

Bucher T, & van der Horst K, Siegrist M. (2012). Fruit for dessert. How people compose healthier meals. *Appetite*, 60(1), 74-80.

Misra, N.N., Koubaa, M., Roohinejad, S., Juliano, P., Alpas, H., Inácio, R.S., Saraiva, A., & Barba, F. (2017). Landmarks in the historical development of twenty first century food processing technologies. *Food Research International*, 97, 318-339.

ПРОБЛЕМЫ УСТОЙЧИВОГО РАЗВИТИЯ СТРАН, ПОРОЖДАЕМЫЕ ХАРАКТЕРОМ И СТЕПЕНЬЮ ОБЕСПЕЧЕННОСТИ ЭНЕРГЕТИЧЕСКИМИ РЕСУРСАМИ

Ирина Дерид, Кандидат экономических наук

Харьковский национальный университет имени В. Н. Каразина, Украина

Актуальным является вопрос, насколько наличие природных ресурсов определяет благосостояние страны. Очевиден тот факт, что недостаточно быть страной, обеспеченной ресурсами, необходимо иметь возможность их эффективно использовать.

Традиционно нефтяные и газовые богатства страны, принося огромные доходы, рассматриваются как козырь в экономическом развитии и повышении благосостояния населения. Но, как показывает практика, часто наличие таких энергетических ресурсов вызывает большие неприятности. Страны, богатые нефтью, нередко становятся бедными именно по причине ее наличия. Нефть и другие природные богатства могут помешать экономическому росту и политическим изменениям, которые диктует время.

Существует феномен, названный исследователями-экономистами «ресурсным проклятием». Заключается он в том, что страны, обладающие большими запасами природных ресурсов, такими как нефть или газ, часто отстают по экономическому развитию и по качеству государственного управления от стран, которые наделены меньшими ресурсами. И хотя открытие месторождений нефти или других полезных ископаемых вызывает надежду на экономический рост, в большинстве случаев такие дары скорее препятствуют сбалансированному и устойчивому развитию. За последнюю четверть XX века экономика богатых ресурсами стран росла медленнее, чем экономика стран без таких ресурсов. К тому же, в странах, наделенных природными ресурсами, часто параллельно проявляются такие черты как слабость демократических институтов, коррупция и общественные беспорядки.

В основном, проблема «ресурсного проклятия» свойственна развивающимся странам. Причин «ресурсного проклятия» несколько. В том числе к ним может относиться исторический контекст (страна ранее была колонией и использовалась исключительно как источник сырья), политическая нестабильность (часто сменяющаяся власть, желание новых лидеров «выжать» всё возможное из ресурсных богатств страны, в том числе на популистские мероприятия, с целью

удержания при власти), неправильная структурная и инвестиционная политика (отсутствие поддержки и капиталовложений в развитие других отраслей, непосредственно не зависящих от ресурсодобывающей отрасли) и т.д. Ярким примером такого «ресурсного проклятия» служит Венесуэла.

Однако и отсутствие энергетических ресурсов ведет к проблемам бедности и экологическим проблемам. В бедных странах, обделенных энергоресурсами, как правило, начинается активная вырубка лесов. Уменьшение площадей лесов является глобальной экологической проблемой. На данный момент леса занимают 37% пригодных для проживания земель. При этом, за последние 100 лет на Мадагаскаре было вырублено 90% лесов. В Бразилии ежегодно уничтожают около 15 тыс. км. квадратных тропического леса. В Бангладеш за период с 1980-1990 годы было уничтожено 37600 гектара лесного покрова. Причинами обезлесения является вырубка лесов (частично незаконно) с целью использования древесины в качестве топлива и для переработки, с целью освобождения сельскохозяйственных угодий, для застройки под влиянием урбанизации. Потерянные леса означают отсутствие среды обитания многих видов растений и животных, а также приводят к дальнейшей деградации почвы. Однако важнейшее свойство лесов заключается в способности поглощать диоксид углерода и выделять кислород в воздух. И поэтому сокращение лесного покрова вредит «дыханию» нашей планеты.

Кроме выше названных проблем устойчивого развития, в основе которых лежит обеспеченность энергоресурсами, есть и третий тип проблемы. Это проблемы стран энергетические потребности которых во многом решаются за счет наличия полезных ископаемых, которые, однако, относятся к неэкологичным. В эту категорию можно отнести и Украину, и Эстонию. В Украине таким ресурсом является каменный уголь, а в Эстонии – сланец. В Украине ситуация существенно усложнена тем, что после 2014 года основная часть угледобывающих шахт оказалась на оккупированной территории. В Эстонии же сланец является основным источником энергии и источником пополнения бюджета. Сланец является горючим и на нем работает большинство эстонских электростанций. Кроме того, из сланца делают синтетическую «нефть». При этом, сланец является исключительно неэкологичным. При его добыче и использовании остается очень много отходов, которые, в том числе, загрязняют грунтовые воды. Но основная проблема состоит в том, что сжигание сланца ведет к огромным выбросам углекислого газа. Сейчас в Эстонии все больше делают ставку на производство сланцевого масла (мазута). Однако при этом стоит вопрос о качестве сланцевого масла в Эстонии. Для его конкурентоспособности нужен технологически усовершенствованный завод по его очищению в регионе Ида-Вирумаа, стоимость которого еще несколько лет назад оценивали в 650 млн евро. Эстония стоит перед нелегким выбором, либо вложить средства в дальнейшее развитие сланцевой индустрии, в том числе в строительство выше названного завода, который придется все равно закрыть до 2050 года в рамках долгосрочной стратегии ЕС по достижению климатической нейтральности, либо сконцентрироваться на зеленой энергетике. Эксперты оценивают, что на достижение экологической нейтральности до 2050 года Эстонии необходимо будет вложить около 17 млрд евро. При этом, наиболее перспективным направлением развития зеленой энергетики для Эстонии считается водородная энергетика.

Таким образом, нами выделено три основные проблемы для устойчивого

развития национальной экономики в контексте обеспеченности/необеспеченности энергетическими ресурсами. Развивающиеся страны с излишком энергетических ресурсов имеют риск попасть под влияние «ресурсного проклятья», что означает зависимость от экспорта ресурсов и перманентную проблему отставания в экономическом развитии. Бедные страны с отсутствием энергетических ресурсов пытаются выжить за счет уничтожения лесов, что приводит к глубоким экологическим проблемам. Активно развивающиеся страны с наличием неэкологичных энергетических ресурсов стоят перед дилеммой: вкладывать ли в технологическое усовершенствование традиционной энергетической отрасли, что принесет увеличение прибыли, но приведет к дальнейшим экологическим проблемам, либо же постепенно сократить до минимума использование традиционных источников энергии и инвестировать в зеленую энергетику для обеспечения долгосрочного устойчивого развития.

- Аллам Мд, Шамшер (2013). Экосоциальные проблемы развития республики Бангладеш. Вестник РУДН. Серия Экология и безопасность жизнедеятельности, 5, 90-95.
- Глобальная экологическая перспектива ГЭП6. Резюме для директивных органов (2019). Дата обращения: 2021-01-10
<http://www.unepcom.ru/news/news2019/2612-190313geo6.html>
- Грязное богатство: пойдет ли Эстония наперекор ЕС? (2019). Дата обращения: 14.01.2021 <https://clck.ru/TWN6E>
- Иванов, И. (16.09.2004). Благо или проклятие. Гудок. Дата обращения: 12.01.2020 <https://www.gudok.ru/newspaper/?ID=763630>
- Хамфрис М., & Сакс Д., Стиглиц Д. (2011). Как избежать ресурсного проклятья. Москва: Изд. Института Гайдара.

REGIONAL FEATURES OF SUSTAINABLE DEVELOPMENT

EVALUATION OF THE LOCAL GOVERNMENT EFFICIENCY

Iryna Honcharenko, Dr. Econ
Mykolaiv National Agrarian University, Ukraine

The formation and publication of unbiased and objective data are necessary for the development of objective measures in the field of public policy. Modern society needs adequate systems for local governments' effectiveness measurement. Most of scientists follow a general approach for determination of the management success, based on the correlation between level of the performance and costs associated with these results. The only problem is to ensure an adequate and objective assessment of both the results and the corresponding costs, as well as to ensure the comparability of the estimates obtained.

USA is the first country, which started to conduct evaluations of the public administration, the experience of evaluation in education, public health and hygiene, the country has received before the First World War. In the 1960s, the US federal government pursued a policy using the slogan "War with poverty." This led to the formation of a scientific method of governance based on the measurement of efficiency, which has traditionally been developed within the study of public administration and its spread since the 90s against the spread of so-called "new public administration".

Evaluation of the effectiveness and efficiency of public management is based on the fact that management activities, which are focused on achieving certain strategic goals, are aimed at achieving results in the form of satisfaction of individual citizens and society as a whole with the volume and quality of goods and services, as well as the volume and quality of public services provided by public administration and administration, which improve the living conditions and livelihoods of citizens.

The most common regulatory framework for creating quality management systems is an international standard ISO 9001:2015. In Ukraine, local governments were the first among the authorities to introduce the ISO system. Implementation and certification of the quality management systems in accordance with this standard leads to increase of the efficiency and consistency of work, more rational use of resources, focusing on consumers and, consequently, to increase of the customer satisfaction.

Public evaluation of the effectiveness of local government is common, which includes evaluation and control, in particular on such issues as, for example, the adoption of certain management decisions by public authorities, as well as the progress of their implementation; targeted and economical spending of resources and public funds; ensuring environmental safety, as well as preserving human life and health; quality and volume of public services provided, implementation of priority national programs and projects, etc. Taking into account the influence of the public opinion and its evaluation in the process of the effectiveness of public administration determination is carried out by implementing a system of its monitoring and taking into account its effects and their consequences. In the countries of the European Union, the practice of introducing the

technology "Smart City", which provides, in particular, governance with the participation of citizens, become highly popular. Such tools as electronic opinion polls or online citizens' notes / appeals make it possible to study citizens' opinions and take them into account when planning local development. The Best Value system was developed in the UK as a program for improving the quality of the local government activities, and its most important aspect is the cooperation of the local authorities with the public, as public consultation on many issues connected with the services' quality improving is its key element. Not only the quality of services is discussed with citizens, but also the list of services, their goals and quality standards, according to which services are provided and determined. In addition to discussions, the form of citizen involvement is the cooperation in the process of services provision. Since 2001, Canada has used a model called the Community-Based Monitoring System. Such monitoring is defined by experts as a process of cooperation between the public, government agencies, industry, academics, community groups and local institutions to adequately respond to local development processes, address existing problems and promote full cooperation between citizens and government, strengthened by involving citizens in the management decisions making process at the local level.

