Ponomarenko Volodymir
D.Sc. (Economics), Professor,
Simon Kuznets Kharkiv National University of Economics
9-A Nauky Ave., Kharkiv, 61166, Ukraine
volodymyr.ponomarenko@hneu.net
ORCID ID: http://orcid.org/0000-0002-9702-8469

UDC: 334.012.6

Gontareva Irina
D.Sc. (Economics), Professor,
Simon Kuznets Kharkiv National University of Economics
9-A Nauky Ave., Kharkiv, 61166, Ukraine
Iryna.Gontareva@m.hneu.edu.ua
ORCID ID: http://orcid.org/0000-0002-2242-378X

The system of causal connections between entrepreneurial activity and economic development

Abstract. *Introduction.* Revealing, studying and applying the common factors of causal connections between changes of entrepreneurial activity and the level of states' and regions' socio-economic development form essential conditions for sustainable outcome. The complexity of analysing the above connections as well as synthesising well-grounded managerial decisions based on them are primarily embedded in the inhomogeneity of internal and external entrepreneurship environment. *The purpose* of the article is to define the peculiarities of the Ukrainian entrepreneurial activity causal field and provide comparative analysis with the other countries based at the Global Entrepreneurship Monitor (GEM) methodology and findings (since it has not covered Ukraine). *Methods.* To meet the purpose, economic analysis of statistical data, synthesis and expert survey have been used. *Results.* As the result of data processing, the actual pending status characteristics have been obtained forming the elements of the causal field of entrepreneurship. The GEM studies' comparative analysis allows us forecasting such trends in Ukraine, as the growth of the number of micro-enterprises as well as entrepreneurs, engaged in self-employment. However, a certain part of entrepreneurial activity goes to «shadow»; the number of innovative enterprises will be cut down because of the reduction of both state and private funding; entrepreneurs are expected to reallocate their activities towards the business with fast funds turnover. *Conclusion.* To modify the existing negative trends in Ukrainian business activity, in the system of causal connections should be strengthened the following sectors: start-up funding; support of business incubator for the businessmen-beginners; nationwide assessment and monitoring of causal connections of Ukrainian entrepreneurial activity using the GEM methodology; increase of educational programs for entrepreneurs supported by leading Ukrainian universities.
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Пономаренко В. С.
доктор економічних наук, професор, ректор, Харківський національний економічний університет імені Семена Кузнеця
Гонтарева І. В.
доктор економічних наук, професор, завідувач кафедри підприємницької діяльності,
Харківський національний економічний університет імені Семена Кузнеця
Система каузальних зв'язків між формами підприємницької діяльності й типами економічного розвитку
Анотація. Ідентифікація, вивчення та застосування закономірностей дії причинно-наслідкових зв'язків між змінами підприємницької активності й темпами соціально-економічного розвитку країн і регіонів є обов'язковими умовами стійкого позитивного результату. Метою статті є виявлення характеристик каузального поля підприємницької активності України та їх порівняльний аналіз із аналогічними характеристиками, отриманими за методикою Глобального моніторингу підприємництва (GEM) в інших країнах. З метою зміни негативних тенденцій у підприємницькій діяльності України в системі каузальних зв'язків слід збільшити значення таких складових, як обсяг фінансування стартапів у сферах підприємницької діяльності, які є першочерговими для держави (зокрема, «зелена» енергетика); надання підтримки бізнес-інкубаторів для підприємців-початківців; організація на державному рівні оцінки й моніторингу підприємницької активності в Україні за методикою GEM; збільшення кількості освітніх програм для підприємців при провідних університетах України.
Ключові слова: каузальне поле; підприємницька активність; економічний розвиток країни.

Пономаренко В. С.
доктор экономических наук, профессор, ректор,
Харьковский национальный экономический университет имени Семена Кузнеца
Гонтарева И. В.
доктор экономических наук, профессор, заведующая кафедрой предпринимательской деятельности,
Харьковский национальный экономический университет имени Семена Кузнеца
Система каузальных связей между формами предпринимательской деятельности и типами экономического развития
Аннотация. Идентификация, изучение и применение закономерностей действия причинно-следственных связей между изменениями предпринимательской активности и темпами социально-экономического развития стран и регионов являются обязательными условиями получения устойчивого результата. Целью статьи является выявление характеристик каузального поля предпринимательской активности Украины и их сравнительный анализ с аналогичными характеристиками, полученными в соответствии с методикой Глобального мониторинга предпринимательства (GEM) в других странах. С целью изменения негативных тенденций в предпринимательской деятельности Украины в системе каузальных связей следует увеличить объем таких составляющих, как финансирование стартапов в сферах предпринимательской деятельности, которые являются первоочередными для государства (в частности, «зеленая» энергетика); оказание поддержки бизнес-инкубаторами для начинающих предпринимателей; организация на государственном уровне оценки и мониторинга предпринимательской активности в Украине по методике GEM; увеличение количества образовательных программ для предпринимателей при ведущих университетах Украины.
Ключевые слова: каузальное поле; предпринимательская активность; экономическое развитие страны.

