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## TOURISM ENTERPRISE CREATION MANAGEMENT ELECTRONICALLY ONLINE

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### ABSTRACT

The e-commerce growth, the increasing role of social networks in promoting the image and products of enterprises, the automation of technological processes in the enterprises, and the spread of remote work around the world lead to the digitalization of economic entities. The purpose of the article is to study the peculiarities of the tourism enterprise creation in an electronic way while minimizing the founding organizational actions carried out in person, in the traditional way. The study is based on a systematic analysis of all organizational actions for enterprise creation exclusively with the use of information and communication technologies based on the differentiated digitization of founding activities. All organizational actions for the establishment of an enterprise, without any exception, are divided into two categories: a) traditional, carried out in the usual way, i.e. by visiting all the necessary government agencies, holding a founding meeting, visiting banks to open a current account, etc. (offline mode); b) electronic, conducted solely remotely, i.e. with the help of information and communication technologies without attending any institutions and meetings (online mode). The comparison of the scope and content of such measures allows us to emphasize the introduction of the concept of "electronic enterprises" into scientific use by the criterion of their origin, as well as the introduction of indicators of average and marginal propensity to digitize. In the study, it was found out that the criterion of the enterprise creation is followed by the next pattern of the enterprise digitalization. The practical value of this article is the proposed methods for calculating the average and marginal propensity of tourism enterprises to digitize by the criterion of their creation, as well as proposed specific areas for further in-depth enterprise digitization at the stage of their formation.

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### INTRODUCTION

At present, discussions on the formation of the digital economy and the digitalization of various spheres of activity, which mark the development of the information society, are becoming a mainstream in science. This is primarily due to the accelerated development pace of the information and communication sector of the

economy, the growing share of employees in this field, the widespread use of digital technologies in other areas of the world economy. As a result, the basic principles and categories of economic theory are being modified, in particular the emergence of electronic money and cryptocurrency, non-documentary or electronic securities, intellectual and electronic property, virtual or

electronic enterprises, remote employment based on digital technologies. Thus, information in various forms is gradually becoming a leading economic resource, the ability to process and the possession of which are already the main competitive advantages at the level of individual enterprises and states in general.

Systemic shifts towards the digitalization of public life inevitably led to a corresponding reaction from the Governments of States, in particular in Ukraine: The Ministry of Digital Transformation of Ukraine was established (Ministry and Committee digital transformation of Ukraine, 2021); the concept of development of the digital economy and society of Ukraine was approved (Verkhovna Rada of Ukraine, 2018a). The concepts of e-government and / or e-state, e-government services, e-democracy, etc. are being actively implemented in the lives of average citizens at the level of public administration. Most importantly, the digitalization of production processes has led to the Fourth Technological Revolution (Industry 4.0). This conclusion was made due to the integration into a range of automated production management systems, data exchange and production technologies while minimizing human participation in direct production.

The core of such "smart enterprises" is automated management systems based on the processing of databases, i.e. the processing of specialized professional information on specific industries. Therefore, the automation of value creation in such enterprises is due to the use of cyber-physical systems, the Internet of Things and the Internet of Services, i.e. through the total digitalization of production. The real virtualization and reaching a new high-quality level of enterprise digitalization is the use of cloud storage. The use of cloud computing allows modern enterprises to achieve higher productivity in data processing and operation of automated management systems precisely due to the third-party professional computing capabilities of a particular cloud storage.

All this leads to a radical transformation of the economic structures and the specifics of their functioning. In particular, it is question about the digitalization of economic activity of modern enterprises from the moment of their establishment until the stage of their liquidation. However, not all areas and stages of the enterprise functioning are at the same level of digitalization. In the scientific literature, special attention was paid to the issue of enterprise

digitalization in the context of e-business. The studies on this topic were conducted by Kajan (2011); Ovaskainen and Tinnilä (2011); Esposito and Evangelista (2014); Chatzoglou and Chatzoudes (2016); Lammers *et al.* (2018). Liao *et al.* (2016); Arntz, *et al.* (2017); Maliar (2019); Sliz (2020); Gallacher and Hossain (2020) did research in the context of the use of digital technologies by the enterprise employees; Volkovich (2011); Momo and Twum-Darko (2017); Kirkby (2019); Škorić (2020) studied the context of the use of information and communication technologies in business registration.

These studies deserve all respect, but they provide no clarity on the definition of "electronic enterprise" and do not define features of its creation in the online mode, and most importantly – there are no clear indicators to determine the degree of digitalization of such enterprises. At present, the area of research is mainly focused on the problems of creating a business in the Internet environment, emphasizing the product and services sales (Chatzoglou and Chatzoudes, 2016; Lammers *et al.*, 2018). At the same time, the issues of state registration of the enterprise and establishment of preconditions for its functioning that can also be solved online, have been ignored.

