



<https://doi.org/10.15407/scine19.03.015>

LIGONENKO, L. O.¹ (<https://orcid.org/0000-0001-5597-5487>),
RIEPINA, I. M.¹ (<https://orcid.org/0000-0001-9141-0117>),
NYKYFORUK, O. I.² (<https://orcid.org/0000-0001-7376-3373>),
BEREZHNYTSKA, U. B.³ (<https://orcid.org/0000-0001-5354-8502>),
MYSYLIUK, V. S.¹ (<https://orcid.org/0000-0002-4941-6766>),
and OVSIENKO, A. M.⁴ (<https://orcid.org/0000-0001-7475-4102>)

¹ Kyiv National Economic University named after V. Hetman,
54/1, Peremohy Ave., Kyiv, 03057, Ukraine,
+380 44 371 61 52, documents@kneu.edu.ua

² Institute of Economy and Forecasting of the NAS of Ukraine,
26, Panasas Myrnogo St., Kyiv, 01011, Ukraine,
+380 44 268 0909, gvm@ief.org.ua

³ Ivano-Frankivsk National Technical University of Oil and Gas,
15, Karpatska St., Ivano-Frankivsk, 76019, Ukraine,
+380 342 72 7144, bi_lif@ukr.net

⁴ Poltava University of Economics and Trade, Higher Educational
Establishment of Ukoopspilka,
3, Kovalia Ave., Poltava, 36014, Ukraine,
+380 532 56 0673, commerce@puet.edu.ua

PROSPECTS FOR THE DEVELOPMENT OF ENTERPENEURSHIP: THE ROLE OF UNIVERSITIES

Introduction. *Entrepreneurial intentions of youth are the key to stimulating innovation-driven development and solving urgent social problems. This is especially relevant for Ukraine as young democracy that suffers from external aggression and needs economic recovery.*

Problem Statement. *Entrepreneurship is not only the bundle of knowledge and skills, but also the way of thinking and behavior. Universities play an important role in the generation and testing of students' business ideas. The potential of Ukrainian universities in this realm has been still understudied.*

Purpose. *The purpose of the research is to clarify the role of universities as the predictor of the formation of entrepreneurial intentions by the example of Ukraine in order to develop recommendations on building-up the entrepreneurship support ecosystem and growing youths' entrepreneurial activity.*

Material and Methods. *The research is based on the results of the students' survey in Ukraine within the framework of Global University Entrepreneurial Spirit Students' Survey international project. While doing the research we have used SPSS software package for processing responses, the methods of system analysis, the hypothetical deductive method, the analysis of contingency tables and the strength of relationships.*

Citation: Ligonenko, L. O., Riepina, I. M., Nykyforuk, O. I., Berezhnytska, U. B., Mysyliuk, V. S., and Ovsienko, A. M. (2023). Prospects for the Development of Enterpeneurship: the Role of Universities. *Sci. innov.*, 19(3), 15–37. <https://doi.org/10.15407/scine19.03.015>

© Publisher PH "Akadempriodyka" of the NAS of Ukraine, 2023. This is an open access article under the CC BY-NC-ND license (<https://creativecommons.org/licenses/by-nc-nd/4.0/>)

Results. *The role of universities in the formation of entrepreneurial intentions in Ukraine is low; the entrepreneurship support system has shown its own immaturity. The educational and cultural components have a partial influence on entrepreneurial readiness, therefore it has been recommended to strengthen them. The financial and conceptual components need to be adjusted in terms of their tools, given the best international practices.*

Conclusions. *The strategic objective is to create an institutional environment for the development of an academic entrepreneurship, the spread of academic business incubators, students' entrepreneurial oriented groups, project teams, and business clubs.*

Keywords: *university, predictor, entrepreneurship support, entrepreneurial intentions, and entrepreneurial readiness.*

In the scholarly research literature, the development of entrepreneurship is traditionally considered a key factor of economic growth, job creation, and the introduction of innovations, as well as a prerequisite for economic success and competitiveness of national and regional economic systems, self-realization of the individual and material well-being of the population.

The development of entrepreneurship depends on a wide variety of factors, with the efforts of educational institutions and universities, which are aimed at the formation of entrepreneurial competences and readiness for entrepreneurship, playing a far from the last role among them. They determine the number of emerging entrepreneurs among young people, including students and university graduates, as well as the mentality, goals, and values ("spirit" or "soul") of the new generation of entrepreneurs of the 21st century.

Over the last 30 years, many researchers from different countries of the world have been studying the predictors of the entrepreneurship development. Entrepreneurial intentions are considered the best predictor of planned future behavior, in particular starting a new business (Bird, B. and Jelinek, M. (1988) [1], De Clercq, D., Honig, B., and Martin, B. (2013) [2]). They characterize the state of mind, motivation, and desire to become an entrepreneur, focus person's attention on a certain goal or way to achieve something, for example, entrepreneurial success (Bird, B. (1988) [3]; Krueger and Brazeal (1994) [4]); provide a connection between ideas and actions, which is crucial for understanding the entrepreneurial process (Bird, B. (1988) [1]; Krueger and Carsrud (1993) [5]). In the 1980s, the 1990s, and the 2000s, various theories and models that explain the fun-

damental elements, prerequisites, and factors of the formation of entrepreneurial intentions have been developed: the entrepreneurial event model SEE (Shapero, A., and L. Sokol (1982) [6]); the theory of planned behavior Ajzen, I. (1991) [7]; the intentional base model (Krueger and Carsrud 1993), the entrepreneurial potential model (Krueger and Brazeal (1994) [8]); the models by P. Davidsson (1995) [9], Douglas, E., and D. Shepherd (2002) [10], Lüthje, C. and Franke, N. (2003) [11] and others.

As rightly noted by Sesen, H. (2013) [12], during this period, there was formed the classical approach to determining the fundamental elements of entrepreneurial intentions (perceived desirability (personal and social attractiveness) + perceived behavioral control (feasibility) based on comparison with other alternative possibilities of self-realization) and to understanding the prerequisites for the formation of entrepreneurial intentions (perception of one's abilities + ability to start a business). The formation of entrepreneurial intentions is traditionally considered through the prism of individual (personal) factors (recognition, independence, financial success, innovation, self-realization); as a result of the presence of appropriate institutional prerequisites (the most important of which are perceived expediency and entrepreneurial self-efficacy); as well as in the context of the external environment factor, in particular the state (quality) of entrepreneurial education and university initiatives to support entrepreneurship.

Based on the formed theoretical framework, there have been conducted empirical studies for testing the hypotheses on the predictors of the entrepreneurship development and the formation

of entrepreneurial intentions, in particular for identifying and assessing the influence of universities on the entrepreneurship development.

The most recognized approach, given the number of references in the SCOPUS database, is the methodology proposed by Saeed, S., Yousafzai, S. Y., Yani-De-Soriano, M., & Muffatto, M. (2015) [13]. Based on the numerous primary sources of the hypotheses, the following questions have been discussed in the research: (1) How students perceive entrepreneurship education (EE) and the support they receive from their universities; (2) Does “perceived university support” (PUS) affect the formation of the perceived desirability and expected expediency of entrepreneurship (entrepreneurial self-efficacy (ESE) for students)? (3) How important is the influence of PUS on EI (entrepreneurial intention) of students, given other personal and institutional motivational factors? (4) How can universities be more effective in providing EE and supporting their students?

The main aspect of the research is studying PUS (perceived university support) that is considered a combination of the three components: perceived educational support (ES), perceived concept development support (CDS), and perceived business development support (BDS).

Given the fact that the above questions has not lost their relevance, especially for developing countries, over the past 5–7 years, many studies that amend, adapt to regional and cultural characteristics, expand and clarify the composition of factors that determine the relationship between “entrepreneurial education” – “entrepreneurial intentions” – “entrepreneurship development” have been conducted.

Peng, Z., Lu, G., and Kang, H. (2013) [14], based on the survey of students at Xi’an universities (China), have analyzed the level of entrepreneurial intentions of students and determined the factors influencing them. The study has proven that university support has a positive effect on their entrepreneurial attitude and entrepreneurial self-efficacy, which together with other factors (individual/psychological factors, family background

factors, and social environment factors) have a significant positive effect on the entrepreneurial intentions.

The opposite results have been obtained in the study of Poblete, C., & Amorós, J. E. (2013) [15], which deals with the advantages of interaction between universities and entrepreneurs for the development of regional entrepreneurship in Chile. Low interaction between entrepreneurs and universities and their insufficient influence on entrepreneurial activity in the region have been established. The negative conclusion has been made: entrepreneurial education does not increase the intention to become an entrepreneur.