1. Introduction and Brief Literature Review

Interrelation between changes in entrepreneurial activity and the states' and regions' the socio-economic development is in the focus of both scientists and state regulatory authorities' attention [1-3]. Revealing, studying and applying the common factors of causal connections between these two processes are essential conditions to achieve sustainable development. The complexity of analyzing the above connections as well as synthesizing well-grounded managerial decisions based on them are primarily embedded in the inhomogeneity of internal and external entrepreneurship environment (Deakins & Freel, 2012; Davidsson, 2016) [4-5]. Thereby, one and the same regulatory effect can lead to the opposite outcomes in different regions, industries or types of entrepreneurial activity. To eliminate mistakes, one should consider not only separate causal connections but the entire set of entrepreneurship causal field characteristics. George L. Mackie (1980) who was the first to apply the term of causal field viewed it as a set of causes and conditions of necessary but insufficient to gain the ultimate effect. It is the formation of space-time connections within the causal field which is both urgent and essential condition that stipulates the emergence of the effect [6].

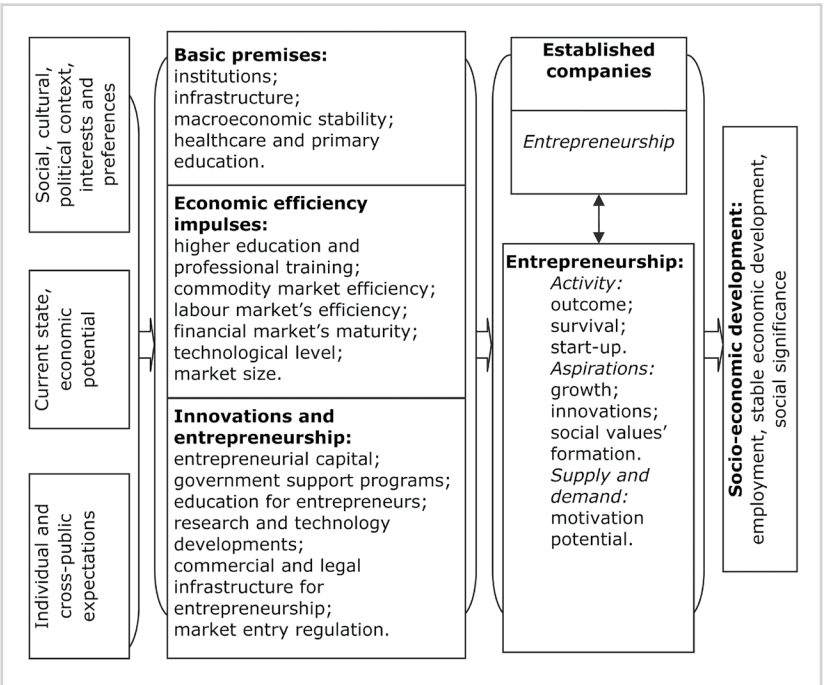

Fig. 1: **A conceptual entrepreneurship and socio-economic development correlation model**

Source: Compiled with the authors' modifications and additions based on the GEM methodology [10]

The authors believe that a synergic or controlled system of direct and indirect, positive and negative, inertial and cumulative, determinative and probabilistic causal connections of the socio-economic development and entrepreneurial activity is bound to be formed. The direction of the corresponding system is determined by Janos Kornai's economic development paradigm (Kornai, 2011), which implies integration of truly heterogeneous structuring elements, such as internal and external stakeholders with their interests, expectations and preferences; alongside with economic, financial, informational and non-corporeal assets; social, institutional, economic and financial aspects of activity infrastructure, etc. [7].

The first stage of structuring the connections of socio-economic development and entrepreneurial activity assumes revealing, and examining quantitative and qualitative characteristics of the causal field of entrepreneurial activity components. The Global Entrepreneurship Monitor (GEM) has developed the most complete and well-known research methodology of the kind [8-9].

2. Since the GEM studies has not covered Ukraine, **the aim of this article** is to define the Ukrainian causal field of entrepreneurial activity characteristics and provide a comparative analysis of similar characteristics of monitored by the GEM in other countries. Statistically open source data and the results of own questionnaires distributed among entrepreneurs to define entrepreneurship characteristics were applied by the authors.