## MATERIALS AND METHODS

Since the object of the study is the process of creating an enterprise online, which is a sequence of certain operations on the Internet (Škorić, 2020), the most appropriate methodological approach is systematic. However, the application of such method is complicated by the fact that the process of starting a business cannot be considered as a simple set of its components. The point is that this process as a system of interactive (remote) interactions with various institutions and economic entities consists of non-additive parts, each of which is a relevant stage in the formation of the enterprise. Such stages significantly differ not only in scope, but also have different weight factors and play distinctive roles in organizing the business.

Therefore, when calculating the aggregate indicator of the company propensity to digitize during its creation, which is characterized by a number of primary indicators, there is a need to implement a weight factor (value), as different organizational actions for the establishment of a company may not have the same significance. For this reason, this study uses the method of expert assessments to establish the weight factor of

each individual action for the establishment of the enterprise and its state registration (Dyujzen, 2014). This method provides an opportunity to obtain approximate quantitative assessments of all organizational actions for the establishment of the enterprise thanks to an expert survey and processing its results. The procedure includes the following sequence of steps: formulating the purpose of the study and specific tasks for experts; choosing the expert group coordinator; selection of experts with sufficient research experience in this field; development of a multiple-choice survey with questions ranked by priority and points; final processing and analysis of the results of the expert assessments, as well as the reliability of the answers.

Consistency of expert assessments can be achieved by applying one of the methods of processing expert surveys, namely: calculating the arithmetic mean, (the simplest and most widely used method); priori ranking method; method based on the use of a coefficient of variation; adaptive method; game method based on the tool of correlation analysis when considering group assessments; method of pairwise comparisons, method of calculating the coefficient of concordance, etc. At the same time, each of these methods provides for the mandatory determination of the reliability of the expert assessments, considering the consistency of their opinions (Colson and Cooke, 2018). Thus, on the basis of weight factors of individual organizational actions to create a tourism agency and the introduction of an average propensity to digitize, it is possible to determine whether a particular enterprise has been originally created online.

## RESULTS

First of all, it is necessary to consider the enterprises as electronic if they are created online, which means remotely with the use of information and communication technologies (ICT). Such enterprises appear to be electronic precisely by their origin, although their direct economic activity may be quite ordinary, such as manufacturing certain products. It should be assumed that not all actions regarding the opening of a certain organizational and legal form of the enterprise will be available via the Internet.

According to the website of the Government of Canada, starting your own business in the form of an appropriate legal form can always be presented as a sequence or

algorithm of actions to be taken for state registration of a business (Government of Canada, 2021). The sequence of such actions or operations should be characterized as organizational actions to create an enterprise (organizational actions to create – OAC). In turn, among such a sequence of actions, it is necessary to separate operations that can be performed exclusively offline from the operations available online:

$$OAC = AC_{off} + AC_{on} \quad (1)$$

$AC_{off}$  – actions to create an enterprise offline (Actions to create offline);

$AC_{on}$  – actions to create an enterprise online (Actions to create online).

On this basis, we propose to introduce a new indicator of the average propensity to digitize by creating an enterprise (APDc):

$$APD_c = \frac{AC_{on}}{OAC} \quad (2)$$

Thus, it is also possible to introduce an indicator of marginal propensity to digitize by creating an enterprise (MPDc).

$$MPD_c = \frac{\Delta AC_{on}}{\Delta OAC} \quad (3)$$

The Marginal Propensity to Digitize by creation (MPDc) is needed to show how the degree of digitization changes when the number of organizational actions to create an enterprise (OAC) increases or decreases.

At the same time, it is worth considering the indicators that characterize the orientation of the processes of starting your own business offline. Since this way involves a personal visit to the relevant government departments to start a business, it can be described as personification of the enterprise registration process. Thus, an indicator of the average propensity to personification of the enterprise creation offline is introduced and calculated by the formula:

$$APP_c = \frac{AC_{off}}{OAC} \quad (4)$$

Accordingly, the marginal propensity to personification, i.e. starting a business offline is determined by the formula:

$$MPP_c = \frac{\Delta AC_{off}}{\Delta OAC} \quad (5)$$

The whole sequence of organizational actions for starting a business both in the online mode and in the offline mode, in total, corresponds to 100% of the effort in this regard. Therefore, the following should be noted:

$$APD_c + APP_c = 1 \quad (6)$$

$$MPD_c + MPP_c = 1 \quad (7)$$

As an example, let us consider the opportunity of

starting your own business on the basis of obtaining the status of "private entrepreneur" or FOP (individual entrepreneur under the laws of Ukraine). This is the simplest and at the same time the most affordable form of starting your own business in the EU. According to the Ukrainian state portal "Diia", the process of becoming a private entrepreneur should take two working days: the first day – to register an application in the Unified State Register of Legal Entities (USR), the second day – to register as a taxpayer, but in reality, the number of actions one should take to become a private entrepreneur is slightly larger. In general, the whole list of actions required to register as a private entrepreneur online and offline will be presented in Table 1 and

compared with each other.