Baroncelli, A., & Landoni, M. (2017) [16] have presented the comparative analysis of university-level support practices (methods) and entrepreneurial behavior of subsidiary companies in Boston universities (Italy). The object of the study is the prerequisites for admission to the university, the development and attitude of entrepreneurs during the first years of activity, as well as alternative models of university support for the development of entrepreneurship. The higher-ranked academic institutions have been found to focus their efforts on the availability of services and incentives to facilitate the ownership of patent rights, shares in the university, and venture capital, while the lower-ranked universities give priority to incubator services for overcoming capital constraints.

Ljubotina, P., & Vadjal, J. (2017) [17] have studied the predictors of family business inheritance and development. It has been proven that the intentions of inheriting an existing family business depend on such factors as: the efficiency of the existing business, the personal motives for self-employment, the gender and historical features, as well as the influence of the university environment. For the countries where the almost 50-year experience of the administrative economy (communist regime) had broken entrepreneurial traditions and slowed down the formation of the mentality and culture of entrepreneurship for several decades, the importance of the last factor increases significantly.

Overall, J., Gedeon, S. A., & Valliere, D. (2018) [18] have developed the psychosocial cognitive model of entrepreneurial intention and behavior. It has been found that the subjective attitude to entrepreneurship, the prevalence of entrepreneurship in the social environment, and the focus of university initiatives on the development of entrepreneurial intentions have a positive effect on the desirability and perceived expediency of an entrepreneurial career, that is, on entrepreneurial intentions, and subsequently on entrepreneurial behavior.

The role of the university in the formation of techno-entrepreneurial intentions of Bulgarian STEM students has been studied by Yordanova, D., Filipe, J. A., & Coelho, M. P. (2020) [19]. It has been established that the traditional determinants of entrepreneurial intentions identified in the literature (entrepreneurial role models, perceived support from social networks, willingness to take risks, and gender) may be irrelevant specifically for the formation of techno-entrepreneurial intentions; instead, the efforts of universities to attract students to scholarly research are more important. That is, the components and content of university initiatives should be consistent with the specialty of students and the direction of their future entrepreneurial activity.

Meeralam, E. A., & Adeinat, I. (2022) [20] have described the two additional factors – university support and fear of failure – to the predictors of entrepreneurial intentions as determined by the theory of planned behavior by Ajzen, I. (1991) [7]. The construct of university support has been found to influence significantly on perceived behavioral control that has a positive effect on the entrepreneurial intentions of female students in Saudi Arabia and contributes to the development of female entrepreneurship in a developing ecosystem.

In the SCOPUS database of scholarly research publications, we have not found any studies on determining the predictors of the development of entrepreneurial activity in Ukraine and the role of universities in achieving this task.

The presented review of the latest studies that deal with the predictors of the formation of en-

trepreneurial intentions has proven that, at the moment, there is a certain theoretical and methodological framework for studying the influence of universities on the formation of entrepreneurial intentions and their further implementation through entrepreneurial activities. The effect of university initiatives on the formation of entrepreneurial intentions is in the focus of almost all researchers, although individual empirical studies that have been conducted in different countries do not always confirm its importance.

The two types of problems that have not yet been sufficiently considered in the previous studies have been identified: 1) the further development of the methodology for determining and identifying the predictors that determine the formation of entrepreneurial intentions, in particular with regard to such a factor as “the role of universities in the formation of entrepreneurial intentions”; 2) the verification of the hypotheses regarding a positive impact of university initiatives on the development of entrepreneurship (through the formation of entrepreneurial intentions and entrepreneurial readiness) in Ukraine and, based on it, the assessment of the necessary correction of the content and focus of efforts of Ukrainian universities.

The survey has been conducted on the basis of Vadym Hetman Kyiv National Economic University in the period from January 8 to February 23, 2022. The link to the survey was placed at <https://forms.gle/oTxRjbDXx8zrU9fN7> and mailed to interested persons. The obtained sociological information reflects the general trends in the current development of student entrepreneurship.

The developed questionnaire is based on the global study of entrepreneurial spirit of students within international project Global University Entrepreneurial Spirit Students' Survey (GUESSS) [21]. This project has been implemented since 2003 by the Swiss Institute of Small Enterprises and Entrepreneurship of the University of St. Gallen. In 2021, it involved 58 countries, including Ukraine. Our country was represented by a small number of respondents. This fact, in our opinion,

does not allow us to consider the conclusions published in [21] as fully relevant, which prompts the authors to conduct this study and in-depth analysis of the results obtained.

Empirical research in the form of survey has been conducted by the Computer Assisted Web Interviewing (CAWI) method with the use of the functionality of the Google forms survey toolkit. The target audience includes students from the leading “student” cities of Ukraine, who receive an invitation to take part in the survey (Kyiv, Odesa, Poltava, Kharkiv, Kryvyi Rih, and Ivano-Frankivsk).

We form the sample population a posteriori, while using the CAWI method (when each potential respondent makes a decision whether to participate or not to participate in the survey). The sample population consists of 248 students who represent the general population in terms of awareness of the status of the infrastructure for the development of student entrepreneurship, the presence of entrepreneurial intentions, and the potential for entrepreneurial activity, which ensures the validity of the results obtained.

The socio-demographic portrait of the respondents and the descriptive characteristics of the research results are shown in [22].

The empirical data have been statistically processed with the help of the Statistical Package for the Social Sciences (SPSS), in particular, the construction and analysis of cross-tabulation (conjugation) tables, testing of hypotheses regarding the independence of variables with the use of non-parametric criteria: the Chi-square (%) test, the homogeneity test (probability of chi-square), Kramer’s V correlation of the mutual conjugation criterion and the non-parametric equivalent of one-factor analysis of variance – the Kruskal-Wallis test. The calculated criteria have been interpreted with the use of the recommendations given in [23; 24, 219; 25].

Thus, there is every reason to consider the data obtained as a result of the conducted empirical research relevant for comprehensive conclusions and well-founded recommendations regarding the role of universities in the development of student entrepreneurship in Ukraine.

Based on [4–9], Table 1 presents the constructs to be used for studying the role of universi-

Table 1. The Characteristics of the Study Constructs

Study constructs	Construct components	Questions the answers to which characterize the study construct
1. EI – entrepreneurial intentions	EIC – current EIP – perspective	What career intentions (plans) do you have immediately after the graduation? What career intentions (plans) do you have 5 years after the graduation?
2. ERS – entrepreneurial readiness	ERS1 – functional ability ERS2 – integral assessment of readiness	Rate your confidence in your ability to cope with the following business functions and tasks on a 5-point scale: 1 – “not sure” ... 5 – “absolutely sure” How do you generally rate (with a 5-point scale) your readiness to start your own business?
3. PUS (role of university in the formation and realization of students’ entrepreneurial initiatives)	ES – educational support CDS – conceptual support FDS – financial support KDS – cultural support	The university has developed and offers for mastering special disciplines necessary for the opening and effective operation of student’s own entrepreneurial project or business (mark both exact and synonymous names; mark regardless of whether they are chosen by you or not, if you know of such an opportunity) Do you agree with the following statement, “The university implements various initiatives aimed at developing students’ skills as potential entrepreneurs”? Does the university provide any financial resources for students to create their own business (in the form of startup capital or other financial support)? Please rate, with a 7-point scale, how much you agree with the following statements on the culture, climate, and motivation for entrepreneurship at the university, where 1 is “absolutely disagree” ... 7 is “absolutely agree”.

ties in the development of entrepreneurship in this study.

The current state of support for entrepreneurial initiatives and student intentions by Ukrainian universities is as follows:

1. Educational support for entrepreneurship. In the universities of Ukraine, students are offered a large number of disciplines that form entrepreneurial competencies: 52% of respondents have a choice of 3–5 disciplines; 31% have 1–2 disciplines; 16.1% may choose out of more than 6 disciplines; 30% of the survey respondents have the profile disciplines (in our opinion, they include “Entrepreneurship”, “Business planning”, and “Innovation and formation of ideas”); 29% study one or two of the three mentioned disciplines. Only 12% of the respondents do not have the specified profile disciplines in their curricula.

2. Conceptual support for entrepreneurship. The most common conceptual support tool in the academic community, according to the respondents, are seminars (workshops) held by entrepreneurs (72.58% of the respondents have confirmed the conduct of such events). Competitions for business ideas and/or business plans are the second most common, as more than two-thirds of respondents (63.1%) confirm the conduct of such events. The third place in the rating is held by meetings to discuss problems of entrepreneurship (more than half of the respondents (58.47%) confirm the conduct of such events). More than a third of the respondents confirm the use of such conceptual support tools as “places for communication with potential investors” and “coaching and mentoring programs for potential entrepreneurs” (39.52% and 37%, respectively).

