

Entrepreneurial activity and ecosystem in Hungary

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Abstract- The article gives an introduction into the world of entrepreneurship. The author analyses the changes in entrepreneurial activity in Hungary in the last two decades, mainly of late years and provides an assessment of the impacts of COVID-19 on level of entrepreneurship. Hungary's entrepreneurial activity is investigated comparing it to European countries. The article construes the local entrepreneurial ecosystem with international outlook. A further research will analyse the entrepreneurial attitudes and ambitions of students in different aspects.

Keywords—*entrepreneurship, entrepreneurial ecosystem, entrepreneurial activity, start-up*

I. INTRODUCTION

The author introduces us into the world of entrepreneurship in Hungary with analysing the Hungarian entrepreneurial ecosystem and attitudes in international comparison. The changes of the late years are construed in the Hungarian entrepreneurial activity and attitudes and the consequences and conclusion are drawn from the analysis. The article shows further research direction: into analysis of the entrepreneurial attitudes and inclination of students and into the education of entrepreneurial skills.

The systematic literature review methodology is applied during this research (Fig.1.). The methodology is:

- searching the available scientific bulletin and publication,
- monitoring the quality of the paper,
- choosing the acceptable ones,
- comparing the research results objectively,
- and drawing and formulating the results in publication unbiasedly.

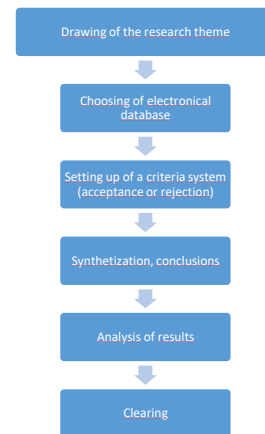


Fig. 1. Systematic literature review methodology

II. ANALYSIS OF ENTREPRENEURIAL ATTITUDES AND ACTIVITY

A. Measures of entrepreneurship

A lot of entrepreneurship-indexes have been created over the last two decades measuring the performance of the economy. The most important index is the connection between economic growth and entrepreneurship. Carey and Turik [8] defined four measure-indexes for entrepreneurship:

1. turbulence (the sum of entries and exit)
2. change of the size distribution of firms
3. number of market participants
4. self-employment.

The self-employment attitude researches were introduced by the OECD in the late 1990s. In 2006 OECD brought a steering group into being to initiate an entrepreneurship indicator. The generated entrepreneurship indicator includes [1]:

- *determinants of entrepreneurship*: regulation, R&D, entrepreneurial capabilities, culture, access to finance and market conditions,
- *entrepreneurial performance*: firms, employment, wealth,
- *impact of entrepreneurship*: employment, economic growth, poverty reduction.

Defining of the indicators were relatively easy but to compare cross-country data is more difficult.

Eurostat regularly gives reports on entry and exit statistics, business start-up and other entrepreneurship related data. These sources give information for policy makers on the quantity of entrepreneurship rather than its quality. These

data and measure indexes do not take into account the differences in environmental factors, the different efficiency and the level of institutional setup. In developed market economies the small and medium-sized enterprise sector is given more attention because it has been recognised that it plays a significant role in domestic production and in the mitigation of the unemployment problem due to its ability to soak up the workforce, and so due to its economic power it can potentially play a stabilising role in the economy [6]. In 1999 the Global Entrepreneurship Monitor (GEM) defined an entrepreneurship measure to compare entrepreneurial activity across countries.

B. GEM report

The analysis of entrepreneurial attitudes and activity is based on the GEM (Global Entrepreneurship Monitor) reports. This monitor is an international entrepreneurial research which has been taking for two decades and more than one hundred countries has been taking part in it. The research has got 4 primary purposes:

- analysis and comparison of the levels of attitudes, activities, capabilities and aspiration in different countries
- analysis of the entrepreneurial activity's impact on economical growth
- factor analysis of promotional and impedimental elements
- identification of incentive and stimulating economic policy tools.

The analysis of entrepreneurial activity is not only an indirect purpose having an important role in generating value-added and new workplaces but also conduces to the growth of economy and society. The extent of positive impacts depends on the entrepreneurial ecosystem (Fig. 2).