Based on Table 1, the entire sequence of actions, without exception, to obtain the status of a private entrepreneur can be done online today, which indicates the possibility of full digitalization of this type of entrepreneurship, i.e. for private entrepreneur potentially  $APD_c = 1$ ;  $APP_c = 0$ . Private entrepreneur is the simplest form of starting your own small business with a low turnover rate and the ability to hire up to 10 employees. Due to the focus on small business, private entrepreneurship is a very common form of entrepreneurship and, accordingly, the number of individuals starting their own business in the form of private entrepreneurship is also very high (Sułkowski *et al.*, 2018).

Table 1. List of organizational actions to register as a private entrepreneur in Ukraine\*.

No.	Offline	Online
1	Have a taxpayer identification number (RNOKPP in Ukraine)	Receive a qualified electronic signature (KEP in Ukraine).
2	–	Register at diia.gov.ua using digital signature
3	Apply offline for registration of a private entrepreneur to the Center for Administrative Services (ZNAP in Ukraine) or to the executive committee of the city council at the place of residence	Fill in the online application for the private entrepreneur registration
4	Submission of the application form for the transition to the simplified taxation system or the application for registration as a value added tax payer (VAT or PDV in Ukraine) in person to the tax authority.	Submission of the application form for the transition to the simplified taxation system or the application for registration as a value added tax payer (VAT or PDV in Ukraine) online – general system of taxation.
5	Find out in person at the Center for Administrative Services about the results of filing an application for state registration of a private entrepreneur	Check the status of the application in the citizen electronic office. As a result, to obtain an online extract from the Unified State Register, which has legal force.

\*Compiled by the author based on the source: Government portal of Ukraine, 2021.

Thus, the digitalization of organizational procedures for obtaining the status of a private entrepreneur: a) significantly relieves the tax inspection and state registration authorities; b) promotes transparency and simplification of registration by entrepreneurs directly. It is also worth noting that in the case of obtaining the status of a private entrepreneur, there is no need to differentiate organizational actions by their significance due to the simplicity and their implementation rate. However, this is fundamentally wrong for starting a business in the form of business partnership. Limited liability company, (Pokorná and Večerková, 2014; Limited Liability Company in Central and Eastern Europe, 2017) has become the most popular organizational and legal for the companies with higher

turnover rate and capital. This is due to two main advantages:

- 1) limited liability of each member of the company in the amount of their own contribution;
- 2) a significant expansion of opportunities for capital accumulation by combining the assets of several individuals, which enables them to reach at least the level of medium-sized businesses.

Table 2 shows the six stages of organizational actions to ensure the creation of an LLC. Table 2 is compiled on the basis of: (Capital Law Consulting, 2003; Verkhovna Rada of Ukraine, 2020a; Verkhovna Rada of Ukraine, 2020b; Zakharova, 2020; Verkhovna Rada of Ukraine, 2020c; WTS Consulting (KMP.ua), 2020; Verkhovna Rada of Ukraine, 2021a; The only web portal..., 2021; Hr-League,

2021). Of these, the first 3 stages permit direct state registration of the enterprise, and the next 3 stages are the necessary minimum (opening a bank account, hiring employees) in order to actually start a business.

This table also presents the current and potential degree of digitization of the establishment of an LLC. The column “mode (potentially)” in Table 2 shows the potential for digitization of certain procedures for the establishment of LLCs, while the “mode (actually)” demonstrates the actual or real implementation of such organizational procedures in Ukraine. Let us consider the organizational actions for the registration of an LLC in more detail, especially those actions that are not yet available online, but can possibly be in the future. Thus,

in paragraph 1.1, the founding meeting of the company can take place with the help of computer applications that allow video conferencing via Zoom, Skype, Discord and others (TechRadar, 2021). The quality, advanced interface, demonstration capabilities of such applications today are quite impressive, and most importantly meet all the technical requirements for the founding meeting. Paragraph 1.2, preparation and signing of the minutes of the founding meeting on creating an LLC, becomes possible remotely due to two facts. First, according to the current legislation there is no requirement for notarization of constituent documents during the registration of a company, in particular the minutes of the founding meeting.