3. Financial support for entrepreneurship. This component of entrepreneurship support is the least developed in the higher education institutions of Ukraine. As few as every sixth respondent (14.11%) confirms the fact that his/her university provides financial resources for students to create their own business (in the form of startup capital or other financial support), the rest (85.89%) deny this fact.

4. Cultural support for entrepreneurship. In general, 43.9% of the respondents have positive (partially and fully agree) opinions of cultural support for the development of student entrepreneurship; while 37.86% of the respondents give absolutely negative answers. The highest level of positive perception is reported for the statement, “At my university, students are encouraged to carry out entrepreneurial activities” (level of positive perception 1.393; 48.1% of the respondents generally agree with this statement). The lowest score is given to the statement, “The atmosphere at my university inspires me to develop ideas for new businesses” (the level of positive perception is only 0.885, which means the negative perception prevails over the positive one; 42.8% and 37.9%, respectively).

The detailed description of individual components of entrepreneurship support by universities has been given by us in [22].

The logic of the study is to check and to verify the hypotheses (Table 2) regarding the positive relationship between the following variables: PUS is the input variable (predictor); ERS is the intermediate variable; EI is the output variable:

$$\text{PUS} \rightarrow \text{ERS} \rightarrow \text{EI}.$$

Successful verification of the identified hypotheses allows us to state that the university initiatives on the development of student entrepreneurship have a positive effect on the entrepreneurial readiness and entrepreneurial intentions, and therefore contribute to the development of entrepreneurial activity in Ukraine. The impossibility of verification is an evidence of insufficient efforts and ineffectiveness of the tools used by Ukrainian universities in this field.

Thus, the purpose and objectives of this research here as follows: 1) to analyze correlation, to form and to verify the hypotheses on dependence of predictor PUS and output variable EI; 2) to evaluate the interdependence of intermediate variable ERS and output variable EI; 3) to analyze correlation, to form and to verify the hypotheses on dependence of predictor PUS and inter-

mediate variable ERS; 4) to discuss the obtained results, to develop proposals and recommendations on enhancing the role of universities in the formation of entrepreneurial readiness and entrepreneurial intentions as determining factors that condition the successful development of entrepreneurial activity.

Stage 1. To analyze correlation, to form and to verify the hypotheses on correlation of predictor PUS and output variable EI. Cross-tabulation between predictor PUS “the role of university in supporting entrepreneurial initiatives” and output variable EI “entrepreneurial intentions” has been made in the form of 2 components: EIC (current entrepreneurial intentions) – “career expectation immediately after graduation from university” and EIP (perspective entrepreneurial intentions) – “career expectation after 5 years after graduation” (Appendix 1). The cross-tabulation analysis allows us to state as follows.

1. Educational support for entrepreneurship. There are signs of correlation between the level of educational support and current entrepreneurial intentions (**hypothesis H1**). 27.03% of the respondents show the intention to start their own business with a low educational support, while 38.10% of the respondents intend to do this in the case of a strong support; the intentions regarding the continuation of existing family business grow more than twice, from 4.05% to 9.52%, respectively. Less than a third of the respondents (31.08%) have general entrepreneurial orientation in the case of a low-quality educational support and almost half (47.62%) do so in the case of a high-quality educational support.

A similar situation has been found with regard to perspective entrepreneurial intentions, which are larger and more responsive to improving the quality of educational support. Almost half respondents (48.65%) show the intention to start

Table 2. Hypotheses of the Study

Hypothesis	Hypothesis content	Content characteristic of hypothesis
H1	ES → EI	Educational support for entrepreneurship has a significant positive impact on the formation of entrepreneurial intentions of students
H2	CDS → EI	Improving the quality of conceptual support for entrepreneurship (support for the generation and testing of business ideas) from universities leads to raising level of entrepreneurial intentions of students
H3	FDS → EI	Financial support to subjects of student entrepreneurship has a positive effect on the formation of entrepreneurial intentions of students
H4	KDS → EI	The growth of entrepreneurial intentions of the students is facilitated by the improvement of cultural support for entrepreneurship from the university
H5	ERS1 → EI	The growth of students' ability to perform entrepreneurial functions and tasks has a positive effect on their entrepreneurial intentions
H6	ERS2 → EI	Higher integral assessment of readiness to start one's own business determines the growth of entrepreneurial intentions
H7	ES → ERS	Educational support for entrepreneurship has a positive effect on the entrepreneurial readiness of students
H8	CDS → ERS	Improving the quality of conceptual support for entrepreneurship (support for the generation and testing of business ideas) from universities leads to an increase in the level of entrepreneurial readiness of students
H9	FDS → ERS	Financial support to subjects of student entrepreneurship has a positive effect on the formation of entrepreneurial readiness of students
H10	KDS → ERS	The growth of entrepreneurial readiness of students is facilitated by the improvement of cultural support for entrepreneurship from universities

their own business 5 years after graduating from university with a low level of educational support; in the case of a strong educational support, the share of such respondents is more than two-thirds (71.43%). The intentions regarding the continuation of existing family business grow significantly, from 1.35% to 9.52%, respectively. Half respondents have general entrepreneurial orientation in the case of a low quality of educational support, and 80.95% do so in the case of a strong support.

2. Conceptual support for entrepreneurship. There are signs of correlation between entrepreneurial intentions and conceptual support for entrepreneurship by universities (**hypothesis H2**), but only in the case of perspective entrepreneurial intentions (in 5 years after graduation from university). The share of the respondents considering an entrepreneurial career in the future increases from 39.13% (no conceptual support measures) to 55.08% of the respondents (real support). However, there are certain illogicalities, for example, in the case of formal support, the entrepreneurial orientation is higher than in the case of real one (61.68% and 55.08%, respectively).

3. Financial support for entrepreneurship. Based on foreign experience, we have formed **hypothesis H3** (financial support for student entrepreneurship has a positive effect on the formation of entrepreneurial intentions of students), however, the Ukrainian realities have not allowed us to obtain statistical confirmation for this statement so far.

The cross-tabulation has shown a negative effect of financial support on the formation of entrepreneurial intentions. The share of the respondents who see themselves entrepreneurs immediately after graduation from university decreases from 32.39% (no financial support) to 22.86% (financial support is available); for the future (in 5 years), it falls from 57.75% to 48.57%, respectively.

This situation is probably explained by the awareness of real difficulties, personal limitations and risks of entrepreneurship, which the respondents have realized while implementing entrepreneurial initiatives for which financial support is received, or by insufficient amount of this sup-

port or low popularization of the positive effect of this support on implementing those business ideas (projects) for which the students receive it among the student community.

Despite the obtained negative results (disappointment), in our opinion, financial support programs for student initiatives in universities are rather useful. They make it possible to reduce the loss of time and money of the university graduates who understand their unpreparedness for entrepreneurial activity during their study and to decrease the share of business entities that go bankrupt and close business (the “foam” effect).

4. Cultural support for entrepreneurship. **Hypothesis H4** has not been statistically confirmed as well. As evidenced by the cross-tabulation, the share of the respondents who plan an entrepreneurial career after graduation from university decreases from 61.54% (unsatisfactory) to 22.67% (excellent), as the quality of psychological support increases. 46.15% of the respondents who evaluate the psychological support as “unsatisfactory” and as few as 33.33% of those who consider it “excellent” plan to have an entrepreneurial career in the future. However, a satisfactory level of the quality of psychological support causes an abnormal increase (an outlier) for entrepreneurial intentions (71.74% of the respondents).

The verification of the formulated hypotheses regarding the presence and strength of the relationship between predictor “the role of the university in supporting entrepreneurial initiatives” and output variable “entrepreneurial intentions” (Table 3) allows us to state that all hypotheses H1, H2C (current intentions), H3, and H4 have not been confirmed: the relationship is not statically significant according to Pearson’s chi-squared test; the variables are considered independent based on the test of homogeneity (chi-squared probability); the measure of association, according to Cramer’s V test, is weak and regarding the PDS-EI1 correlation is insignificant; the hypothesis on the same distribution based on the Kruskal-Wallis test for independent samples has been confirmed.

The H2P hypothesis regarding the effect of conceptual entrepreneurship support on the formation of perspective intentions has been confirmed by 3 verification tests (Pearson's chi-squared test, the test of homogeneity (chi-square probability), and the Kruskal-Wallis test).

Stage 2. To evaluate the interdependence of intermediate variable ERS and output variable EI. Given the unsatisfactory results of testing the hypothesis on the effect of university initiatives on the formation of entrepreneurial intentions, at the 2nd stage of the research, let us search for a construct that can act as an intermediate variable in the chain “university initiatives” – “entrepreneurial intentions.” It has been proposed to use variable “entrepreneurial readiness” ERS as such a construct. This variable is considered through the prism of the two components: “ability to perform entrepreneurial functions and tasks” (ERS1) and “integral assessment of readiness to start

one's own business” (ERS2), which correspond to hypothesis H5 and H6, respectively.