3. Results

The conceptual model of the entrepreneurship causal field according to the GEM methodology is represented as in Figure 1.

This conceptual model (Figure1) contains a number of modifications and additions in connection to the standard scheme used in the GEM methodology [10]. It is explained by the necessity to adapt the model to the notion of causal field. According to J. Mackie research (1980), this field forms causes and conditions necessary for the result's emergence. The difference between them may be illustrated in the following way: in order to hammer a nail into the wall, a hammer, a nail and the performer of the action (the subject, the tool and the live labour) are required. These are the prerequisites, and the reason for hammering a nail into the wall is the need to hang on a picture. Proceeding from the need to turn a scheme of entrepreneurial activity emergence into a conceptual model of productive activity's causal field, entrepreneurs' interests, expectations and priorities were added.

Entrepreneurship as a form of socio-economic activity presupposes the search of possibilities to meet individual and collective needs and interests. Interests come from values of a certain cultural environment and are motivated or limited by public demands and the government policy [11-12]. Upon comparing the needs and opportunities, the entrepreneur forecasts the expected probability of achieving the goal and solving the problem, taking into account the risk of possible losses from one's activity or inertness. In a number of socio-economic situations, the freedom of choice is limited by the absence of comparable alternatives. Thus, a high unemployment level and heavy creative work regulations cause growth of bound entrepreneurial activity and involuntary self-employment. In the course of activity, certain mutual expectations, demands and agreements emerge between the stakeholders. For instance, some of the entrepreneurs' expectations have been presented in the Business Expectations of Ukrainian Enterprises report by the national Bank of Ukraine (2017) [13] (Figure 2).

Figure 3 shows the results of the author's surveys of entrepreneurs' individual perception of business environment.

The research data presented in Figure 2 and Figure 3 enable to assume the following trends of entrepreneurial activity changes in Ukraine:

- growth of self-employed microentrepreneurs amount and sole proprietors, however, part of the entrepreneurial activity becomes «shady»;
- reduction of the amount of innovative enterprises due to the reduction of the sources of financing both on the part of the state and the large businesses;
- possible shift of the entrepreneurs according to the types of activity towards the activity with rapid funds turnover, namely, commerce, consumer services and food production.

The GEM methodology is based on the classification accepted in the Global Competitiveness Report [14] to supply qualitative description of different countries' current economic condition. According to this methodology, countries are subdivided into the following groups: factor-driven economies, efficiency-driven economies, and innovation-driven economies.

Factor-driven economies, in particular, include Vietnam, India, Nigeria, Kazakhstan, Ukraine, and the Republic of Congo. China and Latvia belong to efficiency-driven economies, while Australia, the United Arab Emirates, France, Germany,

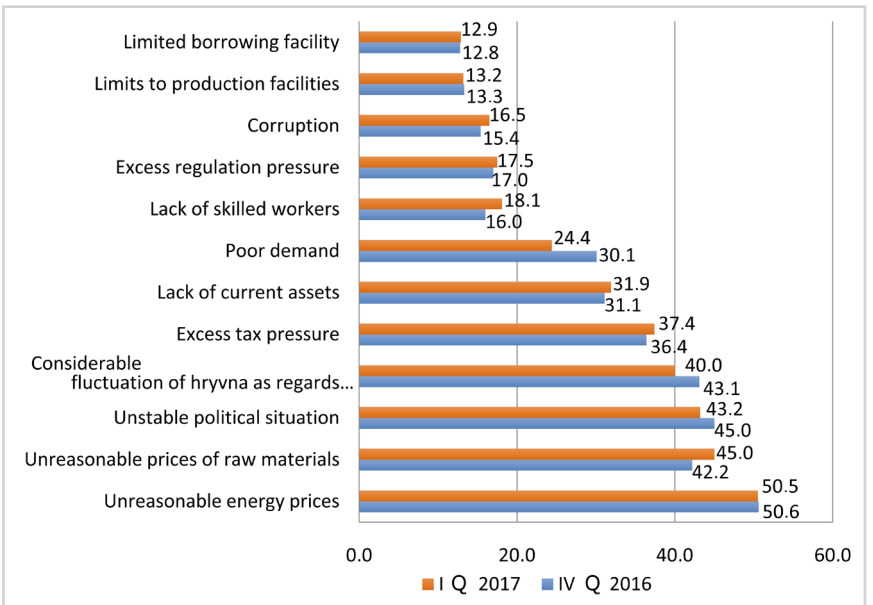

Fig. 2: **Respondents estimate the factors limiting entrepreneurial activity in Ukraine**
Source: [13]