The Balanced Scorecard is a promising grading system, the result of many years of work led by Robert Kaplan, a professor at Harvard Business School, and David Norton, founder and president of the Balanced Scorecard Collaborative. The Balanced Scorecard system, developed for business companies, is gaining popularity among public administration institutions and takes into account four "perspectives" of the organization: traditional financial (Financial) indicators and factors that directly or indirectly affect them, the success of customer service (Customer), optimality of the internal business processes (Internal Process) and general competence of the company's staff in its field (Learning & Growth / Employees). Taken together, these perspectives provide a holistic picture of the organization's current strategy and dynamics. If necessary, additional sets of own development, for example "Ecology" and others can be added and used.

Indicators of the effectiveness of local government, in accordance with current trends, should be established in accordance with the concept of sustainable development, within which the world community is moving.

The number of the key performance indicators selected should be limited. It is impossible to make effective management decisions based on the analysis of too many indicators.

To achieve the strategic goals and objectives of the regional development, the following criteria are proposed:

- Economic and financial stability (Growth rate of the labor productivity; Index of economic innovation; Number of jobs created and modernized; Level of competitiveness);
- Institutional development (Business conditions; Quality of local government; Development of e-government);
- Social transformations (Share of the population with incomes below the subsistence level; Unemployment rate, Minimum income level);
- Environmental responsibility and energy efficiency (Number of sources of pollution; Reduction of energy intensity of the economy; Garbage treatment)

Progress towards the formation of a perfect system for measuring the level of efficiency of the local self-government will contribute to the intensification of the public

monitoring of the certain service delivery, the activities of the communities, institutions and civil society organizations for continuous, periodic or one-time monitoring of the public service delivery or the accumulation of information for consideration in order to improve the quality of the service delivery.

- European Smart Cities. TU Wien european smart cities 4.0 (2015) (<http://www.smart-cities.eu/?cid=2∓ver=4>).
- Hiraki Tanaka Evaluation in Local Governments in Japan (2009) (http://www3.grips.ac.jp/~coslog/activity/01/04/file/Bunyabetsu-14_en.pdf).
- Modernising local government. Improving local services through best value. Department of the Environment, Transport and the Regions. (Eland House, Bressenden Place. – London, 1998. – 40p.).
- Norton, D. (1996). Using the Balanced Scorecard as a Strategic Management System. January – February: Harvard Business Review.
- Quinn M. Community Based Monitoring: Engaging and Empowering / Quinn Michael S., Dubois Jennifer E. // Forest Service Proceedings RMRS-P-36 (Faculty of Environmental Design, University of Calgary. – Calgary, AB, Canada : Alberta Ranchers USDA, 2005. – P. 212–218.).
- Vedung, E. (2017). Evaluation of the public policies and programs. E. Wedung: Routledge.
- Сайт «УКРМЕТПТЕКСТАНДАРТ» (2021). Date of visit: 06.01.2021 <http://www.certsystems.kiev.ua/uk/iso-9001/sistemi-upravlinnya-yakistyu-za-iso-9001.html>
- Системи управління якістю за ISO 9001 (<http://www.certsystems.kiev.ua/uk/iso-9001/sistemi-upravlinnya-yakistyu-za-iso-9001.html>).

PROBLEMS OF CROSS-BORDER COOPERATION DEVELOPMENT IN UKRAINE UNDER THE CONDITIONS OF SUSTAINABLE DEVELOPMENT

Romana Mikhel, Candidate of Economic Sciences (PhD)

Ivan Franko National University of Lviv, Ukraine

The acceleration of European integration processes in Ukraine moves the issue of improving the efficiency of public administration of sustainable development of regions from a purely theoretical to a scientific and practical level. According to Ukrainian and foreign researchers, the main “area” for the implementation of the theory of sustainable development in practice should be the regions. Firstly, regions have the most controlled structure, occupying an equidistant position in the administrative space of the country (center - regions - city councils - citizen). Secondly, they are historically the most stable territorial formations that have formed separate societies during the period of its existence.

According to N. Mikula (2013), ensuring the sustainable development of the border regions has its own specific features, which are clearly revealed by identifying the factor

influence on such processes. The factor influence on the sustainable development of cross-border territories is obviously extremely powerful and ambiguous, which necessitates its external control. In fact, this management function should precede the definition of directions for adjusting the factor impact in order to ensure the sustainable development of the studied areas.

The definition of factor impact on the sustainable development of border regions should serve as a conceptual basis for the regulatory impact of the relevant organizational and economic mechanism. That is why we propose to carry out the investigation according to factors distribution based on their belonging to the object – exogenous and endogenous – regulated, partially regulated, unregulated.

Thus, exogenous unregulated factors include integration processes (including European integration), scientific and technological progress, strategic priorities of the state, and state policy of sustainable development. Exogenous partially regulated factors include innovation processes, the structure of the regional economy, business activities of foreign entities, and the activities of economic entities.

Unregulated endogenous factors include the geopolitical situation. Among the partially regulated ones are the education system, health care, privatization processes, and cross-border cooperation (CBC). Regulated endogenous factors include mobility, educational and qualification structure of the population, entrepreneurial activity, environmental awareness, the system of moral values, and lifestyle.

Currently in the border areas of Ukraine, there is a set of interconnected and complex exogenous problems of cross-border interactions, such as:

1. Insufficient elaboration of the regulatory framework. Among other things, the adopted regulations in Ukraine are not supported by the effectiveness of their actual application in practice; there is a mismatch of formal and informal norms, which significantly complicates the mechanism of cross-border interactions between Ukraine and the EU.

2. Significant development gap between scientific and technological progress in the border areas of Ukraine and EU Member states, which, however, can strengthen the transfer of experience of the latter into the border areas of Ukraine.

3. The conflict of local and national interests, which arises because of the specifics of the political system of Ukraine. Ukrainian legislation is based on the priorities, goals and objectives of the state. In particular, the protection of the unity of the economic space, political integrity and the overall system of foreign policy priorities are seen as a strategic goal. As a result, the local interests of specific border areas are not fully taken into account.

4. Institutional inconsistencies arising from differences in the system of Ukrainian regional governance and local self-government, features of socio-economic development strategies and applied management methods.

5. Underdeveloped financial, organizational and economic mechanisms of the supranational component of cross-border relations regulation in Ukraine. There is no correlation between solving the problems of cross-border cooperation and solving regional problems of neighbouring regions.

6. Lack of system-forming projects that could stimulate the development of integration both at the level of various entities and adjacent regions in general (in the frames of sustainable development strategy).

Endogenous problems of cross-border interactions in Ukraine include the following:

1. Unbalanced socio-economic development of border regions. Marginality influences the socio-economic (nature of population settlement, income level, etc.) and political (dependence on the centre's management decisions, conservatism of political views and electoral behaviour, etc.) processes in the region. In fact, the marginality affects most indicators of socio-economic development.

2. Insufficient elaboration of a number of theoretical issues in the field of cross-border interactions that can as a result ensure a higher level of quality of life of the population of border regions.

3. Low activity of participants from the Ukrainian side in the CBC programs and projects in comparison with the neighbouring regions of Poland or Hungary.

4. The tendency to change the place of residence and work of the population of border areas towards the areas of a higher standard of living.

5. The discrepancy between the demand and supply of existing specialists, workers of the appropriate educational and qualification level.

6. Lack of respect for the environmental problems.

7. Lack of the promotion of entrepreneurship through the development of self-employment.

When analyzing cross-border cooperation between Ukraine and the EU two aspects should be defined (Davydenko, 2012). The first involves the use of diverse EU assistance in the context of cross-border cooperation. The second correlates to the participants' entrepreneurial activities, according to forms and methods of cross-border economic cooperation.

There are two prospects for developing cross-border cooperation forms:

- resolving local problems and economic decline;
- transforming into forms aimed at solving new, preferably more significant tasks, relevant at the regional and national level.

In particular, the innovative nature of Ukraine's cross-border cooperation, which is considered a priority, involves the use of appropriate forms and instruments of state support for these forms of cooperation. The potential for such cross-border cooperation forms and methods as cross-border clusters, special economic zones, technology parks, cross-border industrial parks, scientific parks, etc. remains undiscovered.

The economic component of cross-border cooperation largely determines the provision of appropriate incentives and preferences for entities that implement the associated (investment) projects and programs. The introduction of special regimes of economic activity for entities participating in cross-border cooperation projects is an obligatory element. The abovementioned forms a close interconnection between the mechanisms and forms of cross-border cooperation and other existing forms of special legal regimes of economic activity such as special economic zones, priority development areas, technological parks, industrial parks, etc.

Today, the issues of developing cross-border clusters and industrial parks in Ukraine are relevant for the implementation of cross-border cooperation. Industrial parks successfully operate in European countries such as Austria, Slovakia, Czech Republic, Hungary and Poland. Thus, as of the beginning of 2020, there were 23 clusters on the territory of Ukraine. Among these, only one cluster is funded under the project Horizon 2020 (Carpathian eco-energy cluster), 8 clusters operate in the IT-sphere.

Among the significant socio-economic barriers to the development of CBC are differences in the level and pace of economic development of Ukraine and the EU, as

well as fiscal and customs barriers. Ukraine's state policy on the development of cross-border cooperation should facilitate the transfer of most administrative powers on cross-border cooperation to the level of local governments. Today, this should become a priority. Article 447 of the Association Agreement between the European Union and Ukraine confirms this necessity while stating that "parties have to support and strengthen the involvement of local and regional authorities of cross-border and regional cooperation and appropriate governance structures to achieve the following goals: 1) to increase cooperation via creating a favorable legislative framework; 2) to support and facilitate development; 3) to strengthen cross-border and regional economic relations and business partnership".

Thus, the study of the factor impact on border regions makes it possible to identify their specificity in relation to other spatial locations of the country. It is also important to take into account the factor influence to determine the directions of action of the organizational and economic mechanism of sustainable development of the studied areas.