The correlation between entrepreneurial readiness and entrepreneurial intentions has been recognized by many scholars (Krueger, N. F., and D. V. Brazeal (1994); Douglas, E., and D. Shepherd (2002); Saeed, S., Yousafzai, S. Y., Yani-De-Soriano, M., & Muffatto, M. (2015); Pauceanu, A. M., Alpenidze, O., Edu, T., & Zaharia, R. M. (2019) [35]), which is quite natural. In our opinion, evaluative judgments regarding one's abilities to perform entrepreneurial functions and readiness to start one's own business should be considered potential opportunities available to students. The realization of these potential opportunities determines further career plans: in which field (non-commercial or commercial) and in what capacity (salaried employee or entrepreneur) does the university student see himself/herself in the future.

Table 3. Results of Hypothesis Testing Regarding the Correlation between Predictor PUS “the Role of University in Supporting Entrepreneurial Initiatives” and Output Variable EI “Entrepreneurial Intentions”

PUS components	Pearson's chi-squared test	Test for statistically significant correlation (Pearson's chi-squared test)	Number of degrees of freedom	Asymptotic significance	Testing the hypothesis on the independence of variables based on the test of homogeneity (chi-squared probability)	Cramér's V (φ_c)	Measure Interpretation CRAMÉR'S V	Kruskal-Wallis test	Testing the hypothesis on the same distribution
Component: current entrepreneurial intentions “career expectations immediately after graduation of university”									
ES	18.163	insignificant	12	0.111	accepted	0.156	weak	0.249	accepted
CDS	5.056	insignificant	8	0.752	accepted	0.101	weak	0.658	accepted
– FDS	2.064	insignificant	4	0.724	accepted	0.091	weak	0.726	accepted
PDS	25.654	insignificant	24	0.371	accepted	0.161	insignificant	0.207	accepted
Component: perspective entrepreneurial intentions “career expectations in 5 years after graduation of university”									
ES	17.843	insignificant	12	0.121	accepted	0.155	weak	0.071	accepted
CDS	18.657	Significant at $p = 0.05$	8	0.017	rejected	0.194	weak	0.043	rejected
FDS	4.087	insignificant	4	0.394	accepted	0.128	weak	0.397	accepted
PDS	31.28	insignificant	24	0.146	accepted	0.178	weak	0.112	accepted

Source: prepared by the authors based on the criteria defined in [24, 32–34].

If EI-ERS interdependence is proven, the next step in the research would be to assess the effect of university initiatives on this intermediate variable, which may yield better results than analyzing the correlation with the outcome variable.

The cross-tabulation (Appendix 2) has allowed us to provide the following confirmations regarding the role of intermediate variable ERS “entrepreneurial readiness.”

Entrepreneurial career intentions (starting a new business and continuing the existing one in order of succession), both current and perspective ones, are higher among the respondents who recognize their ability to perform entrepreneurial functions and tasks and highly evaluate their capabilities of starting their own business.

The share of the respondents who plan an entrepreneurial career immediately after graduation from university, in the case of partial ability to perform entrepreneurial functions and tasks, is as small as 9.09%; in the case of partial ability, it increases to 28.46%, while in the case of complete ability it reaches 38.46% (that is more than 4 times higher). As for perspective entrepreneurial intentions, their conditioning by the ability to perform entrepreneurial functions and tasks is even stronger: entrepreneurial intentions are shown by 33.33% of the respondents who evaluate their ability as unsatisfactory and by almost twice as many (64.10%) respondents who believe they are completely capable of performing entrepreneurial functions and tasks.

The relationship between entrepreneurial intentions and self-appraisal of readiness to start one’s own business is even more visible: as self-appraisal grows, the share of the respondents systematically increases: in the case of unsatisfactory appraisal, the share is equal to zero, while in the case of excellent appraisal, it makes up 53.85% for current entrepreneurial intentions, and, respectively, 20% and 65.8%, for perspective intentions.

It should be noted that a direct and systematic relationship between ERS and EI cannot be detected: there are outliers that somehow distort the picture. In our opinion, this may be caused by

the personal characteristics of individual respondents and the degree of their criticality towards their abilities and competencies.

Hypotheses H5 “increasing ability to perform entrepreneurial functions and tasks leads to growing entrepreneurial intentions” and hypothesis H6 “increasing self-appraisal before starting one’s own business leads to growing entrepreneurial intentions” have been statistically confirmed at the level of $p = 0.05$ for current entrepreneurial intentions and at the level of $p = 0.01$ for perspective ones. The test of homogeneity (chi-squared probability) has shown the presence of a weak relationship based on the recommendations of Rea&Parker (M. Rea, Richard A. Parker (2014) [24]) (Table 4).

The confirmation of hypotheses H5 and H6 allows considering variable “Entrepreneurial readiness” (ERS) as intermediate in relation to variable “Entrepreneurial intentions” (EI). This substantiates the validity of the next stage of the research, which is testing the hypotheses regarding the existence of relationships between the quality of university entrepreneurial initiatives and the entrepreneurial readiness of students.

Stage 3. To analyze correlation and to form and verify the hypotheses on dependence of predictor PUS and intermediate variable ERS.

The cross-tabulation (conjugation tables) between predictor PUS “the role of university in supporting entrepreneurial initiatives” and intermediate variable ERS “entrepreneurial readiness” (Appendix 3.4) has shown as follows:

1. Educational support for entrepreneurship. The ability to perform entrepreneurial functions and tasks (partial or full ability) increases from 59.46% of the survey respondents to 76.71%, in the case of a low educational support, and to 76.19% of the respondents, in the case of an excellent and good support. The share of the respondents who are unable to perform entrepreneurial functions decreases from 10.81% to 0%.

The situation with integral self-appraisal of readiness to start one’s own business is similar. At universities with a low-quality educational sup-

port, slightly more than a third of the respondents (36.49%) rate their readiness to start entrepreneurial activities as “good” and “excellent.” With the excellent quality of educational support, the share of such respondents increases to almost half (47.62%). There is a systematic increase in the average score of self-appraisal, from 3.16 to 3.67, for low and excellent quality of educational support, respectively.

2. Conceptual support for entrepreneurship. The cross-tabulation has allowed us to assume the presence of a certain dependence between the factors under consideration. Thus, in the absence of conceptual support for entrepreneurship in universities, 60.87% of the respondents demonstrate the ability to perform entrepreneurial functions and tasks (partial or full). In the case of formal support there is reported an increase in the share of the respondents to 61.68%. If conceptual support for entrepreneurship is real, the share of the respondents capable of performing entrepreneurial functions and tasks increases to almost 70%. At the same time, respondents’ appraisal of their inability to perform entrepreneurial functions and tasks is unclear. The share of such students varies from 0% to 8.41% and does not de-

pend on the availability and the quality of conceptual support for entrepreneurship.

The situation with integral self-appraisal before starting one’s own business is similar. As various conceptual support tools are used more actively, the share of respondents who self-appraise their readiness as good and excellent decreases from 52.17% to 44.07%, and the average self-appraisal decreases from 3.52 to 3.39 points. In our opinion, this situation can be explained as follows: more active communication with real entrepreneurs during various events allows the students to better understand business needs and more correctly assess their readiness to carry out such activities, as compared with the appraisal based on knowledge of certain educational components (disciplines).

3. Financial support for entrepreneurship. The analysis of the cross-tabulation has allowed us to provide statistical information that confirms hypothesis H9 that financial support for student entrepreneurial projects significantly positively affects the entrepreneurial readiness of students. The share of the respondents who are fully capable of performing entrepreneurial functions and tasks increases from 15.02% to 20%. The share of

Table 4. Testing Hypotheses on Relationship between Intermediary Variable ERS “Entrepreneurial Readiness” and Output Variable EIC “Entrepreneurial Intentions”

Components of EI	Components of ERS	Pearson’s chi-squared test	Test for statistically significant correlation (Pearson’s chi-squared test)*	Asymptotic significance	Testing the hypothesis on the independence of variables based on the test of homogeneity (chi-squared probability)	Cramér’s V (ϕ_c)	The nature of correlation based on the recommendations of Rea & Parker
EI1	ERS1	41.535	Significant correlation at $p = 0.05$	0	Rejected	0.205	Weak
	ERS2	28.518	Significant correlation at $p = 0.05$	0.027	Rejected	0.170	Weak
EI2	ERS1	35.978	Significant correlation at $p = 0.01$	0.003	Rejected	0.190	Weak
	ERS2	37.597	Significant correlation at $p = 0.01$	0.002	Rejected	0.195	Weak

* The number of degrees of freedom is 16.