Entrepreneurship			
Attitudes	Activity	Capabilities	Aspiration

Fig. 2. Factors of an entrepreneurship impacting on entrepreneurial ecosystem

C. Economic growth according to GEM

GEM measures the levels of entrepreneurial activity since 1999 and 120 economies have been taking part in the research. GEM judges the economic growth of different countries based on classification of WEF (World Economic Forum) and determines different improvement goals according to the maturity levels [10].

- **Factor-driven economies** (for example: Vietnam, Burkina) are least developed. The most impulsive force of these economies are the natural resources and low-qualified workforce. Workforce is mainly applied in agriculture and raw material extracting industrial sector.
- **Efficiency-driven economies** (for example: China, Egypt) are increasingly competitive, increased product quality and more-efficient production

processes, technological adaption and the increased market-size are typical characteristics.

- **Innovation-driven economies** (for example: Singapore, Sweden) are most developed. More knowledge-intensive sectors and the service sector are dominant. Business development and innovation support are necessary in these economies to growth.

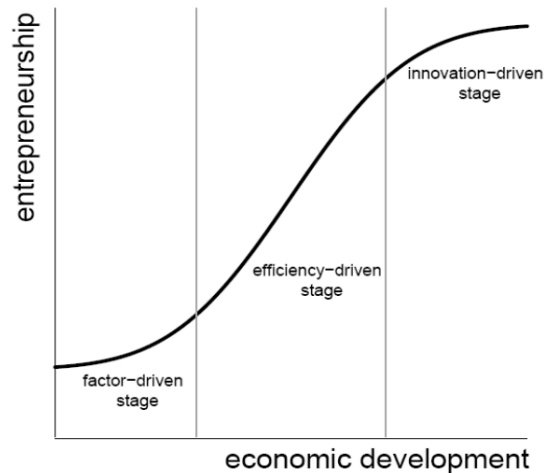


Fig. 3. Relationship of entrepreneurship and economic development [1]

Between entrepreneurship and economic development there is an S-shaped relationship according to Porter [7] (Fig.3.). For example if we move from the efficiency-driven stage to the innovation-driven stage entrepreneurship plays a more important role but it increases at a decreasing rate. Innovation is essential for economic development and innovation is generated by entrepreneurs.

TEA (Total Early-stage Entrepreneurial Activity) index (see explanation of TEA in chapter III) was measured in 2005 in terms of economic development. An U-shape phenomenon was figured out showing the relationship between the entrepreneurship and the development of a country [8]. Economies at a lower level of development have higher rate necessity entrepreneurs. The necessity-driven entrepreneurial activity decreases as economies move from the factor-driven stage to the efficiency-driven stage. In the innovation driven stage entrepreneurial activity increases and there is also a high rate of startups.

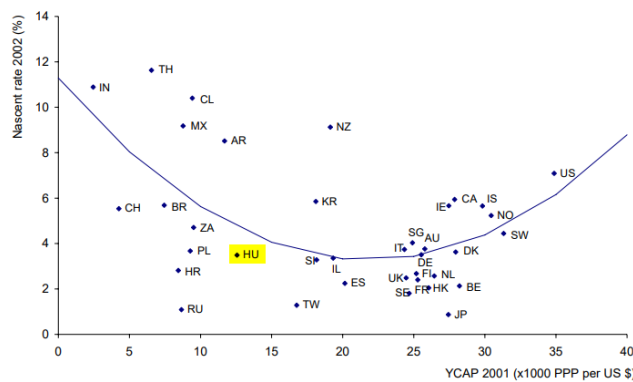


Fig. 4. Nascent entrepreneurship versus per capita income, the U-curve [8]

A low rate of entrepreneurship may also be a consequence of low economic growth levels, which also reflect higher levels of unemployment. Entrepreneurial opportunities are not just the result of the push effect of (the threat of) unemployment but also of the pull effect produced by a thriving economy as well as by entrepreneurial activities in the past. There is a strong positive correlation between entrepreneurship and economic growth [8] (Fig.4.).