Table 2. List of organizational actions for creating an LLC in Ukraine.

Organizational actions	Mode		Weight factor of the operation <i>Kqij</i>	Weight factor of the organisational action		Weight factor of the stage	
	Actually	Potentially		<i>Kqi</i>	<i>Wqi</i>	<i>Kq</i>	<i>Wq</i>
1	2	3	4	5	6	7	8
1. Preparation of the necessary documents							
1.1 Meeting of the founding members	Offline	Online		0.21	0.85		
1.2 Preparation and signing of the minutes of the founding meeting on creating an LLC	Offline	Online		0.19	0.92	0.4	0.92
1.3 Development and signing of the company charter	Offline	Online		0.42	0.82		
1.4 Obtaining a licence to carry on business activity (if needed)	Offline	Online		0.18	0.84		
2. Submitting documents for state registration							
2.1 Statement on the state registration of the legal entity (form 1)	Offline	Offline		0.48	0.88	0.1	0.86
2.2 The minutes of the founding meeting on creating an LLC	Offline	Offline		0.24	0.86		
2.3 Company charter	Offline	Offline		0.28	0.9		
3. Conducting organisational actions on the registration of the legal entity							
3.1 Registration of an LLC							
3.1.1 Filing documents to the <i>Unified State Register of Legal Entities</i>	Online	Online	0,34				
3.1.2 Providing information on the registration of an LLC to the tax inspection and statistics bodies	Online	Online	0,36	0.32	0.92	0.15	0.9
3.1.3 Obtaining an Extract from the <i>Unified State Register of Legal Entities</i> on registration	Online	Online	0,3				
3.2 Closing consideration of the documents	Offline	Online		0.68	0.84		

3.3 Refusal to register	Online	Online				
4. Hiring employees						
4.1 Concluding an employment contract and an establishing order of the newly registered company	Online	Online	0.54	0.86	0.15	0.84
4.2 Informing the State Fiscal Service of Ukraine on hiring employees	Online	Online	0.46	0.82		
5. Making a company stamp seal (optional)	Online	Online	1	0.96	0.05	0.96
6. Opening a bank account						
6.1 Statement on opening a current account	Offline	Online	0.12	0.88		
6.2 Provision of a document package: a copy of the Extract from the Unified State Register of Legal Entities, a copy of the company charter, a copy of the director and chief accountant letter of appointment, a copy of the minutes on the establishment of an LLC	Offline	Online	0.59	0.9	0.15	0.89
6.3 Card with samples of signatures and a stamp seal	Offline	Offline	0.29	0.86		
In total	-	-	-	-	1	

Secondly, the absence of notarization of the documents provides an opportunity for signing the minutes of the founding meeting on the establishment of a company on the terms of the electronic contract. In accordance with Part 2 of Article 639, Article 205, Article 207 of the Civil Code of Ukraine (Verkhovna Rada of Ukraine, 2021a), an electronic contract concluded by using information and communication technologies and a qualified electronic signature (KEP in Ukraine) is equated to a written contract that is also confirmed by the bill No. 2260, which has already entered into force (WTS Consulting (KMP.ua), 2020). Paragraph 1.3, the development and signing of the company charter, has the same justification, i.e. it can be concluded on the terms of an electronic contract (Shah, 2016; Protocol, 2019).

At the same time, to simplify the procedure of enterprise registration, the founders can use the right to a model charter, which was approved by the resolution of the Cabinet of Ministers of Ukraine No. 1182. This is a typical constituent document that determines the creation, functioning, management and liquidation of LLCs. Therefore, the adoption of the model charter as a company charter does not require its development and approval, only a reference to it in the minutes of the founding meeting on the creation an LLC. The charter itself does not require to be notarized, but there is a need for notarization of its copy to open a bank account

in the future (Nakaz, 2012). Moreover, according to Art. 8 of the Law of Ukraine "On Electronic Documents and Electronic Document Management" electronic documents are also subject to notarization, as well as paper documents (Verkhovna Rada of Ukraine, 2018b).

The charter specifies the license number if the business activity is subject to licensing. Therefore, if it is necessary to obtain a license, it is not possible to draw up a charter without passing the appropriate licensing. The implementation of paragraph 1.4 (obtaining a licence to carry on business activity) is determined by industry specifics, i.e. in some industries the degree of digitization of this procedure is higher, and in others, respectively, lower. In Ukraine, such a license is already available online via the government portal of the Cabinet of Ministers for the following sectors of the economy: construction, transport, financial services, alcohol and alcoholic beverage manufacturing and for 10 other activities (The only web portal..., 2021).