Source: prepared by the authors based on the criteria defined in [24, 32–34].

the respondents who fully or partially consider themselves unable to conduct entrepreneurial activity decreases from 1.41% and 5.16%, respectively, to 0%. At the same time, the general appraisal of the ability (including the partial ability) is slightly reduced (from 65.73% to 62.86%), which can be considered a logical decrease in the appraisal of one's ability after gaining real experience.

Financial support for one's startup or entrepreneurial project from university leads to an increase in the integral self-appraisal of readiness to start one's own business: there is reported a slight increase in the average score as it grows from 3.3 to 3.43, and the share of people who assess their readiness as good and excellent goes up from 39.91% to 45.71%. The slight increase, in our opinion, is caused by a fairly small share of the respondents in whose universities this form of entrepreneurship support is used (14.11%).

4. Cultural support for entrepreneurship. There is reported a systematic growth in the share of the respondents who consider themselves partial-

ly and fully capable of performing entrepreneurial functions and tasks as the level of cultural support increases: in case of unsatisfactory cultural support ("unsatisfactory", "poor", "insufficient", "limited") it fluctuates within 50–56%; in the case of positive appraisal of this component it increases rapidly to 76.12%, (for "satisfactory" support), 83.33% (for "good" support), and 93.33% (for "excellent").

At the same time, there is no influence of this component on the integral self-appraisal of the ability to start one's own business: the average self-appraisal score does not increase, even goes down (from 3.77, for unsatisfactory support, to 3.33, for excellent one).

Formulated hypotheses H7–H10 on the presence and strength of the relationship have been tested by using the classical statistical parameters: Pearson's chi-squared test, the test of homogeneity test (chi-squared probability), Cramer's V correlation coefficient, and the Kruskal-Wallis test for independent samples (Table 5). The pre-

Table 5. Testing the Hypotheses on Dependence between Predictor PUS "Role of University in Supporting Entrepreneurial Initiatives" and Intermediate Variable ERS "Entrepreneurial Readiness"

PUS components	Pearson's chi-squared test	Test for statistically significant correlation (Pearson's chi-squared test)	Number of degrees of freedom	Asymptotic significance	Testing the hypothesis on the independence of variables based on the test of homogeneity (chi-squared probability)	Cramer's V (φc)	Measure Interpretation CRAMÉR'S V	Kruskal-Wallis test	Testing the hypothesis on the same distribution
Component "ability to perform entrepreneurial functions and tasks"									
ES	23.711	Significant at $p = 0.05$	12	0.022	Rejected	0.179	Weak	0.035	Rejected
CDS	5.704	Insignificant	8	0.680	Accepted	0.107	Weak	0.780	Accepted
FDS	4.07	Insignificant	4	0.397	Accepted	0.128	Weak	0.399	Accepted
PDS	44.16	Significant at $p = 0.01$	24	0.007	Rejected	0.211	Insignificant	0.000	Rejected
Component "integral self-appraisal of readiness to start one's own business"									
ES	20.476	Insignificant	12	0.059	Difficult to determine	0.166	Weak	0.029	Rejected
CDS	6.125	Insignificant	8	0.633	Accepted	0.111	Weak	0.912	Accepted
FDS	1.163	Insignificant	4	0.884	Accepted	0.068	Insignificant	0.885	Accepted
PDS	40.733	Significant at $p = 0.05$	24	0.018	Rejected	0.203	Weak	0.438	Accepted

Source: prepared by the authors based on the criteria defined in [24, 32–34].

sence and strength of correlation varies depending on the components of entrepreneurial potential (functional readiness, integral self-appraisal) and depends on the type of support (educational, conceptual, financial, and cultural).

Thus, although the above analysis of conjugation tables (cross-tabulations) has allowed us to provide examples that confirm the stated hypotheses, it is impossible to establish a statistically significant and stable relationship between predictors and intermediate variables. Two hypotheses out of 4 have been confirmed for only one of the components, while two others have been rejected. The absence and weakness of correlation can be explained, on the one hand, by the low quality (formality) of university initiatives to support entrepreneurship and, on the other hand, by the fact that the survey respondents are not aware of university's role in the formation of entrepreneurial readiness. In any case, this determines the need to develop measures for intensifying the role of universities in the formation of entrepreneurial readiness and entrepreneurial intentions. In addition, the authors of [36] have concluded that it is necessary to form an entrepreneurial climate in universities, and we consider how to achieve this in the next step of the research.

Stage 4. To discuss the obtained results; to develop proposals and recommendations on increasing the role of universities in the formation of entrepreneurial readiness and entrepreneurial intentions. The results of the study on the assessment of the entrepreneurial intentions of Ukrainian students are significant in terms of reflecting the real picture of the use of entrepreneurial potential by Ukrainian youth and serve as a basis for the development of directions and measures for the organization of the youth entrepreneurship development promotion system. In particular, it is advisable to emphasize some positions of the general results of the research work.

As few as a quarter (24.6%) of the surveyed respondents plan to start their own business after graduation from university, which indicates the low readiness of Ukrainian youth to start a career

as an independent entrepreneur. What has been found is a consequence of the lack of trust in the state and its institutions, as well as the improper work of universities in the field of developing confidence in the abilities of trained specialists and their motivation for entrepreneurial activity. The potential for improving the situation is 24.6% of the respondents who have not decided yet on their entrepreneurial intentions after graduation from university.

Although only 12% of the respondents state the absence of disciplines that form entrepreneurial competence, and the majority of the respondents (52%) confirm that there are 3–5 specialized disciplines, we believe that these disciplines should be added with courses on communications, team building, leadership development, etc. Such expediency has been confirmed by a practical example of *Business Incubator Center for the Development of Entrepreneurship*, when the students of *Success in Business* theoretical and practical course on the basics of organization and management of entrepreneurship in Ivano-Frankivsk actively work within the framework of *Psychology of an Entrepreneur* block and report on the necessity of work with a psychologist.

The same conclusions have followed the evaluation of conceptual support for the development of student entrepreneurship: the survey respondents have shown a high quota of trust (72.58%) to such a form of work as seminars (workshops). We believe that this support tool is so popular because the participants of the seminars and workshops can interact and communicate with each other. It is also important for a young person to receive favorable feedback regarding his/her own ideas and developments. This interactive form enables students to get specialized knowledge and skills in entrepreneurship, as well as soft skills at the university. By the way, other forms and tools of supporting entrepreneurship among young people, which involve communication, interaction, and establishment of partnerships, namely contests for business ideas and/or business plans, meetings to discuss entrepreneurship issues, are

also popular, as they are appreciated by 63.1% and 58.47% of the respondents, respectively. These results should be taken into account for developing both national and local target budget programs for the support and development of small and medium-sized enterprises; in particular, it is expedient to include measures of cooperation with universities, which involve business centers, various student circles, business clubs, etc., into the curricula.

The results of the study have revealed that not all the students are ready to start their own business immediately after graduation from the university, indicating the need to gain experience in a specific subject area, but do not reject the possibility of creating their own business in 5–10 years after the graduation. For such students, it is important to study a corporate entrepreneurship course and effective tools and practices for implementing business initiatives in the internal corporate environment. The implementation of business projects with support and assistance of an employer can become a valuable experience of entrepreneurial activity at a much lower risk as compared with independent entrepreneurial activity. In view of this, it seems appropriate to organize and teach a corporate entrepreneurship course that gives knowledge in such areas as project management, application of design thinking methodology, innovative leadership, creation of innovative business models, approaches to evaluating performance of internal innovation teams, etc.

The practice and tools of financial support for student entrepreneurship require further discussion. 85.89% of the respondents have noted that their universities do not have financial support tools for business development. The research has shown a certain contradiction, as hypothesis H9 (positive impact of financial support on entrepreneurial readiness) has been confirmed, while hypothesis H3 (negative impact of financial support on entrepreneurial intentions) has been rejected, i.e. readiness increases, as intentions decrease.

In our opinion, this inconsistency can serve as an additional argument in favor of the explanation that has been already given above: the prac-

tice of financial support for student entrepreneurship should be expanded, improved, and wider popularized among the student community. However, decision on the feasibility of introducing such a practice in university depends on the degree of entrepreneurial maturity of the university.

Universities should create favorable microenvironments for acquiring knowledge and skills, while direct financial support to business projects initiated by students with the help and mentoring of university teachers is the prerogative of relevant institutions for promoting the development of entrepreneurship in the field. That is, university is the first platform for identifying and testing the entrepreneurial potential of young people, and then it is up to local level small and medium entrepreneurship support institutions that have developed mechanisms and tools for this activity.