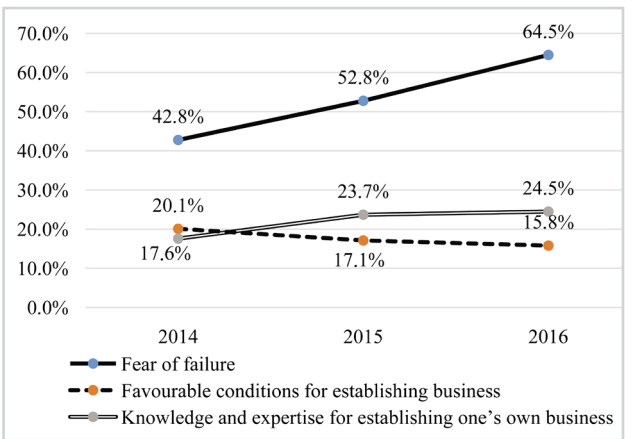

Fig. 3: **Dynamics of individual characteristics of entrepreneurship perception in Ukraine**
Source: Authors' expert research

Greece, Sweden, Ireland, France, Great Britain, the USA can be referred to innovation-driven ones. These conclusions are drawn from the levels of GDP per capita in different countries (Figure 4).

The entrepreneurial process (life-cycle) includes the following stages:

the stage of potential entrepreneurs which includes individuals who see opportunities for setting up their own business in the next 3 years and are sure of their knowledge necessary to manage their own business and aim to move to the early stage of entrepreneurial process;

the stage of start-up entrepreneurs which includes individuals who have undertaken active actions to create their own business for the previous year or they have had their business at least for three months, however, salaries and other types of remuneration have not been paid yet;

the stage of new business which includes individuals who are the owners of newly established businesses (from 3 months to 3 years and a half);

the stage of established business which includes individuals who have been owners of businesses for more than 3 and a half years.

Business closing down may also be regarded as one of the entrepreneurial process stages since the established entrepreneurs can act as advisers and consult other entrepreneurs or they (the established entrepreneurs) can start a new business.

With the account taken of different conditions affecting entrepreneurship, it is impossible to conclude that one stage will inevitably replace another. For example, if a large number of potential entrepreneurs are registered in the country, it does not mean that they will necessarily create new companies. The level of entrepreneurial activity at each stage of the life-cycle for 2016 (Table 1) is defined as a percentage of the population aged 18 to 64 who have ambitions corresponding to the established stage of entrepreneurship.