Association Agreement between the European Union and its Member States, of the one part, and Ukraine, of the other part (2014). Date of visit: 2020-10-02 https://trade.ec.europa.eu/doclib/docs/2016/november/tradoc_155103.pdf

Davydenko, S., & Yehorova, O. (2012). Cross-border cooperation in Ukraine: the economic aspect. *Individual and Society*, 15, Date of visit: 17.12.2020 <https://journals.ala.org/index.php/ltr/article/view/4426/5143>

Мікула, Н. А., & Шахраюк-Онофрей, С. І. (2013). Факторні впливи на сталий розвиток сільських територій прикордонних регіонів. *Науковий вісник. Економічні науки*, 1, 237-246.

SOCIO-PSYCHOLOGICAL ASPECT OF HUMAN DEVELOPMENT IN THE CONTEXT OF SUSTAINABLE DEVELOPMENT OF UKRAINE

Tetiana Kim, PhD in Economics

V.N. Karazin Kharkiv National University, Ukraine

Oleksii Kim, PhD in Economics

V.N. Karazin Kharkiv National University, Ukraine

The relevance of human development as a central link in sustainable socio-economic development is undisputed. In this article we will consider the socio-psychological aspect of human development, the basis of the social relations and a necessary condition for human development. The study of human development and sustainable development in assessing a healthy life and well-being contains indicators of the physical health of the population, social equality in income, opportunities, etc. However, we consider that it is important to study and assess the psychological health of the population and its impact on sustainable human and socio-economic development.

The analysis based on the data of the UN Human Development Report 2019, shows that 3 decades with different dynamics of human development occurred in the history of

independent Ukraine: 1 - from 1990 to 2000 - the index decreased by 0.034, 2 - from 2000 to 2010 - an increase in the index by 0.061, 3 - from 2010 to 2018, an increase of 0.018.

Changes in the values of the index and rates of human development are correlated with changes in the average per capita value of gross national income (GNI PPP per capita), i.e. with the economic and social conditions in the country. The retrograde trend in human development of the first decade is due to a long and deep (up to 60% of GDP) transformational recession, during which a bunch of stressful processes for the population emerged. Among them: the shutdown of enterprises, delays in the payment of wages, unemployment, hyperinflation (until the mid-1990s), a decrease in the population's income, the non-official employment, the level of population social protection declined, the property and financial inequality increased. From the point of view of social psychology, this is the beginning of the post-socialist paternalistic consciousness transformation of Ukrainian citizens into a modern, individually responsible one.

At the beginning of the new millennium, the growth of the economy and employment in Ukraine resumed on the basis of a diversified form of ownership and social capital, experience of entrepreneurship, awareness of the citizens' individual responsibility for their self-realization and well-being. The increase in the pace and volume of industrial production, international trade, educational, R&D cooperation was accompanied by an increase in employment and incomes of citizens. Optimism and empowerment of citizens led to the acceleration of the pace of human development in the country. The growth of the human development index continued until 2013 and during this period increased by 0.073.

The onset of the political crisis in the country in 2014, the subsequent military conflict in Donbass and the annexation of Crimea led to the decline in human development, which was replaced by the resumption of growth in 2016 (by 0.002). In 5 years (from 2013 to 2018), the HDI grew by 0.016. In the second decade of independence, the growth of the index was 0.061, which corresponds to an average annual growth rate of 0.87%, and in the third - by 0.18 at a corresponding rate of 0.29%.

The slowdown in human development in a difficult modern period for Ukraine is not surprising. The fact that human development resumed in these conditions testifies to the adaptation of citizens to the new circumstances of life. At the same time, attention should be paid to the increase in conflict moods in society, which forms an antagonistic model of social relations and creates obstacles for the sustainable human development in the country.

Conflicts arise at all levels of the socio-economic life of society: in interpersonal relations, when people go beyond tolerance to the opponent's opinion in discussions in real life and in virtual social networks; in the relationship of co-owners of apartment buildings with regard to household issues; in relations between the state elite and citizens on the reform of taxation systems, land use, health care and education, unfair tariff policy in the housing and communal services system, the bad state of pensions and citizens' incomes. In these areas, a stress-forming factor is the inconsistency of the reality that has developed in Ukraine with the declared principles of democracy, social fairness and social dialogue on key issues of the life of society.

The COVID-19 pandemic has escalated conflicts between entrepreneurs and government officials, among the different groups of population about the established quarantine regime and the health care practices. The reform legislation in Ukraine is

taking place without the community support. People are under pressure of the growth of utility bills, declining employment and income, risks of job and income loss, expensive treatment under quarantine conditions, they can't consider reforms and legislation. A non-economic stress factor is conflicts based on political disagreements among citizens, for instance, destructive discussions on issues of national patriotism and the historical past in social networks, which are often conducted in discriminatory, bullying and non-friendly manner.

Conflict nature of the Ukrainian society causes destructive forms of communication, behavior, thinking, pessimistic moods, increases citizens' distrust to the country's leadership, as a result, a significant part of the population does not believe in the social effectiveness of liberal reforms, and accordingly does not support them. All this creates obstacles to sustainable human and socio-economic development in the country.

To overcome these obstacles, the practice of transforming conflict behavior and thinking into constructive, partner thinking is especially important for human development in Ukraine. In this regard, the study of the social harmony achieving experience in the countries of the world and its introduction into educational and educational practice in Ukraine is demanded for the international cooperation. The examples of this experience: in post-war and modern Germany and other European countries, in post-socialist China and Vietnam, in which, at the highest state level, care is shown for the healthy psychological state of citizens belonging to different generations, religious and ideological, social and property status groups.

It should be noted that Ukrainian society is developing its own experience in managing conflicts and stresses. It is associated with the formation of educational content in such areas as an avalanche in quarantine conditions, in such areas as psychological consulting, coaching, information technology training, marketing, design and expert work, design, healthy lifestyle, etc. Handicrafts, home cooking, online gymnastics of various types, educational classes to strengthen intergenerational, couples and family relationships, parenting, personal growth, conflict and stress management have become very popular. Women are especially active in the field of online forms of developing professional skills, for which the home environment is convenient and close, allowing them to combine homework with socially useful activities.

At the level of civil society, public organizations, in particular of a multicultural nature, play an important role in reducing conflicts in the regional centers of Ukraine. They unite citizens in international projects for the preservation of cultural sites and traditions, in the development of economic and intercultural relations. Such an example is the Kharkiv regional organization "MultiKultiUA", international academic centers of Ukrainian universities (Ukrainian-German, Ukrainian-French, Ukrainian-Polish, etc.), regional centers of cultural minorities, which contribute to strengthening the culture of relations, psychological stability of citizens in society based on intercultural exchange.

The role of creative teams, creative and developmental centers in human development, functioning in district and regional centers, in the capital, should be considered. From early childhood, they form a positive outlook, constructive thinking, communication skills, as well as the foundations of musical, dance, and theatrical creativity, bring a sense of beauty to society, which certainly strengthens stress resistance and psychological health, and creates favorable opportunities for human development through creative self-expression of the individual.

Conclusion. As a result of the ongoing military conflict, political instability and economic uncertainty, a model of antagonistic social relations has been formed in Ukraine, which manifests itself in a high degree of conflict at all levels of society, from the individual to the state. This causes the phenomenon of negative asocial thinking and non-constructive discriminatory behavior, threatens the ecological balance in human communication, which is necessary for sustainable human development. Reforming for sustainable growth does not receive the support of citizens whose opinions are ignored by government leaders. It is possible to change the situation by encouraging activities and means that increase mutual understanding and social harmony, such as educational programs stimulating in the field of conflict and stress management, individual and collective creativity, creative entrepreneurship, including in online forms. International cultural, educational and business exchange plays a positive role, contributing to the formation of constructive thinking and behavior in society.

Human Development Report 2019. Beyond Income Levels and Today's Averages: Inequality in Human Development in the 21st Century (2020). Date of visit: 16.01.21 http://hdr.undp.org/sites/default/files/hdr_2019_ru.pdf

Multicultural Ukrainian Exchange Network (2020). Date of visit: 16.01.21 <http://mkua.org.ua/en/home-eng/>

Policy Brief on Countries Covered in the 2019 Human Development Report. Inequalities in Human Development in the 21st Century. Ukraine. 11 p. (2019). Date of visit: 16.01.21 [http://www.un.org.ua/images/documents/4792/Ukraine%20\(ukr\).pdf](http://www.un.org.ua/images/documents/4792/Ukraine%20(ukr).pdf)

SDGs Ukraine 2020 Monitoring (2020). Date of visit: 16.01.21 http://www.ukrstat.gov.ua/csr_prezent/ukr/st_rozv/publ/publ.htm

Sustainable Development Goals - United Nations in Ukraine (2017). Date of visit: 16.01.21 http://www.un.org.ua/images/SDGs_NationalReportEN_Web.pdf. P.168 <http://mkua.org.ua/en/home-eng/>

THE ESSENCE OF FORMATION AN INNOVATIVE MODEL OF ECOTURISTIC INFRASTRUCTURE DEVELOPMENT OF THE REGION

Olena Dovgal, Doctor of Economics

Mykolaiv National Agrarian University, Ukraine

Natalia Potryvaieva, Doctor of Economics

Mykolaiv National Agrarian University, Ukraine

Lyudmila Bezuhla, Candidate of Sciences in Public Administration

Dnipro State Agrarian and Economic University, Ukraine

Tourism is one of the dynamic areas of economic activity in the world. According to the World Tourism Organization (WTO), the number of international touristic trips in 2019 was 1.5 billion. According to expert estimates of the World Tourism and Travel Council (WTTC) and Oxford Economics, the tourism and travel sector in 2019 showed the growth in 3.5%, the ninth year in a row ahead of the world economy (2.5%). Over the last five years, one in four new jobs has been created in this sector.

As a result of the aggravation of the global environmental situation and the growing popularity of environmental ideas among tourists, there is a demand for so-called "green" travel. Green tourism is most common in Hungary, the Czech Republic, Spain, Italy, Germany and other European countries, which under the auspices of the Council of Europe have merged into the Central and Eastern European Federation for the Development of Rural Green Tourism. According to the WTO, for example, in France only 7% of business travelers stay in hotels, the remaining 93% choose rural hotels and campsites.

Rural green tourism should be searched as a resource for sustainable community development, the rational use of which will contribute to economic growth and the creation of significant added value. It is a revenue generator, a motive for creating new jobs, attracting investment, as well as a factor in the capitalization of the local brand.