At the same time, the experience of implementing academic entrepreneurship projects and business financial support programs in entrepreneurial universities deserves support and dissemination. A successful form of combining the chain “education/science – business/production – government/authority” is the establishment of academic business incubators on the basis of universities, which provide a full range of business services, including resource support (in particular, at the expense of local budget funds within complex target programs, international grants, funds from business angels, etc.).

The results of the assessment of cultural support for entrepreneurship by universities are of high relevance: the negative perception of university initiatives in this component outweighs the positive ones, with the overall rating of cultural support for development being generally not high (43.9%). The obtained results have reflected the general state of establishing and conducting business in Ukraine: the country does not have a positive image of an “entrepreneur;” there is no trust in government institutions; there is a misunderstanding of the modern paradigm of entrepreneurship and its role in achieving the UN

Sustainable Development Goals. The universities should contribute to the formation of innovation entrepreneurship culture and socially responsible business management for the sake of all interested stakeholders and future generations.

The formation of a loyal environment for possible failures of budding entrepreneur should include both formal institutional business formations and informal institutions, norms and rules of behavior for identifying and developing the entrepreneurial potential of young person. The university is the first platform, a base for testing entrepreneurial intentions, approbation of entrepreneurial readiness of conscious, critically thinking young person. The university shall create the most favorable microclimate, conditions for further activity and development, that is, an appropriate institutional environment for entrepreneurship.

At the same time, it is necessary to ensure the sustainability of the operation and development of institutions supporting youth and academic entrepreneurship, their focus on the needs and challenges of the post-war economy. The priority should be the orientation of business projects of students of such institutions to the industries and spheres of activity, which are critically important for the country in the context of facilitating the revival and innovation-driven development of the economy of Ukraine, ensuring food and energy security, solving environmental problems, creating new jobs, etc.

We consider the case of participation and implementation of various international *social and business-oriented programs and projects* on the basis of universities as a good impetus and adaptation to qualitative institutional changes. This allows students to be involved in practical project activities, which means the acquisition of applied work experience, expands the financial capabilities of existing business development support centers based at universities and forms a profitable partnership and establishment of business relationships and communication networks for students who are going to be entrepreneurs.

The spread of the experience of creating student circles (project groups) of scientific and so-

cial direction and permanent business clubs for young people on the basis of universities deserves comprehensive support. As practice has shown, such student initiative groups contribute to the development of strong interaction between participants and support for the implementation of innovative developments by young people.

A special proposal for the formation of an appropriate support system for youth entrepreneurship is the establishment of academic business incubators as innovation institutions based on universities. The main advantages are the comprehensiveness of business services for budding entrepreneurs in one place, the effect of the principle of synergy and the real possibility of identifying and developing entrepreneurial potential among young people. The business incubation process shall include educational component for participants, resource support, consulting support, and appropriate communications.

CONCLUSIONS

1. We have not established any statistically significant relationship between predictor PUS “the role of university in supporting entrepreneurial initiatives” and output variable EI “entrepreneurial intentions,” which have been evaluated in terms of the two components: the current “career vision after university graduation” (EIC) and the perspective “career expectation in 5 years after university graduation” (EIP); hypotheses H1–H4 have not been confirmed. This is the evidence that one of the priority tasks of the domestic educational space, which is the transformation of universities into a place and space for the formation of not only certain competencies, but also the identification, formation, and orientation of entrepreneurial intentions, entrepreneurial readiness and, ultimately, entrepreneurial initiative for the first steps of young people in business, has not been implemented yet. So, the main identified problem is the general weakness and low effectiveness of the existing system of support and development of entrepreneurship in universities of Ukraine.

2. It has been proven that variable “entrepreneurial readiness” (ERS), which has been studied in terms of the two variables, “ability to perform entrepreneurial functions and tasks” (ERS1) and “integral assessment of readiness to start one’s own business” (ERS2), affects the formation of entrepreneurial intentions of students (variable “entrepreneurial intentions” (EI), hypothesis H5 and H6, respectively). Thus, the efforts and initiatives of universities should be focused on increasing students’ readiness to perform entrepreneurial functions and tasks, as well as their confidence in the ability to generate and implement business ideas and projects, to start their own business.

3. The research has confirmed the influence of the educational (hypothesis H7) and the cultural (hypothesis H10) components on entrepreneurial readiness of students (ERS). The relationship between the entrepreneurial readiness of students with the conceptual and the financial support (hypotheses H8 and H9) has not been confirmed. Ukrainian universities should pay special attention to the quality of educational support for entrepreneurship, as well as the formation of entrepreneurship support culture. The existing forms of conceptual support for entrepreneurship in universities need to be revised (by further in-depth research), since they do not have an effect

on the growth of entrepreneurial readiness of students. The choice of tools of financial support for student entrepreneurship should be decided individually, depending on the entrepreneurial maturity of university.

The basic principles of forming an institutional environment for the development of entrepreneurship in universities are as follows: *trust, mutual benefit and partnership; democracy, openness in activities and autonomy of university-based centers and cores of business development and support.*

It is advisable to include the tools that have already been tested in the world practice and Ukrainian realities into the ecosystem of support for youth and academic entrepreneurship in Ukrainian universities, have confirmed their effectiveness and may be offered to others as a positive experience for implementation, in particular: 1) the implementation of various international social and business oriented programs and projects on the basis of universities; 2) the creation of student circles (project groups) of scientific and social direction on the basis of universities; and 3) the establishment of innovative institutions (academic business incubators that provide a range of business services for budding entrepreneurs and business accelerators for testing and scaling business models and innovation products) on the basis of universities.

APPENDIXES

Appendix 1. The Results of the Cross-Tabulation between Predictor PUS “Role of University in Supporting Entrepreneurial Initiatives” and Output Variable EI “Entrepreneurial Intentions”

Options for response	Career expectations*					
	Have not decided yet	Employee at a noncommercial organization	Employee at a business structure	Entrepreneur inheriting the family business	Entrepreneur, founder of my own business	Total for the entrepreneurial direction
Educational support for entrepreneurship (ES)						
Low	32.43	2.7	33.78	4.05	27.03	31.08
	25.68	5.41	18.92	1.35	48.65	50
Sufficient	25	5	40	11.25	18.75	30
	17.5	2.5	22.5	2.5	55	57.5

Options for response	Career expectations*					
	Have not decided yet	Employee at a noncommercial organization	Employee at a business structure	Entrepreneur inheriting the family business	Entrepreneur, founder of my own business	Total for the entrepreneurial direction
Good	16.44	9.59	46.58	2.74	24.66	27.4
	10.96	9.59	24.66	2.74	52.05	54.79
Excellent	23.81	4.76	23.81	9.52	38.1	47.62
	9.52	4.76	4.76	9.52	71.43	80.95
Conceptual support for entrepreneurship (CDS)						
No support	30.43	8.7	21.74	4.35	34.78	39.13
	26.09	17.39	17.39	0	39.13	39.13
Formal	22.43	6.54	41.12	5.61	24.3	29.91
	14.02	4.67	19.63	0	61.68	61.68
Real	25.42	4.24	39.83	7.63	22.88	30.51
	18.64	4.24	22.03	5.93	49.15	55.08
Financial support for entrepreneurship (FDS)						
No	23.94	5.16	38.5	7.04	25.35	32.39
	16.9	6.1	19.25	2.35	55.4	57.75
Available	28.57	8.57	40	2.86	20	22.86
	20	2.86	28.57	5.71	42.86	48.57
Cultural support for entrepreneurship (KDS)						
Unsatisfactory	15.38	0	23.08	15.38	46.15	61.54
	30.77	0	23.08	0	46.15	46.15
Poor	26.92	3.85	38.46	3.85	26.92	30.77
	11.54	3.85	38.46	0	46.15	46.15
Insufficient	34.62	5.77	26.92	3.85	28.85	32.69
	26.92	5.77	13.46	1.92	51.92	53.85
Limited	28.89	2.22	46.67	8.89	13.33	22.22
	24.44	2.22	20	2.22	51.11	53.33
Satisfactory	17.91	5.97	44.78	5.97	25.37	31.34
	5.97	5.97	16.42	4.48	67.16	71.64
Good	13.33	10	46.67	10	20	30
	10	10	23.33	6.67	50	56.67
Excellent	33.33	13.33	26.67	0	26.67	26.67
	26.67	13.33	26.67	0	33.33	33.33

* Numerator: immediately upon the graduation from the university (EIC); Denominator: 5 years after the graduation from the university (EIP).

Source: calculated by the authors based on the survey with the use of SPSS.