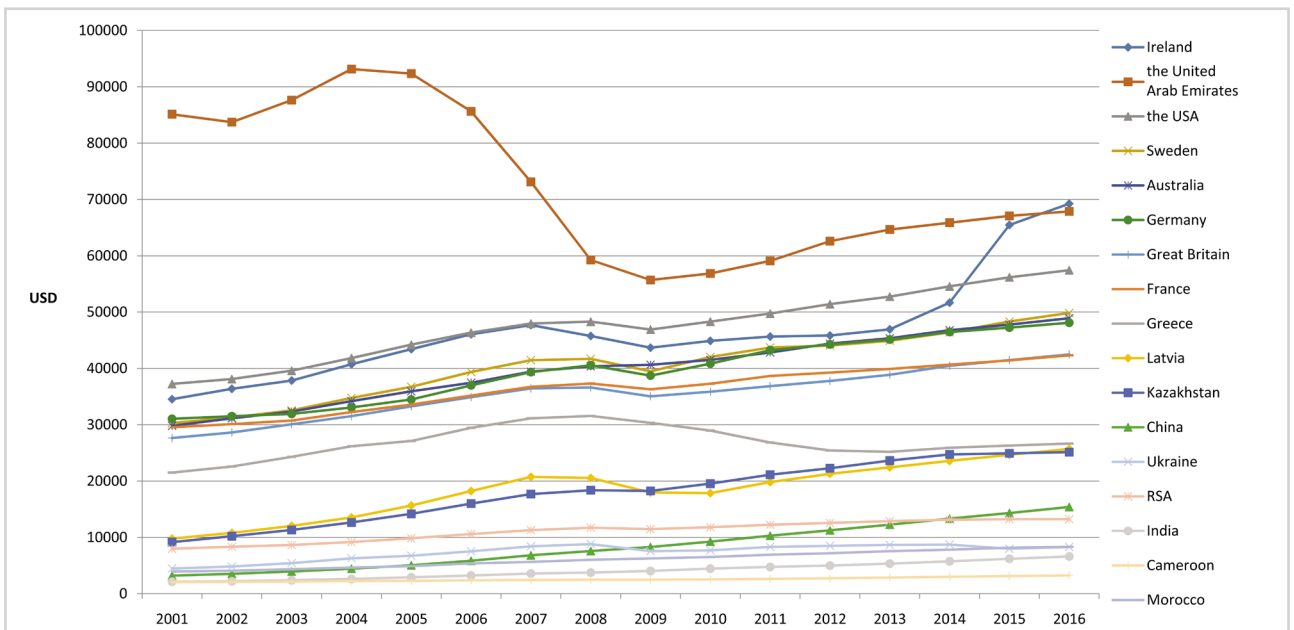

Fig. 4: **Per capita GDP levels countrywise**
Source: [15]

There is the discrepancy between the intentions to create business and their realisation as indicated in Table 1. It is due to the complementarity of large and small businesses development in each country. Thus, in the developed countries, small and medium-sized businesses account for 70-80% of GDP, and large business accounts for 20-30% respectively. In the United States, large companies account for 38% of GDP, while in China - for 40%, 44% in France, 43.7% in Ukraine, 50% in Britain, 60% in the UAE, and only 20% in India (OECD, 2002) [2].

The following regulatory impacts on transition to innovation-driven economy based on the experience of developed countries can be identified:

- programs of state support, such as legislative, tax, fiscal as well as government contracts participation;
- specialised education of entrepreneurs according to types and areas of activity;
- scientific and technological development and promotion of collaboration in cooperation with research institutes and universities;
- creation of market and social infrastructure of entrepreneurship;
- preferential lending of entrepreneurs;
- protection against criminality and corruption.

Tab. 1: **The level of entrepreneurial activity of population (18-64 y.o.) at each stage of the entrepreneurial life-cycle in 2016, %**

№	Countries	Potential entrepreneurs	The level of entrepreneurial activity of start-up entrepreneurs	The level of entrepreneurial activity of newly established businesses owners	The index of early entrepreneurial activity (TEA)	The level of entrepreneurial activity of established entrepreneurs	The level of closing a business
1	Ireland	56.3	7.0	4.4	10.9	4.4	10.1
2	the United Arab Emirates	75.1	1.3	4.4	5.7	1.9	20.7
3	the USA	63.7	8.9	4.0	12.6	9.2	7.7
4	Sweden	53.6	5.8	1.8	7.6	4.5	10.2
5	Australia	54.2	8.8	6.2	14.6	11.3	4.4
6	Germany	51.8	2.9	1.7	4.6	7.0	4.7
7	Great Britain	58.8	5.2	3.7	8.8	6.1	6.3
8	France	57.1	3.1	2.3	5.3	4.3	8.5
9	Greece	63.6	3.2	2.6	5.7	14.1	2.8
10	Latvia	55.2	9.7	4.9	14.2	9.5	7.2
11	Kazakhstan	74.3	6.9	3.4	10.2	2.4	3.4
12	China	70.3	4.5	6.1	10.3	7.5	6.4
13	**Ukraine**	55.0	3.0	4.0	5.0	5.0	8.0
14	RSA	72.6	3.9	3.3	6.9	2.5	10.0
15	India	44.4	3.9	6.8	10.6	4.6	26.4
16	Cameroon	57.3	17.8	10.9	27.6	15.2	14.9
17	Morocco	79.3	1.3	4.3	5.6	7.5	12.0

Source: Formed based on [16], with the similar survey focused on Ukraine completed by the authors

All in all, above-mentioned regulatory impacts will contribute to the creation of new companies and learning about favourable entrepreneurial climate, thereby, affecting economic growth and employment level.

4. Conclusions

As a result of the available information processing and its comparison with the GEM research, one can predict some increase in quantity of microentrepreneurs and self-employed entrepreneurs in Ukraine, in spite of the fact that a certain part of the entrepreneurial activity goes into «shadow»; reduction of amount of innovative enterprises as the source of financing both from the state and large business will decrease; entrepreneurs will move the activities towards spheres with fast turnover, such as commerce, consumer services and food production.

The main recommendations for altering negative trends in business field are:

1. Increase of start-up financing in the area of entrepreneurial activity, which is prior to the state, including alternative energy sources.
2. Increase of education programs for entrepreneurs at Ukrainian leading universities.
3. Business incubators for start-up entrepreneurs support enhancement.
4. Organising a state level assessment and monitoring of entrepreneurial activity in Ukraine, using the GEM methodology.

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