A. Bilgihan, M. Nejad, V. Marakova, M. Medvedova; S. Sardak, V. Dzhyndzhoian, A. Samoilenko; O. Romanenko, O. Yavorska, O. Davydova, P. Romaniv and others are engaged in critical analysis and systematization of theoretical approaches to the formation and implementation of an innovative model of tourism development. Despite the close attention to the outlined problem by scientists, it remains relevant and necessary to conduct further research in the field of innovative development of ecotourism infrastructure, taking into account the regional component.

The aim of the study is to identify problems at the regional level that hinder the effective formation and development of ecotourism infrastructure, and to substantiate the need to develop a regional innovative model of ecotourism infrastructure development.

The analysis of the current legal framework showed that the Law of Ukraine "On Tourism" includes the development of rural and ecological (green) tourism as the main directions of state policy in the field of tourism, but the Law of Ukraine "On Personal Rural Economy" mentions only the above terminology about rural green tourism without its interpretation. In addition, the draft law on rural green tourism has not yet been adopted, which should contain a separate article on the features and principles of formation and functioning of ecotourism infrastructure on an innovative basis.

The reasons for the decline in the vast majority, in our opinion, lie in the neglect of international experience in rural tourism, lack of consistent state policy in tourism, inefficiency of central executive bodies in tourism, lack of appropriate conditions for the development of priority areas of foreign and domestic tourism, tax incentives for the export of tourist services; unsatisfactory work on the formation and strengthening of the tourist image of Ukraine, the global economic crisis in the tourism industry, which is caused by the pandemic COVID-19.

Currently, we have the negative consequences of the decline of the tourism industry, namely: almost halving the flow of foreign tourists to Ukraine, the degradation of the domestic tourism market, a significant reduction in the share of tourism in GDP and regional gross domestic product, including revenues from tourism and hotel services, tourist tax, foreign exchange earnings from the export of tourist and hotel services, investment in tourist infrastructure, jobs.

According to the result of analysis of scientific sources and own research some problems were revealed, the solution of which will contribute to the effective formation and development of ecotourism infrastructure in the regions, the main of which are:

- the imperfection of the legal framework for the regulation of the tourism industry and the allocation of land for infrastructure;
- the lack of special support programs for the rural population in order to organize business activities in the field of ecotourism;
- the reduction of tourist flow due to the deterioration of the political, socio-economic and epidemiological (Covid-19) situation in the region and the country;
- the insufficiently effective use of marketing tools and imperfect system of promotion of tourist products on the domestic market;
- the lack of a systematic approach to advertising ecotourism products;
- the Insufficient development of the transport system and road infrastructure
- the low level of quality of tourist service in the countryside;
- seasonal nature of rural green tourism development;
- the lack of methodological, organizational, informational, financial support for small business development in the field of ecotourism;

In order to solve these problems, we consider it appropriate to create a regional innovative model of ecotourism infrastructure development, one of the key principles of which is partnership and cooperation of all institutions and organizations that perform their tasks for the effective formation and development of regional ecotourism infrastructure. In particular, the Ministry of Development of Communities and Territories of Ukraine ensures the implementation of state regional policy and state policy in the field of local self-government; the formation of the optimal system of institutional support for regional development; develops and implements measures aimed at building infrastructure. The Ministry of Infrastructure is responsible for the formation and implementation of state policy on the development of transport infrastructure in the region. The Department of Tourism and Resorts of the Ministry of Economic Development, Trade and Agriculture of Ukraine will ensure the formation and implementation of state policy in the field of tourism, development and implementation of tourism development programs; will promote the coordination of the functioning of business entities and their associations in the field of ecotourism. The main task of the Department of Economic Development at the regional level will be to ensure the implementation of state regional policy, state policy on business development and

tourism.

The creation of a regional innovative model of ecotourism infrastructure is impossible without proper scientific and methodological support, an important place in which is given to scientific institutions and institutions of higher education. Scientific institutions together with higher education institutions carry out essential research and development on the problems of rural green tourism. In addition, higher education institutions have an equally important mission - it is staff training in the field of tourism.

The implementation of this model should include:

- partnerships between all participants: central authorities, regional authorities, local governments (village councils, local communities), NGOs, research institutions, higher education institutions, regional innovation centers, startup incubators, small businesses in the field of rural (green) tourism, consumers of ecotourism services;
- coordination of efforts of central authorities, regional authorities with local governments;
- scientific and organizational support of long-term ecotourism development programs;
- development and implementation of the concept of marketing;
- implementation of innovative programs and infrastructure projects for the development of ecotourism activities;
- creation of a modern information support system;
- development of a financial support mechanism, which will consist in the use of various financing instruments:
 - public-private partnership;
 - preferential lending;
 - crowdfunding;
 - venture investment;
 - grant programs;
 - international technical assistance;
 - funds of international funds, etc.

One of the vectors of development of the infrastructure market of ecotourism services is the active use of the informatization component of the formation of the innovative potential of ecotourism development in the region, the use of informatization technologies. Information resources, acting as a basis for the subjects of regulation of regional development of ecotourism management decisions of an innovative nature, form the information component of the innovative potential of such development.

Conclusions. The regional innovative model of ecotourism infrastructure development is a combination and interconnection of elements of a unified system for creating, developing new tourism projects, routes, the implementation of which will increase employment and income, increase local budget revenues, increase the cultural component of the population.

Implementation of the regional innovative model of ecotourism infrastructure development will increase the income of the rural population and the amount of revenues to local budgets; reduce unemployment by creating additional jobs; to intensify the development of small business in the villages of the region; strengthen public-private partnerships based on attracting private investment.

- Bilgihan A., Nejad M. (2015). Innovation in hospitality and tourism industries. *Journal of Innovation*, 6:3, 33-41, doi: 10.1108/jhtt-08-2015-0033
- Marakova V., Medvedova M. (2016). Innovation in tourism destinations. *Forum Scientiae Oeconomia*, 4(1), 33-43.
- Sardak S., & Dzhyndzhoian V., Samoilenko A. (2016). Global innovations in tourism. *Innovative Marketing*, 12:3,1-8, doi: 10.21511/im.12(3).2016.04
- United Nations Environment Programme and World Tourism Organization. *Tourism in the Green Economy – Background Report* (2012). Date of visit: 10.05.2020 <https://www.unwto.org/unwto-acceleration-programme>
- World Tourism Organization UNWTO (2019). Date of visit: 10.05.2020 <http://mkt.unwto.org/barometer>
- Романенко О. О., Яворська О. Г. (2018). Інвестиції: практика та досвід. Особливості інновацій в туризмі та індустрії гостинності, 8, 5-9.

THE CONCEPT OF SMART SPECIALIZATION AS A MAJOR FACTOR IN THE REGIONAL DEVELOPMENT OF UKRAINE

Larisa Yaremko, Doctor of economic sciences, professor

Department of the International economic, Lviv University of Trade and Economics,
Ukraine

Sofiya Yaremko, PhD student

Institute of Regional Research named after M.I. Dolishniy, Ukraine

Regional development as a foundation for a further strengthening of social and economic systems today is premised on such major development trends as globalization and localization (Patytska, 2019). It should be noted that the development of a region is directly dependent on the process of forming a strategy for further economic growth and development of territories. It clearly defines the goals in combination with the main vector of the above-mentioned strategy and a general action plan that is created to gradually implement major management tasks. To effectively implement the strategy of economic development of the region, the process of selecting criteria for finalizing the action plan and efficient allocation of resources should be taken into consideration (Patytska, 2019). Such a process is possible only with the involvement of stakeholders in the process of making appropriate management decisions and step-by-step implementation of appropriate actions to reach the goals. H. Patytska noted that the establishment of an appropriate strategy is a task of governing institutions. However, the implementation process directly affects all representatives of regional business, namely those who are directly involved in the development of the region's economy (Patytska, 2019). The concept of smart specialization in the European Union is considered as a new type of industrial policy (Radosevic, S at al., 2017). It was developed by an expert group of scientists and included in the description of the policy "Knowledge for development", which consulted the European Commission (Radosevic, S at al., 2017). This concept has played a leading role in the implementation process of the strategy "Europe 2020" (Gulc, 2015). A clear definition of priorities and selectivity of smart specialization makes it another important high-tech approach to strengthen the innovative development of EU countries. Therefore, it can be argued that smart specialization is one of the most developed approaches on the way to create a new industrial and regional policy.

Smart specialization has acquired a particular significance in Ukraine becoming an important condition for the implementation of the Association Agreement between Ukraine and the EU. The consolidation of various institutions responsible for innovative development in Ukraine and subordinated to various international programs and line ministries have become one of the important results in the implementation of this strategy.

Today in Ukraine occurs a gradual implementation of smart specialization. The vast majority of Ukraine's regions have formed their key areas of specialization as a response to the requirement of formation and definition of major regional strategies for the period up to 2027. The first stage of the establishment was subject to certain difficulties regarding the innovative development of the country.

Innovative development is an important prerequisite for the implementation of the

strategy of "smart economy". Therefore, at this stage, it is important to determine the problems of innovative development of the country. Nowadays the main challenges of innovative development are considered: an imperfect system of governance, a difficult communicational component of cooperation between stakeholders and government, shortage tools to improve innovative processes in the country, as well as insufficient cooperation between science and business.

It is worthwhile to note that the market of domestic research is in low demand among Ukrainian business representatives. This trend is characterized by a shift towards requests and needs of customers from abroad. There is also an issue of developers' emigration because the purchase of relevant equipment in Ukraine requires significant investment. Financial issues regarding the efficient use of funds also need to be addressed under the condition of appropriate program coordination. It can be concluded of the above, that the implementation of the next stages of the smart specialization strategy concerning the stage of entrepreneurial discovery depends on the joint efforts of all stakeholders of the innovation development system.

In conclusion, the development of the regions today has become a keystone of the economic growth of European countries. This process requires the creation of appropriate strategies that would help identify priority sphere for development of these areas. The process of goal formation and the plan of tasks for its implementation is important at this stage. Smart specialization as a new type of industrial policy helps to identify regional development priorities and strengthen the innovation component of the respective territories. The process of involvement of stakeholders in the formation of strategies at the stage of management decisions is one of the main conditions for the effective implementation of this strategy.