The framework of GEM research is based on three data sources:

- on APS (Adult Population Survey) queried 2000 adults in each country taking part in the research. It is a standardized, representative primary research according to age and gender. APS surveys the attitudes, behaviours and expectations of individuals. APS informs on hidden economy, give information about unrecorded economic activities and jobs, about the individual decisions whether to start or continue a business.
- on NES (National Expert Survey): half structured interviews are made with at least 36 entrepreneurship-experts which provides an opportunity to assess the entrepreneurial context. This context influences the individual decision whether to start a new business and decisions to sustain or grow the business. The entrepreneurial context means access to finance, the education and skills of the population, and social support to entrepreneurship, the extent of bureaucracy and taxes and the development of infrastructure. The environment of entrepreneurship has a substantial impact on the likelihood to start and to grow a business.
- on national statistical data, official government statistics, such as business registrations, OECD reports and the other international data resources. National reports provide information on the annual research results.

III. GEM METHODOLOGY

The national environment of entrepreneurship is assessed by nine “Entrepreneurial Framework Conditions” (Fig. 5.). These conditions incorporate the ease of access to finance to social support for entrepreneurship, the access to

entrepreneurial education and the availability and cost of essential business services. The conditions are assessed in the NES by national experts. Figure 5. shows the GEM Conceptual Framework: the relationship between entrepreneurship and its local environment. The social, cultural, political and economic environment (entrepreneurial ecosystem) directly and indirectly influences entrepreneurship. The jobs, value-added and incomes generate entrepreneurial activity. The reverse is also true: if entrepreneurship of a country operates successfully that stimulates economic development, adds new value and creates jobs. The economy, politics and society have a profound impact on education, which basically determines entrepreneurship and the willingness of becoming an entrepreneur. At the same time, however, skills and competences also count.

Several EU-surveys show that 15-20% of secondary school students formerly involved in mini company programmes will establish an enterprise later. Students involved in entrepreneurial education will have developed business knowledge and sense, which means improving their basic skills and attitude including creativity, initiative, endurance, teamwork, understanding risks and developing a sense of responsibility. This is the entrepreneurial mindset that will make action from ideas and significantly improve employability [4].

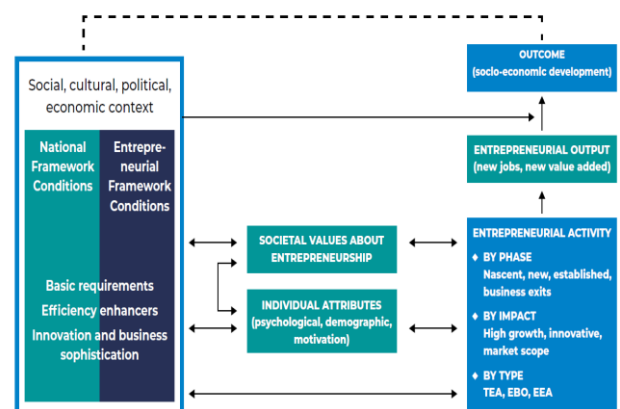


Fig. 5. GEM Conceptual Framework (Source: Global Entrepreneurship Monitor 2020/2021 Global Report)

There are a lot of different notions for entrepreneurship in the literature. Entrepreneurship according to GEM methodology is only the active behaviour, so the activity of someone who is committed to start or run a business. This methodology does not count in the notion of entrepreneurship recognizing a new opportunity for a new start-up, or thinking about a new business.

Figure 6. demonstrates the indicators of GEM entrepreneurship according to the periods of an enterprise, from the conception to an established business. One of the GEM indicator is the *Total early-stage Entrepreneurial Activity (TEA)*. This is the percentage of adults who start or manage a new business (nascent entrepreneurs) and the new business owner (baby businesses – aged less than 3,5 years). Potential entrepreneur who recognize opportunities for a new business and intend to start a new business is not involved in

TEA. There is another important GEM indicator: the level of *Established Business Ownership (EBO)*. This is the percentage of adults who own and manage an established business (where wages/salaries are paid for 42 months or more). Figure 3.2 shows that new or established business owner can exit the business at different stages.