Paragraph 2, submitting documents for state registration, can be done entirely online, but provided that the model charter is considered. Otherwise, it is necessary for the founders or the authorized person to submit a physical package of documents to the state registrar that one can find at the centers of administrative services or a notary who also has the right to register an LLC. Therefore, most cases of

registration are still carried out offline (The only web portal..., 2021).

Registration of the company is carried out by filing documents to the Unified State Register of Legal Entities (paragraph 3.1.1 table 2), which is performed exclusively online by the state registrar or a notary. The next step in registering a company is to enter its information into the databases of the State Fiscal Service of Ukraine and social protection bodies, which is actually done by providing information on the registration of the LLC to the tax inspection and statistics bodies (3.1.2 table 2). It is possible to suspend the consideration of documents for a period of 15 days to eliminate the identified shortcomings, after which the consideration of documents for registration is resumed (paragraph 3.2 of table 2). At the same time, it is possible to refuse state registration of the company in case of violations that cannot be eliminated (paragraph 3.3 of table 2).

Pursuant to paragraph 4.1 of Table 2, current employment contracts and, accordingly, establishing orders may be concluded in electronic form in accordance with the already adopted Bill No. 2260 and Article 5 of the Labor Code of Ukraine (Labor Code). At the same time, electronic employment record books are being introduced in Ukraine, which will ensure the automation of pension accounting in the future (Verkhovna Rada of Ukraine, 2021b). According to paragraph 4.2 of Table 2, it is also possible to notify the State Fiscal Service of Ukraine about hiring employees within the system of electronic public services, i.e. online. Making a company stamp seal for an LLC (paragraph 5 of Table 2) is not mandatory today (Zakharova, 2020), but if necessary, you can place an order via the Internet and receive a stamp seal by mail or courier. Therefore, this action is classified as an online operation. The degree of availability to open a current bank account with the help of electronic documents is constituted by law (paragraph 6 of table 2), but in reality, is determined by the willingness of the banks themselves to work with an electronic flow of documentation. In the vast majority of cases, banks are conservative in this sense and committed to the offline mode, i.e. processing a package of paper documents. Nevertheless, application to open a current bank account, provided that a qualified electronic signature is available, can be carried out online (paragraph 6.1 of table 2). Starting in 2016, banks are also not allowed to require a notarized copy of the constituent documents

(Capital Law Consulting, 2003), which means that all copies of documents can be submitted in a package validated by a qualified electronic signature. Today, instead of the charter, it is enough to provide the number of registry action, i.e. the charter must be published on the portal of electronic services (paragraph 6.2 of table 2). An exception is a card with samples of signatures and a seal stamp (paragraph 6.3 of table 2), as it requires a personal visit to a notary and further contact with the bank.

Table 2 includes only a list of the most important organizational actions, which can be significantly expanded and supplemented. However, even at this stage, it is possible to trace quite clearly the degree of digitalization of the enterprise creation in the form of an LLC. For the organizational and legal form of an LLC, it is not enough just to compare the electronic and traditional operations for starting a business. It is also necessary to conduct an expert assessment of the weight factor of electronic organizational actions to create an enterprise in order to define their role and significance in the process of establishing an enterprise. The following approach to calculate the weight factor should be used (Dyujzen, 2014; Tymoshenko and Kotsyubivska, 2016). The coordinator of this study involved 24 experts with a degree in economics that have sufficient competence for this expert assessment. The level of competence of each expert was determined by three criteria:

- education (Candidate of Sciences – 2 points; Doctor of Sciences – 3 points; Doctor of Sciences, Professor – 4 points);
- competence in the field of starting a business (an expert – 3 points, *partially informed expert* – 2 points);
- experience in the field of expert assessment (there is an experience – 3 points, no experience – 0 points).

The maximum possible number of points is 10, i.e. the expert is at the first (1) level of competence.

The coordinator of this study assigned the following tasks to the group of experts (24 people):

- to set the weight factor (value) of the stage (section) of the enterprise creation –  $K_q$  (minimum step in the assessment – 0.01 points, weight factor of all stages – 1);
- to determine the weight factor of a specific organizational action within each stage –  $K_{qi}$  (minimum

step in the assessment – 0.01 points, weight factor of all organizational actions within one stage – 1);

- to find out the weight factor of the procedure within a single organizational action –  $K_{qij}$  (minimum step in the assessment – 0.01 points, weight factor of all procedures within one organizational action is – 1).