- Gulc, A. (2015). Analysis of methodological approach to identify smart specialisation on the example of Polish regions. *Procedia - Social and Behavioral Sciences*, Vol.213, 817-823, doi: 10.1016/j.sbspro.2015.11.483
- Patytska, K. (2019). Smart specialization strategy in the context of regional competitiveness: theoretical aspect. *Efektivna ekonomika*, № 11, 1-9, doi: 10.32702/2307-2105-2019.11.53
- Radosevic, S., Curaj, A., Gheorghiu, R., Andreescu, L., & Wade, I. (2017). *Advances in the Theory and Practice of Smart Specialization*. London, UK: Academic Press.

ОСОБЕННОСТИ УСТОЙЧИВОГО РАЗВИТИЯ АГРАРНОГО ТУРИЗМА

Анзор Девадзе, Кандидат экономических наук, профессор
Батумский государственный университет имени Шота Руставели, Грузия
Ольга Прокопенко, Доктор экономических наук, профессор
Инновационный университет Коллегиум Мазовия, Польша
Лела Девадзе, Докторант факультета экономики и бизнеса
Батумский государственный университет имени Шота Руставели, Грузия

В мировой практике аграрный и экологический туризм становится важным составным компонентом глобальной социально-экономической программы, которая предусматривает перемещение части населения, занятого в сельском хозяйстве, от производства к сфере услуг и задачей которого является придание импульса развитию аграрных регионов и их населения путем организации нового сектора местной экономики. Актуальность исследования особенностей аграрного туризма обусловлено его особенностью и приоритетностью в делеразвития внутреннего и международного туризма различных стран. Авторы выполнили исследование на примере Аджарской Автономной Республики Грузии. Значительное внимание уделено использованию возможностей агротуристического потенциала Аджарской АР для дальнейшего развития туризма.

Целью исследования является выявление проблем, препятствующих развитию аграрного туризма в Аджарской АР и разработка соответствующих методических рекомендаций с целью их устранения. Объектом исследования являются региональные рынки продуктов аграрного туризма Грузии. Предметом исследования являются экономические отношения менеджмент, возникающие в процессе формирования и развития аграрного туризма. В процессе исследования использовались методические и нормативно-правовые материалы Национального агентства туризма Грузии, методы экономического анализа, а также статистические методы. Теоретической и методологической основой исследования являются работы учёных в области экономики, сельского хозяйства и управления туризмом, а также законодательные акты и нормативно-правовые документы, регулирующие функционирование сельского хозяйства и туризма. Результаты работы могут быть использованы государственными органами Аджарии, а также общественными и коммерческими организациями при разработке региональных программ развития агротуризма.

За последние годы туризм стал одним из приоритетных направлений развития страны. Каждый год (за исключением 2020 года, из-за пандемии KOVID – 19). Наблюдается значительный рост туристических потоков (в среднем 4-6%, как на внутреннем, так и в международном туризме). Согласно проведенным исследованиям, 52% составляют туристы, приезжающие деловыми визитами, а 39% - отдыхающие (Национальная, 2019).

На сегодняшний день Грузия стоит перед важным определением приоритетных направлений регионального развития, которые сыграют ведущую роль на пути стабильного и устойчивого экономики регионов. Вместе с тем, представляется возможным управлять развитием новых отраслей, также

обеспечить положительный мультипликативный эффект целого региона в экономическом разрезе. Одним из таких перспективным направлением экономического роста сельских регионов Грузии представляется развитие агротуризма (Гечбаия, 2017).

Отмеченный сектор туристической отрасли будет ориентирован на использование и специфику природных, культурно-исторических и других ресурсов сельских поселении с целью создания комплексного туристического продукта. Данное направление представляется довольно перспективным, т.к. Грузия располагает высоким сельско-хозяйственным потенциалом, что представляет основу формирования материальной базы агротуризма (Национальная, 2016).

Грузия является одним из интересных туристических регионов восточной Европы. Она известна как морскими, так и горными курортами. В это же время, с учетом того, что 47% населения Грузии живет в сельской местности и исходя из разнообразия экологических ресурсов страны, нетрудно догадаться, что страна имеет серьезный потенциал для развития агротуристического направления. Для традиционных сельских поселении страны агротуризм не требует больших затрат. Этот вид туризма относительно дешевый, эффективный и общедоступный. Вместе с тем, существуют определенные проблемы (Девадзе, 2009).

В настоящее время, фактически, в Грузии, в том числе в Аджарской АР, имеются только агротуристические ресурсы, но практический не имеет реального туристического продукта, как рыночного товара, который будет иметь соответствующие товару характерные свойства. В это же время, агротуризм, с одной стороны, создает новые сегменты туристического рынка и развивает сферу туризма, и, с другой стороны, этот вид туризма может стать значительным фактором развития сельского хозяйства Грузии. Обе эти стороны агротуризма представляют системное единство. Само их разделение на две части имеет условный характер – обе системные составляющие одинаково важны для его развития. Не менее важны рыночные характеристики агротуризма, в первую очередь его конкурентоспособность. Упомянутое условие способствует повышению эффективности агротуризма и экономики страны в целом (Девадзе, 2017).

Следует отметить, что хотя департаментом туризма и курортов Аджарской АР был разработан стратегический план развития, где значительное внимание уделено вопросам развития агротуризма, в этом направлении практически сделано очень немного. На сегодня на отдельных туристических маршрутах имеются малые хозяйства, которые включены в туристический бизнес (хотя весьма инертно) и предлагают туристам отдельные виды сервисов, включающие элементы агротуризма. Проведенными исследованиями установлено, что с учетом существующих в Аджарской АР агротуристических ресурсов можно выбрать и доработать агротуризм следующих типов: винные туры; сырные туры; пчеловодческие туры; цитрусовые туры и кукурузные туры (Институт, 2018).

Для развития агротуризма необходимо формирование рынка обслуживания агротуризма, что подразумевает, что туристическое обслуживание на селе не должно осуществляться эпизодически или не должно зависеть от случайных гостей. Вместе с тем, массовость агротуристических потоков – это перспектива будущего, т.к. в Аджарской АР и не только, широко распространены более дешевые

формы отдыха, которые представляют альтернативу агротуристического обслуживания. Это отдых на дачах и дачных участках (Джабнидзе & Джабнидзе, 2017).

Представляется целесообразным создание региональной агротуристической компании, которая будет представлена, как ассоциация владельцев агротуристических объектов. Компания будет проводить единую маркетинговую политику, рекламную кампанию, единую систему бронирования, обеспечит обработку информационных материалов и его размещение на едином веб-сайте.

Агротуризму нужна соответствующая поддержка и, прежде всего, на региональном уровне. В этом направлении, представляется возможным, создание региональной системы поддержки развития агротуризма, основными задачами которой будут:

- формирование системы информационного и методического обеспечения региональных программ развития агротуризма;
- создание эффективных механизмов для формирования новых объектов агротуризма в рамках региональной системы поддержки развития агротуризма;
- подготовка соответствующих кадров для развития агротуристического бизнеса;
- разработка механизма по выбору перспективных инвестиционных проектов и их внедрению.

Активное развитие агротуризма даст возможность наметить пути преодоления бедности на селе, избавиться от негативных последствий демографического кризиса на селе, сбалансировать проблемы спроса и предложения на аграрном рынке труда, а так же позволит оптимизировать структуру занятости сельского населения.

Гечбаия, Б. (2017). Формирование кластеров в агробизнесе. Материалы научно-практической конференции. Батуми: Диогене.

Девадзе, А. (2009). Теория и практика. Тбилиси: Диогене.

Девадзе, А. (2017). Агротуризм в системе национальной экономики и перспективы развития. Кутаиси: Диогене.

Джабнидзе, Р., & Джабнидзе, Н. (2017). Роль агротуризма в решении экономических проблем сельского населения. Инновационная экономика и управление. Тбилиси: Диогене.

Институт социальных исследований и анализа. Исследования рынка высокогорных регионов Аджарии. (2018). Дата обращения: 17.08.2020.

Национальная администрация туризма Грузии. Перспективы развития туризма в Грузии и мировой опыт. (2016). Дата обращения: 17.07.2020.

Национальная администрация туризма Грузии. Перспективы развития туризма в Грузии и мировой опыт. (2019). Дата обращения: 14.04.2020.

CURRENT ISSUES OF STRUCTURAL CHANGE IN THE EU

Olga Tofaniuk, PhD of Economic Sciences

National Aerospace University "Kharkiv aviation institute", Ukraine

Alona Zinchuk,

National Aerospace University "Kharkiv aviation institute", Ukraine

The systemic crisis that the EU is currently experiencing has a rather extraordinary scale, as this is not an accidental crisis that accompanies the development of European integration processes. Therefore, at the moment, there are quite a number of sources that provoke crisis processes and complicate the development of the EU. One of the main sources of this is significant socio-economic disparities between EU member states, as the euro area includes countries with significantly different structural and institutional economies. The root causes of the crisis process have not disappeared, but continue to operate from time to time. Nor can it be said that crisis processes are temporary problems, by resolving which the EU will strengthen its role in the world system or, conversely, weaken the EU.

One of the important indicators of confirmation of disparities is the general index of competitiveness (GCI). The general competitiveness index makes it possible to measure the ability of the national economy to achieve sustainable development in the medium term. Table 1 shows the overall competitiveness index of the EU.

Table 1 - General Competitiveness Index in 2019

№	Country	GCI	Rating
1	Belgium	76,4	8
2	Bulgaria	64,9	22
3	Czechia	62,6	24
4	Denmark	81,2	3
5	Germany	81,8	2
6	Estonia	70,9	12
7	Ireland	75,1	10
8	Greece	62,6	24
9	Spain	75,3	9
10	France	78,8	5
11	Croatia	61,9	25
12	Italy	71,5	11
13	Cyprus	66,4	20
14	Latvia	67,0	18
15	Lithuania	68,4	17
16	Luxembourg	77,0	6

17	Hungary	65,1	21
18	Malta	68,5	16
19	Netherlands	82,4	1
20	Austria	76,6	7
21	Poland	68,9	15
22	Portugal	70,4	13
23	Romania	64,4	23
24	Slovenia	70,2	14
25	Slovakia	66,8	19
26	Finland	80,2	4
27	Sweden	81,2	3
28	UK	81,2	3

The reason for such differences is influenced by the low rating of the technological factor, which is crucial in today's global competition. Leading positions in 2019 have the Netherlands, Germany, Sweden, Denmark and the United Kingdom. Outsider countries are Croatia, the Czech Republic, Greece, Romania and Bulgaria. The difference between the leaders and outsiders is about 20%.