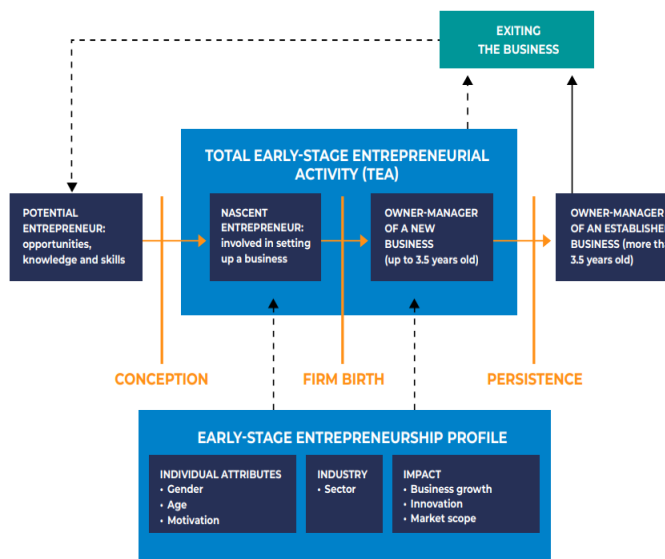


Fig.6. Entrepreneurial stages and GEM entrepreneurship indicators (Source: Global Entrepreneurship Monitor 2020/2021 Global Report)

IV. ENTREPRENEURIAL ECOSYSTEM AND ATTITUDES IN HUNGARY

Hungarian adults aged 18-64 were questioned in the GEM research and the results shows that to have an entrepreneurship is attractive however Hungarian adults are less willing to start a new business. The reason of that is the lack of experience and knowledge. Only 36% of Hungarian adults feel to have the abilities and knowledge to start and run a business (GEM Report 2020/2021). It means that business knowledge should be educated.

The entrepreneurial activity is higher among the men, among the age of 25-44 and among adults with higher qualification. The proportion of adults planning to start a business is lower than the average of countries taking part in the GEM research.

The strongest motivation to start a business is the own livelihood in Hungary. The innovation activity of Hungarian entrepreneurs is low according to GEM results. The major part of nascent entrepreneurs and new business owners (Total early-stage Entrepreneurial Activity) distributes, trades with generally known products and services and use established technologies (more than three quarters). The customers of Hungarian entrepreneurs are from local region and not abroad.

The Hungarian entrepreneurial ecosystem can be listed into the lower middle segment of European economies according to the NECI Index (4,5), however in relation to Middle-East Europe Hungary is in a good position considering entrepreneurial ecosystem. According to the results the entrepreneurial education is unsatisfactory. The market openness, the dynamics of the market, the government support

policy, and the R&D transfer are judged in disadvantageous situation. The key factor in the development of the entrepreneurial activity is strengthening of the entrepreneurial training, the increase of entrepreneurial education on different educational levels. The third of the Hungarian adult population think that there are good opportunities to start a new business in Hungary (GEM Report 2021/2022)

V. IMPACT OF THE COVID-19 ON HOUSHOLD INCOME

More than 130.000 individuals have participated in APS interviews inquired about the entrepreneurial impacts of Covid.-19 in 2020.

Level A >\$40,000	Level B >\$20,000-<\$40,000	Level C <\$20,000
Canada	Belarus	Brazil
Finland	Chile	Colombia
France	Croatia	Dominican Republic
Germany	Cyprus	Egypt
Ireland	Greece	Guatemala
Israel	Hungary	India
Italy	Kazakhstan	Iran
Japan	Latvia	Jamaica
Luxembourg	Lithuania	Mexico
Netherlands	Oman	Morocco
Norway	Panama	South Africa
Qatar	Poland	Sudan
Republic of Korea	Romania	
Saudi Arabia	Russian Federation	
Sweden	Slovak Republic	
Switzerland	Slovenia	
United Arab Emirates	Spain	
United Kingdom	Turkey	
United States	Uruguay	

Fig. 7. Economies in GEM (Source: Global Entrepreneurship Monitor 2020/2021 Global Report)

Economies were categorized into levels A, B and C (Fig. 7.).

- Level A is GDP per capita of more than \$40,000 (high income economies),
- Level B is a GDP per capita of between \$20,000 and \$40,000 (middle income economies), and
- Level C is GDP per capita of less than \$20,000 (low income economies).