In this case, the expert assessment is a set of assessments of relative importance, which were assigned by the expert to each specific action to open a business. It is important to prove sufficient consistency of the expert assessments to confirm the validity of the results obtained, which is achieved by summarizing the opinions of all experts on each individual organizational action (Colson and Cooke, 2018). One of the ways to summarize the expert assessments is the sum of the assessment ranks of  $S_j$  that are set for the  $j$ -organizational action:

$$S_j = \sum_{i=1}^m R_{ij} \quad (8)$$

$m$  – number of experts;

$R_{ij}$  – the rank of assessment by the  $i$ -expert of the  $j$ -organizational action.

Priority will be given to business processes that received the least value of  $S_j$ . To deepen the understanding of the coordination of assessments established by the relevant experts for each organizational action to open a business, it is advisable to calculate the concordance coefficient. The concordance coefficient reflects the degree of consistency of expert opinions on the relative importance of all proposed for comparison organizational actions. To determine the concordance coefficient, it is necessary to establish several intermediate indicators, in particular the arithmetic mean of the sums of the expert assessment ranks on organizational actions:

$$S_i = \sum_{j=1}^n C_{ij} \quad (9)$$

$n$  – the number of electronic organizational actions that are evaluated;

$C_{ij}$  – assessment of relative importance (in points) by the  $i$ -expert of the  $j$ -organizational action.

When establishing a collective assessment of each electronic organizational action, it is important to measure the competence of experts on a scale from 0 to 10 points. Thus, in the previous formula (16) we substitute the coefficient of competence of experts, due to which there is an adjustment of the results in favor of more trained professionals:

$$S_i = \sum_{j=1}^n U_j C_{ij} \quad (10)$$

$U_i$  – the coefficient of competence of the  $i$ -expert.

The following intermediate indicator is variance estimate:

$$D = \frac{1}{n-1} \sum_{i=1}^m (S_i - \bar{S}) \quad (11)$$

$\bar{S}$  – the expected value calculated by the formula:

$$\bar{S} = \frac{1}{n} \sum_{i=1}^m S_i \quad (12)$$

Weight factor or weight value of a separate organizational action is determined considering the opinions of a group of experts:

$$K_i = \frac{2(mn-S_i)}{mn(n-1)} \quad (13)$$

The concordance coefficient is calculated as the ratio of the variance estimate to the maximum value of this estimate:

$$W = \frac{D}{D_{max}} \quad (14)$$

The maximum value of the variance can be calculated by the formula:

$$D_{max} = \frac{m^2(m^3-n)}{12(n-1)} \quad (15)$$

The concordance coefficient ranges from 0 to 1. Under condition of absolute consistency of expert opinions  $W = 1$ , i.e. the closer the value of the concordance coefficient to 1, the higher chance of the consistency of the expert opinions is.

The main criteria to determine the weight factor (the amount of effort) are the complexity of a particular organizational action, as well as the amount of time for its implementation. Thus, stage 1 of table 2 is the most time consuming, as it includes holding a founding meeting, preparation and signing of the minutes of the founding meeting, development of the main document of the company – the company charter (according to experts, the weight factor of this stage  $K_q$  ranges from 0.36 to 0.45 points). Submitting documents to the state registrar (paragraph 2 of table 2), which consists in providing a statement and a package of previously prepared documents, is assessed more as a purely technical procedure with minimal effort (experts' weight estimates of this stage  $K_q$  have the following discrepancy: from 0.07 to 0.12 points). Carrying out actions on registration of a legal entity (stage 3 of table



2) is performed by the state registrar or notary, so the efforts of the founders are insignificant, and time is determined purely by the pace of the state registrar work (weight factor of this stage  $K_q$  is set by experts between 0.85 and 0.14 points).

At this stage, the founders are only required to obtain an Extract from the Unified State Register of Legal Entities on the registered company (provided by the registrar or one can obtain it independently in electronic form via the e-services), and in case of suspension of the registration process due to identified shortcomings, the founders must eliminate them. Evaluation of efforts at this stage by experts is largely determined not by the procedure of submitting documents, but by the time spent on eliminating possible deficiencies in the documentation. Stage 4, hiring employees, is easily carried out online, so its weight factor  $K_q$  is estimated by experts in the range from 0.08 to 0.15 points according to current legislation (WTS Consulting (KMP.ua), 2020; Hr-League, 2021). Paragraph 5 of Table 2, making a company stamp seal, is not mandatory and is easily solved by placing an order from any manufacturer, which causes a low assessment of the weight factor of this stage  $K_q$  by experts, namely from 0.03 to 0.08 points (Zakharova, 2020). Although stage 6 of table 2 does not directly concern the enterprise registration, it is impossible to start a business activity without it.