In the case of countries that activities are aimed at European integration, they are in the process of rethinking their integration course. The EU needs to be radically reformatted, but this process can have a significant impact on both member states and countries that have taken their path to European integration into the EU. The reformatting of the EU is both a new opportunity and a new challenge for countries.

Today, the EU leadership faces the task of developing measures to carry out influential reforms that will consolidate and transform the union into a more integrated and effective structure on the world stage.

In early 2017, EU-27 leaders adopted the Rome Declaration, which will allow the EU to focus its efforts on combating internal problems and external threats. According to this document, Europe must become: safe and secure, sustainable and prosperous, social and strong, and have the will and ability to play a key role in the world.

In 2017 The European Commission has formulated ways to develop European integration, which is set out in the White Paper on the Future of Europe: Ways to EU-27 Unity, which sets out 5 scenarios for the possible development of the EU-27 by 2025. It is difficult to say which scenario is the most acceptable and whether the EU will actually follow the chosen scenario .

Assessing the above, we can say that the EU is still approaching the final decision on further development, and this should put an end to all discussions and bring all European leaders to a common common vision for the future of Europe.

The Global Competitiveness Report 2019 (2019). Date of visit: 15.01.2020
http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf

INTERNATIONAL COOPERATION FOR SUSTAINABLE DEVELOPMENT

DEVELOPMENT OF THE MOST INFLUENTIAL DIGITAL COMPANIES IN THE WORLD

Maryna Domashenko, Ph.D., Assoc
Sumy State University, Ukraine
Pavlo Lazis, Student
Sumy State University, Ukraine

Economics as a phenomenon has been considered by many scientists for many years. Many different scientific papers on how the economy should function have been written at different times. From the works of Adam Smith and David Ricardo, who were among the first to describe economics as a science, to the work of Karl Marx, on the basis of which a completely new economic model was later created, which would be completely opposed to capitalism. But still, as we can see in the modern world, most countries have switched to the model of capitalist economy. And despite some exceptions or deviations, such as Socialist China, which is largely on paper, but in fact has largely adopted almost all the features of capitalism, we can say that humanity has finally found the best possible form of economic functioning as individual country and the world economy as a whole. And everything would seem simple, you just need to create a market free of outside interference, including government regulation, and let the "invisible hand of the market" set prices, regulate sales, be able to produce any product and service and also buy any product or a service without any restrictions (except, of course, things that directly affect the safety of residents, such as weapons or drugs). There are many examples of the results of such non-interference in the economy: America, as a country with "ideal capitalism," the countries of Europe, China, which over the past 30 years, thanks to the course taken towards capitalism, have been able to get out of a long-term decline.

But, as it turned out, the situation is not so good. Almost every country in the world has a state anti-monopoly committee that constantly monitors and tries to regulate a variety of manipulations and dulling in the market. China, although being in fact a capitalist country, constantly interferes in the affairs of private companies, and in which case it may ask to regulate this or that case that the Chinese authorities do not like. This was the case with the NBA, when it was banned for speaking out by one of the managers of the NBA team in support of Hong Kong, or App Store, who quietly removed applications that were used by protesters in the same Hong Kong. But the case with China is a case that cannot be regulated in any way, as we saw with, for example, America, China is too powerful and produces too many goods to be pushed against the wall.

But lately, there is more and more news about private companies, which, are accused of a monopoly. Competition is one of the most important factors in market

development. With many options and alternatives, the consumer has the ability to choose the option that best suits him, while companies compete with each other to attract the consumer's attention. This in turn leads to improvements in product quality. In the absence of competition, the market stagnation is visible, since the company has no motivation to improve the quality of products or, in principle, to take any action, since consumers will have no choice but to come to them. But in the modern world we can see completely different type of monopoly, companies that even with a large number of competitors not only have a large part of the market behind them, but also are accused of «monopoly power» in their benefit. Those companies have created a whole self-sufficient eco-system which can operate without any other programs and usually provide wide range of services which make customers to be fully satisfied with a particular product, which companies use in any way they can.

As an example of a big tech monopoly we can take Google. Everyone knows it. This company has the biggest searching network in the world and several other popular projects including for example YouTube, the most popular video-upload service in the world. Google has a monopoly in the markets of online search and search advertising. Google's dominance is protected by high entry barriers and the strong positions that Google has obtained across most of the world's devices and browsers. A huge number of entities—major public corporations, small businesses, entrepreneurs— all of them depend on Google for traffic, and there is no alternate search engine which could replace Google. The Justice Department charge Google on Tuesday of illegally protecting its monopoly over search and search advertising. In a lawsuit, the agency accused Google of dealing with giant partners like Apple and destroying competition through different business contracts and agreements. Big tech companies nowadays are dominating the market and, as it seems to be, no one is able to move them from their positions. Google isn't the only exam. The same problems global market has with other giant companies such as Facebook, Amazon or Apple.

On 16 June in 2020 The European Commission has opened formal antitrust investigations to research whether Apple's rules for app developers on the distribution of apps through the App Store disturb EU competition rules. In past Apple presented itself as an alternative to giants like Microsoft. Today Apple has become a monopoly, crushing potential competitors with fees and censorship on behalf of dictators. IOS software from Apple controls 25% of the global smartphone market (the remaining 75% is largely controlled by Google's Android), and nearly 50 % in the USA. This means that for over a billion people the only way to install apps is through the App Store. This gives Apple a tremendous impact on how software is created and used around the world. But the most damaging manifestation of this power is a terrific 30% developer tax, which is now the subject of antitrust investigations in both the United States and the European Union. Such a huge tax would be unreal in terms of usual competition, but when the only market which is installed in billion of phones is App Store, there is pretty nothing you can do with it.

The same situation we have with Amazon and Facebook. Amazon has significant and lasting market power in the US e-commerce market. The platform has monopoly power over many small and medium-sized businesses which doesn't have any other alternatives to reach online consumers. “The dominant platforms collect real-time data which, given the scale of their user-base, is akin to near-perfect market intelligence”. If you want to sell socks online, you will do it on Amazon, but if Amazon starts its own

socks business, be sure, your sales won't make you happy. Among all of the companies above Facebook looks the clearest, but in fact the biggest concern about Facebook is not about its monopoly, but about its privacy. Facebook's quality has deteriorated over time, due to lack of the competition, resulting in weaker privacy protections for users and a huge increase in misinformation on its platform. There is a whole saga of Facebook's failure in ensuring privacy for users starting back in 2018. And if almost every big company collect data about their users, with Facebook its especially dramatic. Facebook just as Instagram with it holds is a social media, where most people show big part of their life. And people don't like when some AI collects all the information about including private life and then sell it.

All these situations are terrific, but there is nothing that customers or other companies can do about. But, there are powers which are still bigger and in theory can take companies under control or at least reduce their monopoly on the market. On July 29 four leaders of technology giants were called in the US Congress to prove that their companies did not monopolize the market and do not impede fair competition. Also, the House Justice Committee has published the final report on the investigation of fair competition in digital markets, the final result of many years of research and hearings and deep investigatings. The message of the majority report is clear: Apple, Amazon, Facebook, and Google have gotten too powerful to stay out of control. Other companies are now also trying to move tech giants from their places with the help of courts. Epic Games, a tech company which owns its own digital game distributive shop and have developed Fortnite which is attracting more than 350 million players and billions of dollars in sales. Epic Game's trial against Apple in a federal court will begin on May 3, 2021. Epic sued Apple on Aug. 13, alleging that the iPhone company's rules demanding up to a 30% cut of app sales made on the iPhone and iPad are anticompetitive. The suit effectively forces Apple to defend the way it operates its App Store, the only gateway for developers who want to have their apps made available for download on the iPhone. In compare with other companies' statements this have already given a result: companies, which earn less than \$1 million per year now pay only 15 % instead of 30%. The rule should apply to an estimated 98 percent of iOS app developers that generated just a small 5 percent of the App Store's revenue last year. This decision has already been criticized by Epic's, saying that its just a way of clearing Apple's name before court.

What is the future of all the investigation and courts? Will big tech companies be taken under control and markets become more competitive-friendlier? It's all up to European and US courts. But one thing is clear, if those companies won't be stopped their power will only become more influential and in future who knows, maybe global governments won't be the first power in the world, but huge tech giants will take over the market, as well as our personal lifes.

Antitrust: Commission opens investigations into Apple App Store rules
(https://ec.europa.eu/commission/presscorner/detail/en/ip_20_1073).

By Mary Hui. Apple bowed to China by removing a Hong Kong protests map from its app store (<https://qz.com/1725175/apple-removed-a-hong-kong-protest-map-from-its-app-store>).

- Cecilia Kan, & David McCabe, Daisuke Wakabayashi (2020). U.S. Accuses Google of Illegally Protecting Monopoly. The New York Times. Date of visit: 10.20.2020 Access Mode: <https://www.nytimes.com/2020/10/20/technology/google-antitrust.html>
- Facebook's latest privacy scandal: What we know about the company's handling of user data. (2018). USA Today Tech. Date of visit: 26.10.2017 Access Mode: <https://eu.usatoday.com/story/tech/2018/12/19/facebooks-latest-privacy-scandal-what-we-know-now/2361257002>
- James Clayton. Tech giants Facebook, Google, Apple and Amazon to face Congress (<https://www.bbc.com/news/technology-53571562>).
- Lina M. Kha. Amazon's Antitrust Paradox (<https://www.yalelawjournal.org/note/amazons-antitrust-paradox>).
- One Year After China Banned the NBA, Basketball Returns to Chinese TV. (2020). The Wall Street Journal. Date of visit: 2020 <https://www.wsj.com/articles/one-year-after-china-banned-the-nba-basketball-returns-to-chinese-tv-11602260786>.

FORMATION OF THE CONCEPT OF SUSTAINABLE DEVELOPMENT AND ITS MISSION

Nataliia Kravchenko, PhD, Associate Professor

National University of Life and Environmental Science of Ukraine, Ukraine

Sustainable development - it is a general concept regarding the need to strike a balance between meeting the modern needs of humanity and protecting the interests of future generations, including their need for a safe and healthy environment.

The author of the innovative economic theory of sustainable development is a leading researcher of economic aspects of environmental pollution, a former World Bank economist Herman E. Daly. In the monograph «Beyond Growth. The Economics of Sustainable Development» (Herman E. Daly, 1996), based on the definition of the UN Commission and scientific analysis, H. Daly logically interprets the term «sustainable development» as a definition of harmonious, balanced, conflict-free progress of all earthly civilization, groups of countries (regions, subregions) and individual countries of our planet according to scientifically sound plans (methods of system approach).