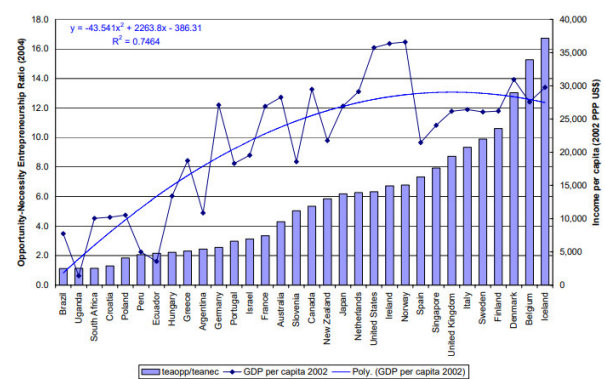


Fig. 8. Opportunity-Necessity Entrepreneurship Ratio and Income per capita (Source: Global Entrepreneurship Monitor 2004 Global Report)

Figure 8. shows the relationship between the opportunity-necessity entrepreneurship ratio and country income: there is a positive relationship between income level and the entrepreneurship ratio. The higher a country's per capita income, the more entrepreneurship is motivated by

recognizing an economic opportunity instead of necessity. As visible on Figure 8 Hungary is in the lower-middle segment of the analysed countries by GEM that means that Hungarian entrepreneurs are motivated from necessity instead of recognition of a business opportunity.

According to the results of the research in 2020/2021 Covid had a great negative impact on the income of households and mainly on households in the poorest financial situation. There were a deep fall in the income of poorer households and in the high-income economies There were the lowest proportions of interviewed individuals who reported that their household income decreased strongly. Hungary is among the middle level income economies so there was a great fall in household incomes as the impact of Covid-19 (Fig. 9.).

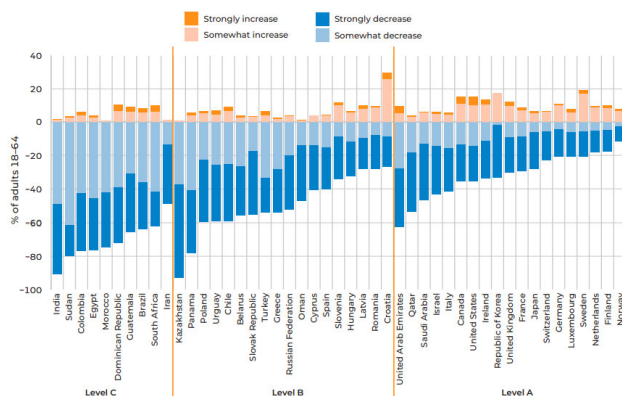


Fig. 9. The impact of COVID-19 on household income (Source: Global Entrepreneurship Monitor 2020/2021 Global Report)

The impact of Covid-19 on household incomes is much more lower in high income economies because of the higher economic stimulus packages.

Attitudes and perceptions influence on the level of the entrepreneurship. Entrepreneurial attitudes and perceptions can vary across the different countries and regions. Successful entrepreneurs can play an important role in a region because their behaviour strongly influence the decisions of individuals whether to start a new business. Covid-19 made starting a new business more difficult.

VI. CONCLUSION

The socio-economic development of a nation is dependent on knowledge, innovation, and entrepreneurship to a great extent. The extent of positive impact on economic growth depends on the factors of entrepreneurial ecosystem: attitudes, activities, capabilities, aspiration. The Hungarian entrepreneurial ecosystem can be listed into the lower middle segment of European economies according to the NECI Index and GEM Reports but in relation to Middle-East Europe Hungary is in a good position considering entrepreneurial ecosystem.

The entrepreneurial ecosystem influences entrepreneurs: the jobs, value-added and incomes generate entrepreneurial activity. The reverse is also true: if entrepreneurs of a country thrive that encourages economic development, adds new value and creates jobs. The society and economy have a great impact on education, which

basically determines entrepreneurship and the willingness of becoming an entrepreneur.

Covid had a negative impact on the income of households and mainly on households in the poorest financial situation. Since the COVID-19 innovation has become more important. One of its initiatives is Global Innovators, a community of start-ups and scale-ups focused on technological and business model innovations. Education of entrepreneurial knowledge play a very important role, moreover there is a positive relationship between post-secondary education and high start-up skills. The educated potential entrepreneurs can cope with start-up difficulties better than non-educated people.

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