Appendix 2. The Results of the Cross-Tabulation between Intermediate Variable ERS “Entrepreneurial Readiness” and Output Variable EI “Entrepreneurial Intentions”

	Career expectations*					
	Have not decided yet	Employee at a noncommercial organization	Employee at a business structure	Entrepreneur inheriting the family business	Entrepreneur, founder of my own business	Total for the entrepreneurial direction
Ability to perform entrepreneurial functions and tasks (ERS1)						
Full ability	28.21	12.82	20.51	0	38.46	38.46
	15.38	10.26	10.26	5.13	58.97	64.1
Partial ability	12.2	4.07	46.34	8.94	28.46	37.4
	7.32	4.88	21.95	2.44	63.41	65.85
Have not decided yet	40.28	5.56	34.72	6.94	12.5	19.44
	34.72	5.56	20.83	1.39	37.5	38.89
Partial inability	45.45	0	45.45	0	9.09	9.09
	18.18	0	36.36	9.09	36.36	45.45
Full inability	33.33	0	33.33	0	33.33	33.33
	33.33	0	33.33	0	33.33	33.33
Integral assessment of readiness to start one’s own business (ERS2)						
Excellent	15.38	7.69	23.08	7.69	46.15	53.85
	7.69	7.69	19.23	7.69	57.69	65.38
Good	18.67	5.33	34.67	10.67	30.67	41.33
	10.67	4	16	4	65.33	69.33
Satisfactory	25	6.73	43.27	4.81	20.19	25
	14.42	7.69	25	0.96	51.92	52.88
Poor	34.21	2.63	47.37	2.63	13.16	15.79
	36.84	2.63	21.05	2.63	36.84	39.47
Unsatisfactory	80	0	20	0	0	0
	80	0	0	0	20	20

* Numerator: immediately upon the graduation from the university (EIC); Denominator: 5 years after the graduation from the university (EIP).

Source: calculated by the authors based on the survey with the use of SPSS.

Appendix 3. The Results of the Cross-Tabulation between Predictor PUS and Intermediate Variable ERS1 “Ability to Perform Entrepreneurial Functions and Tasks”

Options for response	Ability to Perform Entrepreneurial Functions and Tasks (ERS1), % of the respondents						
	Full inability	Partial inability	Have not decided yet	Partial ability	Full ability	Total inability	Total ability
Educational support for entrepreneurship (ES)							
Low	2.70	8.11	29.73	40.54	18.92	10.81	59.46
Sufficient	1.25	5.00	36.25	52.50	5.00	6.25	57.50
Good	0.00	1.37	21.92	57.53	19.18	1.37	76.71
Excellent	0.00	0.00	23.81	42.86	33.33	0.00	76.19
Conceptual support for entrepreneurship (CDS)							
No	0.00	0.00	39.13	52.17	8.70	0.00	60.87
Formal	1.87	6.54	29.91	45.79	15.89	8.41	61.68
Real	0.85	3.39	26.27	52.54	16.95	4.24	69.49
Financial support for entrepreneurship (FDS)							
No	1.41	5.16	27.70	50.70	15.02	6.57	65.73
Available	0.00	0.00	37.14	42.86	20.00	0.00	62.86
Cultural support for entrepreneurship (KDS)							
Unsatisfactory	7.69	7.69	30.77	46.15	7.69	15.38	53.85
Poor	0.00	11.54	38.46	38.46	11.54	11.54	50.00
Insufficient	0.00	7.69	42.31	36.54	13.46	7.69	50.00
Limited	0.00	4.44	37.78	48.89	8.89	4.44	57.78
Satisfactory	1.49	1.49	20.90	59.70	16.42	2.99	76.12
Good	0.00	0.00	16.67	60.00	23.33	0.00	83.33
Excellent	6.67	0.00	0.00	53.33	40.00	6.67	93.33

Source: calculated by the authors based on the survey with the use of SPSS.

Appendix 4. The Results of the Cross-Tabulation between Predictor PUS “Role of University in Supporting Entrepreneurial Initiatives” and Intermediate Variable ERS2 “Integral Assessment of Readiness to Start One’s Own Business”

Options of responses	Integral self-appraisal of readiness to start one’s own business(ERS2), % of the total respondents						Average self-appraisal
	Unsatisfactory	Poor	Satisfactory	Good	Excellent	Good and excellent	
Educational support for entrepreneurship (ES)							
Low	6.76	16.22	40.54	27.03	9.46	36.49	3.16
Sufficient	0.00	17.50	41.25	35.00	6.25	41.25	3.30
Good	0.00	16.44	41.10	28.77	13.70	42.47	3.40
Excellent	0.00	0.00	52.38	28.57	19.05	47.62	3.67
Conceptual support for entrepreneurship (CDS)							
No	4.35	8.70	34.78	34.78	17.39	52.17	3.52
Formal	1.87	19.63	43.93	26.17	8.41	34.58	3.20
Real	1.69	12.71	41.53	33.05	11.02	44.07	3.39
Financial support for entrepreneurship (FDS)							
No	1.88	15.96	42.25	30.05	9.86	39.91	3.30
Available	2.86	11.43	40.00	31.43	14.29	45.71	3.43
Cultural support for entrepreneurship (KDS)							
Unsatisfactory	7.69	0.00	23.08	46.15	23.08	69.23	3.77
Poor	7.69	15.38	38.46	30.77	7.69	38.46	3.15
Insufficient	0.00	23.08	30.77	32.69	13.46	46.15	3.37
Limited	0.00	22.22	53.33	22.22	2.22	24.44	3.04
Satisfactory	1.49	11.94	49.25	31.34	5.97	37.31	3.28
Good	0.00	6.67	36.67	40.00	16.67	56.67	3.67
Excellent	6.67	13.33	46.67	6.67	26.67	33.33	3.33

Source: calculated by the authors based on the survey with the use of SPSS.

REFERENCE

1. Bird, B., Jelinek, M. (1988). The operation of entrepreneurial intentions. *Entrepreneurship Theory and Practice*, 13(2), 21–30. <https://doi.org/10.1177/104225878801300205>
2. De Clercq, D., Honig, B., Martin, B. (2013). The roles of learning orientation and passion for work in the formation of entrepreneurial intention. *International Small Business Journal*, 31(6), 652–676. <https://doi.org/10.1177/0266242611432360>
3. Bird, B. (1988). Implementing Entrepreneurial Ideas: The Case for Intention. *The Academy of Management Review*, 13(3), 442–453. <https://doi.org/10.2307/258091>
4. Krueger, N. F., Brazeal, D. V. (1994). Entrepreneurial Potential and Potential Entrepreneurs. *Entrepreneurship Theory and Practice*, 18(3), 91–104. <https://doi.org/10.1177/104225879401800307>
5. Krueger, N. F., Carsrud, A. L. (1993). Entrepreneurial intentions: Applying the theory of planned behaviour. *Entrepreneurship and Regional Development*, 5(4), 315–330. <https://doi.org/10.1080/08985629300000020>
6. Shapero, A., Sokol, L. (1982). The Social Dimensions of Entrepreneurship. In: C. A. Kent, D. L. Sexton, & K. H. Vesper (Eds.). *Encyclopedia of Entrepreneurship*. Englewood Cliffs, NJ: Prentice-Hall, 72–90.
7. Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
8. Krueger, N. F., Brazeal, D. V. (1994). Entrepreneurial Potential and Potential Entrepreneurs. *Entrepreneurship Theory and Practice*, 18(3), 91–104. <https://doi.org/10.1177/104225879401800307>
9. Davidsson, P. (1995). Determinants of Entrepreneurial Intentions. RENT IX Workshop, Piacenza, Italy. URL: https://eprints.qut.edu.au/2076/1/RENT_IX.pdf (Last accessed: 06.01.2023).
10. Douglas, E. J., Shepherd, D. A. (2002). Self-Employment as a Career Choice: Attitudes, Entrepreneurial Intentions, and Utility Maximization. *Entrepreneurship Theory and Practice*, 26(3), 81–90. <https://doi.org/10.1177/104225870202600305>
11. Lüthje, C., Franke, N. (2003). The ‘making’ of an entrepreneur: testing a model of entrepreneurial intent among engineering students at MIT. *R&D Management*, 33, 135–147.
12. Sesen, H. (2013). Personality or environment? A comprehensive study on the entrepreneurial intentions of university students. *Education+Training*, 55(7), 624–640.
13. Saeed, S., Yousafzai, S. Y., Yani-De-Soriano, M., Muffatto, M. (2015). The Role of Perceived University Support in the Formation of Students’ Entrepreneurial Intention. *Journal of Small Business Management*, 53(4), 1127–1145. <https://doi.org/10.1111/jsbm.12090>
14. Peng, Z., Lu, G., Kang, H. (2013). Entrepreneurial intentions and its influencing factors: a survey of the university students in Xi’an China. *Creative Education*, 3(8), 95–100. <https://doi.org/10.4236/ce.2012.38B021>
15. Poblete, C., Amorós, J. E. (2013). University Support in the Development of Regional Entrepreneurial Activity: An Exploratory Study from Chile. *Investigaciones Regionales*, 26(26), 159–177.
16. Baroncelli, A., Landoni, M. (2017). Exploring differences in university support practices and the effects on spin-off companies in Boston. *International Journal of Entrepreneurship and Innovation Management*, 21(4–5), 366–394. <https://doi.org/10.1504/IJEIM.2017.085689>
17. Ljubotina, P., Vadjal, J. (2017). Succeeding a family business in a transition economy: Is this the best that can happen to me? *Kybernetes*, 46(8), 1366–1385. <https://doi.org/10.1108/K-06-2016-0148>
18. Overall, J., Gedeon, S. A., Valliere, D. (2018). What can universities do to promote entrepreneurial intent? An empirical investigation. *International Journal of Entrepreneurial Venturing*, 10(3), 312–332. <https://doi.org/10.1504/IJEV.2016.10006912>
19. Yordanova, D., Filipe, J. A., Pacheco Coelho, M. (2020). Technopreneurial Intentions among Bulgarian STEM Students: The Role of University. *Sustainability*, 12(16), 6455. <https://doi.org/10.3390/su12166455>
20. Meeralam, E. A., Adeinat, I. (2022). Understanding the role of universities in fostering female entrepreneurship in the emerging ecosystem. *Gender in Management*, 37(3), 388–404. <https://doi.org/10.1108/GM-02-2021-0041>
21. Official website GUESS. (Last accessed: 06.01.2023).
22. Yurko, I., Misiukevich, V., Balaban, Y. (2022). *The main trends and prospects of entrepreneurship development in Ukraine*. Poltava [in Ukrainian].
23. Siegel, F. A. (2008) *Practical Business Statistics*. Moscow [in Russian].
24. Rea, L., Parker, A. (2014). *Designing and Conducting Survey Research: A Comprehensive Guide*. John Wiley & Sons, Inc. Jossey-Bass, CA.
25. Greene, J. M., D’Oliveira, M. (1982). *Learning to Use Statistical Tests in Psychology* [in English].