In the process of steady innovative intensive (rather than extensive) economic development of countries at the same time positively addresses a range of issues related to environmental protection, elimination of exploitation, poverty and discrimination of each individual and entire peoples or groups, including ethnic, racial or sexual characteristics.

In the second half of the twentieth century. there is evidence of the depletion of global natural resources and the limited assimilation capabilities of the planetary ecosystem. The revolutionary work of the new vision was the first report of the Club of Rome «The Limits to Growth» (1972) Donella H. Meadows, Dennis L. Meadows, Jørgen Randers, which made us think about the physical limits of economic growth. It concluded that with current trends in population growth, production, resource depletion and

environmental pollution over the next hundred years, the physical limit of growth on the planet will be reached with further population decline and economic decline, but these trends can be reversed and move to an economic state, social and environmental stability.

Since 1972, Earth Summits, a meeting of world leaders, has been held every 10 years with the support of the United Nations to identify ways to promote sustainable development at the global level. The results of these meetings were development programs for 2000-2015 and global goals for 2015-2030. The first summit was held in Stockholm in 1972, the second in Nairobi (Kenya) in 1982, the third in Rio de Janeiro in 1992 and the fourth in Johannesburg (South Africa) in 2002 (Rio + 10). The last Earth Summit, Rio + 20, was also held in Rio de Janeiro in 2012.

In 1972, for the first time at the international level, the UN Conference on the Human Environment in Stockholm discussed the interdependence of man and nature. The conference resulted in the development of the United Nations Environment Program (UNEP) and the creation of many environmental structures at the national level.

At the Second Earth Summit in Nairobi, Kenya, the UN Assembly Declaration highlights the main environmental issues that need to be addressed by UNEP (the United Nations Environment Program) over the next 10 years. The United States ignored the summit, which went almost unnoticed and did not become public. However, the American Democrats took the issue more seriously. James Gus Speth, Jimmy Carter's former environmental adviser, and Jessica Mathews, a former environmental officer on the National Security Council and one of the top managers of the Rockefeller Foundation, founded the World Resources Institute. They questioned the ability of states to confront environmental problems and called for global environmental governance, which should be done through the market, not the United Nations. Interstate agreements in this case are useless, because everything is in the hands of transnational corporations, and they will take effect only if it is beneficial to their shareholders (Thierry Meyssan, 2010).

In order to develop a program of action for the whole world in 1983, the UN established the World Commission on Environment and Development (WCED). In 1987, the commission presented its report «Our Common Future» Report of the World (Commission on Environment and Development: Our Common Future, 1987) (Brundtland Report' Gro Harlem Brundtland, former Norwegian Prime Minister, role as Chair WCED. The report acknowledged the dependence of humanity on the environment and provided a definition of sustainable development as one that contributes to meeting the needs of the present generation without reducing the ability of future generations to meet their own needs. This formulation of the concept of «sustainable development» is now widely used as a basis in many countries. In addition, she argued that the basic idea of human societies should be to intensify the search for a better life, well-being.

The idea, formed in the report «Our Common Future», received official recognition only in 1992 at the third Earth Summit - the UN International Conference on Environment and Development in Rio de Janeiro. As a result of its work, the Rio Declaration on Environment and Development was adopted, which contains 27 principles of environmentally sound behavior of the world community.

Agenda 21 (Agenda 21, 1992). is also being adopted - a global action plan for sustainable development - a program for the implementation of the concept of global sustainable development by world governments. It included 2,500 recommendations for

the development of alternative energy sources, protection of the atmosphere, oceans, biodiversity, combating deforestation, desertification and drought, addressing demographic problems, and poverty. Emphasis was placed on the creation of such structures of consumption and production that would reduce environmental stress and meet basic human needs, as well as give a deeper understanding of the importance of consumption and ways to create more rational consumption structures. Attention was paid to national diversity and it was recognized that it was necessary to protect indigenous lands from activities that are environmentally unsafe or socially and culturally unacceptable from the point of view of indigenous peoples.

A Commission and an Interagency Committee on Sustainable Development have been established within the UN to implement Agenda 21. The Convention on Biological Diversity (CBD) was proposed, which pursued three main objectives: the conservation of biological diversity, the sustainable use of its components and the equitable, equitable distribution of the benefits of genetic resources. Also, at the Rio summit, the United Nations Framework Convention on Climate Change, UNFCCC was proposed, which later led to the signing of the Kyoto Protocol (1997) and the Paris Agreement (2015).

In general, the concept of sustainable development is an attempt to comprehensively implement three dimensions of sustainable development: economic, environmental and social, each of which is a separate system and aims at certain tasks. The task was to achieve a balance between economic growth, social community and the environment.

At the Fourth Earth Summit in Johannesburg, South Africa (2002), the United Nations presented an overview of ten years of experience in promoting sustainable development. Following the Johannesburg Summit, two documents were adopted: the Johannesburg Declaration on Sustainable Development and the Plan of Implementation of the 21st Century Agenda. The declaration formulates the main tasks for achieving balanced development: overcoming poverty; change of consumption patterns; protection and rational use of natural resource base. Special priority was given to the social problems of sustainable development: overcoming poverty, developing health care, especially sanitation, providing clean drinking water, etc. Considerable attention was paid to the problem of biodiversity loss. The Johannesburg Summit also discussed new issues not discussed at the Rio Conference, including trade, globalization and the financing of sustainable development.

At the Fifth Earth Summit in Rio de Janeiro, Brazil (2012), the UN brought together governments, international organizations and major groups to work together to develop a number of effective measures to reduce poverty while creating decent jobs, clean energy and more rational and equitable use of natural resources.

The Heads of State and Government adopted the outcome document of Conference "The Future We Want" (The Future We Want, 2012), which reaffirmed the commitment to the goal adopted at the World Summit on Sustainable Development in 2002: a course for sustainable development and building an economically, socially and environmentally balanced future. for our planet, for present and future generations.

The final document deals with the development of a "green" economy in the context of balanced development and poverty eradication and the need to form an institutional framework for such development.

The document reaffirms the need to further promote the idea of sustainable development at all levels and to integrate its economic, social and environmental

components and take into account their interrelationships.

The Conference decided to establish a comprehensive and transparent intergovernmental process of sustainable development, open to all stakeholders.

Governments reaffirmed their determination to achieve the 2020 target of “rational management of chemicals throughout their life cycle and hazardous waste, which will minimize the negative impact on human health and the environment, as set out in the Johannesburg Plan of Implementation”.

In the Health and Population section, governments acknowledged that "reducing, among other things, air, water and chemical pollution has a positive impact on health".

In the Agriculture section, governments decided to "increase balanced agricultural production" and referred to the need to "encourage, strengthen and support more balanced agriculture".

At the Conference, along with general official documents, voluntary commitments were made. More than 700 voluntary commitments from civil society groups, business, government, universities and others were published on the Rio + 20 homepage. In particular, Ukraine is represented by the All-Ukrainian Ecological League, the International Institute of the Association of Regional Environmental Problems and the Gunda Institute for Environmental Economics in the section "Greening of Education" of the Voluntary Commitments of the UN Conference on Sustainable Development "Rio + 20".

September 2015, as part of the 70th session of the UN General Assembly in New York, the UN Summit on Sustainable Development and Adoption of the Agenda for Development after 2015 was held, at which new guidelines for development were approved. The final document of the Summit «Transforming our world: the agenda in the field of sustainable development until 2030». Transforming our world: the 2030 Agenda for Sustainable Development approved 17 Sustainable Development Goals and 169 tasks. The Sustainable Development Goals (SDGs), also known as the Global Goals, are a general call for action to achieve the following: (1) No Poverty, (2) Zero Hunger, (3) Good Health and Well-being, (4) Quality Education, (5) Gender Equality, (6) Clean Water and Sanitation, (7) Affordable and Clean Energy, (8) Decent Work and Economic Growth, (9) Industry, Innovation and Infrastructure, (10) Reducing Inequality, (11) Sustainable Cities and Communities, (12) Responsible Consumption and Production, (13) Climate Action, (14) Life Below Water, (15) Life On Land, (16) Peace, Justice, and Strong Institutions, (17) (Partnerships for the Goals Transforming our world: the 2030 Agenda for Sustainable Development, 2015).

Thus, sustainable development involves the implementation of three components: economic, environmental and social. To date, the process of developing the concept of sustainable development has not been completed: some progress has already been made in implementing this concept, but most issues remain unresolved. For the successful implementation of the goals of sustainable development, the policy should be aimed at economic stabilization and ensuring social goals, together with investments in resource-saving technologies. Actions for the implementation of sustainable development should be differentiated depending on the capabilities and characteristics of a particular country, international assistance should be aimed mainly at the transfer of knowledge and technology. Sustainable development must help meet the needs of the present generation without diminishing the ability of future generations to meet their own needs. The global goals of sustainable development are unique in that they cover issues that affect us all

and reaffirm our international commitment to keep no one out of the picture. And most importantly, they involve all of us in building a more stable, secure, prosperous planet for all mankind.

Agenda 21 (1992). Date of visit: 2021-16-01
https://www.un.org/ru/documents/decl_conv/conventions/agenda21.shtml
Herman, E. Daly (1996). *Beyond Growth. The Economics of Sustainable Development* (158 p.). Boston: Beacon Press. URL: <http://pinguet.free.fr/daly1996.pdf>.
Report of the World Commission on Environment and Development: *Our Common Future* (1987). Date of visit: 2021-16-01 <http://www.un-documents.net/wced-ocf.htm>
The Future We Want (2012). Date of visit: 2021-16-01
<https://www.slideshare.net/uncsd2012/the-future-we-want-rio20-outcome-document>
Thierry Meyssan. *Climate control in a time machine*. (2010). Date of visit: 2021-16-01
<http://www.odnako.org/magazine/material/klimat-kontrol-v-mashine-vremeni/>
Transforming our world: the 2030 Agenda for Sustainable Development (2015). Date of visit: 2021-16-01 <http://sdg.org.ua/ua/resources-2/344-2030-2015>

SUSTAINABLE DEVELOPMENT STRATEGY OF REGIONAL TRADE AGREEMENTS

Kateryna Ladychenko, PhD in Economics, Associate Professor
Kyiv National University of Trade and Economics, Ukraine

To the issue of the sustainable development of economic systems and the possibilities of its achievement a lot of scientific works by ukrainian and foreign scientists are devoted, in particular, O.O. Veklych, E.V. Hirusova, B.M. Danylyshyn, G. Daley, D. Meadow, L.G. Melnik, O.I. Karintseva, O.G. Osaulenka, G.V. Platonov, O. Shubravskaya and others.