Since the opening of a current bank account requires submission to the bank: application, copies of the Extract of the USR, the company charter, a copy of the director and chief accountant letter of appointment, a copy of the minutes on the establishment of an LLC, as well as cards with samples of signatures and stamp seals, the weight factor of this stage  $K_q$  is estimated from 0.08 to 0.15 points (Capital Law Consulting, 2003). We also determine the weight factors (the amount of effort) of specific organizational actions ( $K_{qi}$ ) and specific organizational procedures ( $K_{qij}$ ) to create an LLC and amend Table 2. According to formula 14, let us calculate the concordance coefficients for each organizational action  $W_{qi}$  and each stage  $W_q$ . The obtained results are also presented in table 2. It is considered an acceptable level of consistency of expert opinions, if the concordance coefficient is not less than 0.75, i.e. is in the range  $0.75 < W < 1$ . As can be seen from Table 2, the values of the concordance coefficients for organizational actions  $W_{qi}$  and stages  $W_q$  are not less than 0.8, which indicates a fairly high consistency of expert opinions.

Based on the selected estimates of the weight factor of the relevant organizational actions, the weight factor of digitization on each stage of the enterprise creation can be established:

$$AC_{on}^q = \sum_{j=1}^J K_{qj} \quad (16)$$

$AC_{on}^q$  – the weight factor of all organizational actions carried out online at the q-stage of enterprise creation (actions to create);

$K_{qj}$  – the weight factor of a specific organizational action online within each q-stage;

J – the number of organizational actions online within each q-stage.

Given the weight factor of each stage, we can establish its impact on digitalization to create an enterprise:

$$SC_{on}^q = (\sum_{j=1}^J K_{qj}) * K_q \quad (17)$$

$SC_{on}^q$  – the degree of digitization of the q-stage of the enterprise creation with the help of information and communication technologies.

$K_q$  – the weight factor of the q-stage in the enterprise creation.

Thus, the whole sequence of organizational actions to create an enterprise online, considering their weight factors, can be calculated by the formula:

$$AC_{on} = \sum_{q=1}^Q SK_{on}^q \quad (18)$$

The same formula can be written as follows:

$$AC_{on} = \sum_{q=1}^Q (\sum_{j=1}^J K_{qj}) * K_q \quad (19)$$

Q – the number of stages in creating an enterprise.

The average propensity to digitize is determined when creating an LLC by adjusting formula 2 as follows:

$$APD_c = \frac{AC_{on}}{OAC} = \frac{\sum_{q=1}^Q (\sum_{j=1}^J K_{qj}) * K_q}{OAC} \quad (20)$$

OAC – the whole sequence of organizational actions to create an enterprise.

Given that the whole sequence of organizational actions carried out online and offline is 100%, in the coefficient expression  $OAC = 1$ .

Table 2 considers two options for creating an enterprise: actual and potential, which differ significantly in the degree of use of information and communication technologies. Therefore, the figure  $APD_c$  for each of them will also be different. Let us calculate the average propensity to digitalize, which actually takes place in the

current conditions of Ukraine:

$$APD_c = \frac{0.18*0.4+0*0.1+(0.32+0.68)*0.15+(0.54+0.46)*0.15}{1} + \frac{1*0.05+0*0.15}{1} = 0.422 \quad (21)$$

Similarly, according to formula 20, the average propensity to digitalize that can be potentially available in Ukraine at present should be calculated:

$$APD_c = \frac{((0.21+0.19+0.42+0.18)*0.4+0*0.1+(0.32+0.68)*0.15)}{1} + \frac{(0.54+0.46)*0.15+1*0.05+(0.12+0.59)*0.15}{1} = 0.8565 \quad (22)$$

As you can see, the average propensity to digitize in terms of creation an LLC is only  $APD_c = 0.422$ , which is not a very high indicator. Nevertheless, today, it can be potentially increased to  $APD_c = 0.8565$  due to the implementation of the recommendations proposed in this research.

## DISCUSSION

We agree on the statement of Momo and Twum-Darko (2017) that the availability of creating a business online is a way to improve the country's ranking in terms of ease of doing business. In essence, the ease of starting your own business simplifies market entry and provides an opportunity for engaging in legitimate activity not only for national economic entities, but also for foreign investors. At the same time, the consideration of Momo and Twum-Darko (2017) online business registration as a means of rebranding public services seems rather inaccurate. Of course, the relevance and urgency of business registration online cannot be underestimated, but it is difficult to talk about public services as a brand. At present, the availability of online business registration is becoming a strong need for the modern digital economy, i.e. in the near future, online business registration will be introduced in most countries. Therefore, to talk about it as a brand that promotes these public services is not possible.