26. Greene, J., D'Oliveira, M. (1999). *Learning to Use Statistical Tests in Psychology* (Open Guides to Psychology). Buckingham.
27. Saeed, S., Yousafzai, S. Y., Yani-De-Soriano, M., Muffatto, M. (2013). The role of perceived university support in the formation of students' entrepreneurial intention. *Journal of Small Business Management*, 53(4), 1127–1145. <https://doi.org/10.1111/jsbm.12090>
28. Schimperna, F., Nappo, F., Marsigalia, B. (2022). Student Entrepreneurship in Universities: The State-of-the-Art. *Administrative Sciences*, 12(1), 5. <https://doi.org/10.3390/admsci12010005>
29. Suparno, Saptono, A. (2018). Entrepreneurship Education and Its Influence on Financial Literacy and Entrepreneurship Skills in College. *Journal of Entrepreneurship Education*, 21(4). URL: <https://www.abacademies.org/articles/entrepreneurship-education-and-its-influence-on-financial-literacy-and-entrepreneurship-skills-in-college-7455.html> (Last accessed: 06.01.2023).
30. Baidi, Suyatno. (2018). Effect of entrepreneurship education, self-efficacy and need for achievement toward students' entrepreneurship intention: Case study in FEBI, Febi, Iain Surakarta, Indonesia. *Journal of Entrepreneurship Education*, 21(2). URL: <https://www.abacademies.org/articles/effect-of-entrepreneurship-education-self-efficacy-and-need-for-achievement-toward-students-entrepreneurship-intention-case-study-7100.html> (Last accessed: 06.01.2023).
31. Trivedi, R. (2016). Does university play significant role in shaping entrepreneurial intention? A cross-country comparative analysis. *Journal of Small Business and Enterprise Development*, 23(3), 790–811. <https://doi.org/10.1108/JSBED-10-2015-0149>
32. Grzhibovsky, A. M. (2008). Analysis of nominal data (independent observations). *Human ecology*, 6, 58–68. URL: <https://cyberleninka.ru/article/n/analiz-nominalnyh-dannyh-nezavisimye-nablyudeniya/viewer> (Last accessed: 06.01.2023). [in Russian].
33. Shikhalev, A. M. (2015). *Application of tables of mutual contingency: teaching aid*. Kazan University. <https://core.ac.uk/download/pdf/197367071.pdf> [in Russian].
34. Bosniuk, V. (2020). *Mathematical methods in psychology: a course of lectures*. National University of Civil Defense of Ukraine. URL: <http://repositc.nuczu.edu.ua/handle/123456789/11329> (Last accessed: 06.01.2023) [in Ukrainian].
35. Pauceanu, A., Alpenidze, O., Edu, T., Zaharia, R. (2018). What Determinants Influence Students to Start Their Own Business? Empirical Evidence from United Arab Emirates Universities. *Sustainability*, 11(1), 92. <https://doi.org/10.3390/su11010092>
36. Novikova, I. E., Zhylinska, O. I., Osetskyi, V. L., Bediukh, O. R. (2020). Strategic Approaches to Activating Academic Entrepreneurship in Modern Mega-Universities: Prospects for Ukraine. *Nauka innov.*, 16(6), 3–17. <https://doi.org/10.15407/scin16.06.003>

Received 21.07.2022

Revised 16.09.2022

Accepted 21.09.2022

Л.О. Лігоненко¹ (<https://orcid.org/0000-0001-5597-5487>),
І.М. Ретіна¹ (<https://orcid.org/0000-0001-9141-0117>),
О.І. Никифоруку² (<https://orcid.org/0000-0001-7376-3373>),
У.Б. Бережницька³ (<https://orcid.org/0000-0001-5354-8502>),
В.С. Мислюк¹ (<https://orcid.org/0000-0002-4941-6766>),
А.М. Овсієнко⁴ (<https://orcid.org/0000-0001-7475-4102>)

¹ Київський національний економічний університет ім. В. Гетьмана,
просп. Перемоги, 54/1, Київ, 03057, Україна,
+38044 371 61 52, documents@kneu.edu.ua

² Інститут економіки та прогнозування НАН України,
вул. Панаса Мирного, 26, Київ, 01011, Україна,
+38044 268 0909, gvm@ief.org.ua

³ Івано-Франківський національний технічний університет нафти і газу,
вул. Карпатська, 15, Івано-Франківськ, 76019, Україна,
+380 342 72 7144, bi_if@ukr.net,

⁴ ВНЗ Укоопспілки «Полтавський університет економіки і торгівлі»,
вул. Ковалю, 3, Полтава, 36014, Україна,
+380 53256 0673, commerce@puet.edu.ua

ПЕРСПЕКТИВИ РОЗВИТКУ ПІДПРИЄМНИЦЬКОЇ ДІЯЛЬНОСТІ: РОЛЬ УНІВЕРСИТЕТІВ

Вступ. Підприємницькі наміри молоді — це запорука прогресивного інноваційного розвитку та вирішення нагальних суспільних проблем. Особливо актуальним це є для України — молоді демократії, яка потерпає від зовнішньої агресії та потребує відновлення економіки.

Проблематика. Підприємництво — це не тільки знання й навички, а й спосіб мислення та поведінки. Важливу роль у цьому відіграють університети: формування світоглядного бачення студентів, генерування та апробація власних бізнес-ідей. Досвід та потенціал українських університетів в цій царині залишається недостатньо вивченим.

Мета. З'ясування ролі університету як предиктора формування підприємницьких намірів на прикладі України задля розробки рекомендацій та пропозицій щодо формування екосистеми підтримки підприємництва, зростання підприємницької активності молоді.

Матеріали й методи. Інформаційним матеріалом слугували результати опитування студентів у різних регіонах України на базі творчого розвитку методики міжнародного проєкту *GUESSS (Global University Entrepreneurial Spirit Students' Survey)*. Для обробки застосовано пакет програм *SPSS*, використано методи системного аналізу, гіпотетично-дедуктивний метод, аналіз таблиць спряженості, тісноти взаємозв'язків та ін.

Результати. Роль університетів у формуванні підприємницьких намірів в Україні є низькою, система підтримки підприємництва засвідчила свою слабкість і несформованість. Частковий вплив на рівень підприємницької готовності мають освітня та культурна складові, які рекомендовано зміцнювати. Фінансова та концептуальна складові потребують корекції інструментарію з урахуванням кращого світового досвіду.

Висновки. Стратегічним завданням є формування інституціонального середовища розвитку молодіжного та академічного підприємництва, поширення академічних бізнес-інкубаторів, студентських підприємницькоорієнтованих гуртків, проєктних груп, бізнес-клубів тощо.

Ключові слова: університет, предиктор, підтримка підприємництва, підприємницькі наміри, підприємницька готовність.