However, the analysis of the results of research by the scientists shows that despite their high scientific and practical value, there is a need to identify and analyze the implementation processes of sustainable development strategies at regional trade agreements (RTAs).

The purpose of the article is to study the preconditions, peculiarities, problems of implementing the provisions of the sustainable development strategies and factors that will facilitate the successful implementation of such strategies in trade procedures and agreements in the practice of RTAs worldwide.

Using the methods of analysis and observation, we will focus on contemporary metrics of conducting international trade in the regional integration organizations, as well as factors that accelerate the formation of an institutional mechanism to facilitate trade under conditions of sustainable development.

Opportunities for stability and prosperity are partly a result of growing efforts of governments around the world to coordinate economic, social and environmental policies

so that sustainability was displayed in all fields as well as in planning and decision-making processes.

The realization of a sustainable development strategy is impossible without governmental spending on environmental protection. Thus, the environmental costs of 27 EU countries in 2015-2019 are about 250 million euros and are constantly growing. However, the share of these expenditures in GDP is constantly declining and reached a historic low to 1.93% in 2019.

Legislative regulation of sustainable development is also important. In particular, regulatory acts on emissions into the atmosphere and other factors that may affect the climate. The largest number of such regulations was adopted in 2018 in Spain (25), and the least integrated into this global trend are African countries. The trend is to increase the number of adopted environmental laws at the national level, which is already an achievement and a good basis for the implementation of sustainable development strategies at the national and international levels.

Sufficient funding and a high level of national regulatory framework are the basis for the implementation of environmental issues in the joint strategy for sustainable development of regional trade agreements.

Traditionally, regional trade agreements tend to focus on reducing tariff and non-tariff barriers to trade. Not so long ago, more and more agreements began to contain environmental regulations. This trend reflects the growing recognition of trade policy as a tool to support the environment and sustainable development.

In fact, almost all RTAs contain at least one environmental provision. However, the review also shows a significant increase in the number and level of detail of environmental standards added to recent agreements. They typically focus on environmental issues, such as the level and scope of national environmental legislation, environmental goods and services, biodiversity, sustainable forest and fisheries management, trade in forest and fishery products, environmentally harmful subsidies and corporate social responsibility. Agreements often provide clauses for cooperation, technical assistance and capacity building to support their environmental goals and to implement some of their environmental provisions.

The largest number (52) of environmental standards is contained in the CPTPPA (Comprehensive and Progressive Trans-Pacific Partnership Agreement) in 2018. Such provisions include most recent EU trade agreements, in particular with Canada, Ukraine, the Republic of Korea, etc.. These agreements become a tool to protect the interests of developing countries and the growing market from the negative effects of TNC production on their territory, as well as a guarantee of quality and environmental friendliness of products for developed countries.

Increasing environmentally friendly and environmentally responsible investments is one of the ways to include environmental goals in international investment agreements (IIAs) within RTA. The search for a balance between trade objectives, investment and the environment is of interest to countries seeking to adopt an integrated approach to sustainable development.

The main ways to promote environmentally responsible investment may be the inclusion in RTA or IIAs of intention to promote environmentally responsible investment, expanding the investor's obligations to comply with national and international environmental legislation and standards, the introduction of environmentally responsible investment and criteria for this type of investment,

consolidating the Member State's obligation to promote and support environmental investment.

The emissions trading system and the commitment to create one within the RTA can be the effective mechanism for implementing a sustainable development strategy. The EU Emissions Trading Scheme (EU ETS) is the cornerstone of EU climate change policy and a key instrument for reducing profitable greenhouse gas emissions. It is the world's first large carbon market and remains the largest. The emissions permits are traded exactly through this system in the EU and some other countries.

The carbon tax aims to force individuals and companies to pay the full social cost of carbon pollution. So the final price of the product should include external costs, not just private costs. As the price of taxed goods increases, it will force companies to look for alternative ways of production, and consumers - for more environmentally friendly goods. The emissions tax varies from country to country. The largest amount is in Sweden - 137, 52 USD for 1 ton of CO₂e, and the lowest is in Mexico - only 2.67 USD.

Some countries have already adopted the EU's experience with its emissions trading system and have set up their own. In 2020 these initiatives covered 17.0% of global greenhouse gas emissions.

Another economic mechanism for supporting the environment and sustainable development is green bonds. The proceeds from the sales of such debt financial instruments (securities) are used exclusively to finance "green" projects. The funds raised can be used for various environmental projects. For example, in the field of ecological transport it can be used for getting clean energy generated using renewable energy sources, etc. In 2020, the amount of bonds issued by OECD member countries reached \$ 28 billion USD.

Despite the rapid growth, the size of the green bond market is quite small compared to traditional bonds. For example, in the OECD area, government green bonds account for only 0.1% of all government debt securities.

Although it is still an emerging market, a growing number of governments value green bond issuance as a valuable tool for demonstrating moral leadership on climate change and resilience and for financing Paris Agreement commitments.

Thus, there are different economic mechanisms for implementing sustainable development strategies in regional trade and investment agreements. Increasing the number of such mechanisms in the RTA will help improve the quality of life and increase the environmental efficiency of national economies.

Carbon Pricing Dashboard, World Bank (2020). Date of visit: 12.01.2021
https://carbonpricingdashboard.worldbank.org/map_data

Eurostat, the European Commission's statistical office (2020). Date of visit: 11.01.2021
https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=env_ac_epneis&lang=en

Eurostat, the European Commission's statistical office (2020). Date of visit: 12.01.2021
https://ec.europa.eu/eurostat/statistics-explained/index.php/Greenhouse_gas_emission_statistics

Growing momentum for sovereign green bonds, OECD (2020). Date of visit: 13.01.2021
<http://www.oecd.org/coronavirus/en/data-insights/growing-momentum-for-sovereign-green-bonds>.

World Trade Organization, UNEP (2018). Making Trade Work for the Environment, Prosperity and Resilience. WTO: World Trade Organization, UNEP.

World Trade Organization, UNEP (2020). Short Answers to Big Questions on the WTO and the Environment. WTO: World Trade Organization.

Перспективы развития рынка "зеленых" облигаций в Украине. (21.05.2019). Энергореформа. Date of visit: 11.01.2021

[http://reform.energy/analytics/perspektivy-razvitiya-rynka-zelenykh-obligatsiy-v-ukraine-11404#:~: text = World% 20market% 20bond% 20bond & text = "Green"% 20o%](http://reform.energy/analytics/perspektivy-razvitiya-rynka-zelenykh-obligatsiy-v-ukraine-11404#:~:text=World%20market%20bond%20bond&text=%20Green%20o%20)

THE MAIN TRENDS IN THE DEVELOPMENT OF TRANSPORT NETWORKS OF THE EUROPEAN UNION

Olena Poradenko, Ph.D., Associate Professor
West Ukrainian National University, Ternopil, Ukraine

In recent decades, the development of transport networks in many countries has experienced significant shocks, which are caused by both external factors, such as the impact of economic and internal crises. The transport systems of most countries require major changes in accordance with the requirements of the current stage of development of the world economy. Transport is one of the most important sectors of the economy of any state. The development of the transport sector is of particular importance in such an integration association as the European Union, the main purpose of which is to ensure the free movement of goods, services and labor. The efficient functioning of the transport network of each of the countries of the integration association and their involvement in the European and world transport networks will help to solve the most important problems of today and will increase the volume of international traffic. The level of development of the transport network is one of the most important indicators of the EU's economic integration into the world economy.

The exploitation of transportation significantly depends on the level of economic development of the country and the degree of its integration into the world economy, as the largest volumes of transport show those EU countries that are older and most developed, and transport networks of these countries cover all strategically important transport corridors.

The European Commission adopted a roadmap of 40 concrete initiatives for the next decade to build a competitive transport system that will increase mobility, remove major barriers in key areas and fuel growth and employment. At the same time, the proposals will dramatically reduce Europe's dependence on imported oil and cut carbon emissions in transport by 60% by 2050.

By 2050, key goals will include:

- No more conventionally-fuelled cars in cities.
- 40% use of sustainable low carbon fuels in aviation; at least 40% cut in shipping emissions.
- A 50% shift of medium distance intercity passenger and freight journeys from

road to rail and waterborne transport.

- All of which will contribute to a 60% cut in transport emissions by the middle of the century.

The future development of the transport system should be based on a number of the following areas:

- Improving the energy efficiency of vehicles of all modes of transport; development and application of ecological types of fuel and power plants.

- Optimizing the functioning of multimodal logistics schemes, in particular through the wider using modes of transportation that are more resource-efficient in nature, where other technological innovations may be insufficient (e.g. transporting goods over long distances).

- More efficient using transport and infrastructure through improving transport management and information systems (e.g. ITS, SESAR, ERTMS, SafeSeaNet, RIS7), advanced logistics and market measures, including full development of the integrated European railway market, removal of restrictions on domestic transport, removal of barriers to cabotage, balanced pricing, etc.

Infrastructure takes many years to plan, build and equip and trains, planes and ships have been operating for decades. The choices we make today will determine transport in the future.

Solving the above issues will mean achieving very difficult tasks by 2050 and incredibly difficult by 2020-2030. The scale of changes in the system of transport operation is different depending on the transport segment, as different technological options for each segment, country, region. The implementation of this work will depend on many actors - the EU, Member States, regions, cities, but also industries, social partners and citizens.

European strategies. White book. (2011). Date of visit: 12.12.2020
https://ec.europa.eu/transport/themes/european-strategies/white-paper-2011_en

Scientific edition

Sustainable Development: Modern Theories and Best Practices

Materials of the Monthly International Scientific and Practical
Conference (February 24-26, 2021)

The language style and spelling of the authors are preserved. Teadmus OÜ made some changes in the design of the materials provided.

The editorial board and Teadmus OÜ are not responsible for the content of the materials provided.

The collection of conference materials was formed by the computer algorithm teadmus.org automatically based on the materials submitted by the authors after their review. RushApp OÜ developed this algorithm.

Publisher:

10132 Liivamae 4-33

Tallinn, Estonia

info.teadmus@gmail.com

<https://teadmus.org>