Thus, back in 2009, with the support of New Zealand, in the Pacific Island country of Tonga, special software and electronic business registration system were introduced. According to Kirkby (2019), this allowed the country to reduce the time for obtaining a business registration certificate from 2 weeks to 30 minutes, and most importantly, to raise the level of security of the business entities register to a qualitatively new level. Tonga has

even launched a large-scale campaign to re-register businesses that have already been registered in the traditional paper format. Despite the undoubted progress, the fact that New Zealand software was used, and the information was hosted on a New Zealand server is a matter of concern. An electronic register of economic entities of a country is a strategic information resource, and direct access to it by the government of another country is inherently a factor of national danger. Today, the establishment of enterprises has become a form of business that is carried out for a fee in favor of third parties. There are campaigns that specialize in preparing document packages for the registration of certain types of enterprises and even have the appropriate Internet services for this (Top10incorporate, 2021). The introduction of online business registration at the national level should significantly simplify this procedure, make it clearer and more accessible to potential entrepreneurs, eliminate the corruption component due to the lack of contact of the applicant with the state registrar.

However, online business registration should not be idealized. According to Škorić (2020), although electronic registration of limited liability companies (LLCs) and obtaining an entrepreneurial status online is available in Serbia since 2018, the use of digital technologies in this area has added new dilemmas and new problems to both businesses and registration authorities.

According to Volkovich (2011), online registration only makes sense if there is a real simplification of the business registration procedure, which faces the following obstacles in Ukraine:

- there is an option to initially register the enterprise online, but it is impossible to input any edits to the already existing constituent documents online. From this perspective, electronic registration is a rather limited service;
- no clarity on the payment of the registration fee, in particular in terms of its confirmation by an electronic settlement document;
- difficulties in obtaining a qualified electronic signature, etc.

## CONCLUSIONS

1. Today, there is a high degree of digitalization of simple forms of business organization such as private entrepreneur. This is due to the simplicity of their

establishment. Conversely, organizationally complex forms of business organization (joint-stock companies) have a much lower degree of digitalization at the stage of their establishment. This allowed us to determine the following pattern: the more complex the form of business organization is, the fewer procedures for creating such an enterprise online is available.

2. In this study, the attention is focused on the following forms of tourism business organization: private entrepreneur and limited liability company. However, the greatest opportunities for capital accumulation are provided by the joint-stock form of the enterprise. In the case of joint-stock companies, organizational actions to establish an enterprise will be even greater, primarily due to the need to issue securities and, accordingly, compliance with all requirements of the National Securities and Stock Market Commission of Ukraine. In this regard, the following urgent problems arise in the way of digitalization of procedures for the establishment of joint-stock enterprises, which need further solution:

- it is advisable that the securities are issued exclusively in non-documentary form, i.e. without printing the papers. And although the non-documentary form of shares has recently become widespread in the securities market, it does not always meet the requirements of the founders;

- the National Securities and Stock Market Commission of Ukraine should provide the public with the following services: submission of an application and all other documents for the issue of shares online; registration and issuance of a temporary certificate of issued shares online; technical opportunity for submission and further registration of the report on the results of private placement among the founders by the National Securities and Stock Market Commission of Ukraine, and obtaining the final state certificate of issued shares online;

- maintenance of the register of shareholders should be carried out exclusively in electronic form, which, if necessary, can be confirmed by extracts from a certain register;

- for public joint-stock companies there is also a strict requirement to be listed on at least one stock exchange, which accordingly requires the establishment of an electronic service system by a specific stock exchange.

3. Opening your own business in any organizational and legal form is only one of the important areas of state electronic services for the enterprise creation. The

ability of the founders to open a certain form of enterprise online is determined by the level of development of digital services in the country, i.e. it largely depends on the degree of development of "e-government" or "digital state". This means that the high average propensity to digitalize in the enterprise creation indirectly indicates a fairly high level of the public service digitalization, otherwise it would not be possible at all.

4. Comparing state portals for online business registration on the example of Canada, the State of Connecticut (USA) and Ukraine, the following conclusions can be drawn:

- the interface and the presence of a clear algorithm of the online business registration procedure are essential;
- the whole list of actions for business registration cannot always be done within one state portal, quite often there is a need to turn to other state Internet services;
- even with the declared availability of online business registration in different countries, the level of complexity of business registration in each country will differ, as well as the degree of digitalization of public services for starting a business online.

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