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INNOVATIVE STARTUPS AND LOCAL DEVELOPMENT - THE CASE OF THE NORTH-WEST REGION OF ROMANIA

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Abstract

This article analyses the role and importance of new startups, especially innovative ones, in the regional context. What is more, we aim to assess the impact of measures of local government level, meant to improve the business environment. In practical terms, we have addressed the situation of the startup sector in a developing region of Romania, namely the North-West Region, and, in two important cities located in this area - Cluj-Napoca and Oradea. The theoretical part has the task of discussing the main theories and contributions regarding aspects of the business environment and future opportunities that shape the creation of startups and how they will develop. At the same time, the theoretical part deals with finding and analyzing the factors that influence startup creation. Based on the theoretical foundations, a comparison between two selected areas has been made numerically (using quantitative comparison), and from the perspective of the future impact that innovative, fast-growth-oriented startups can have on the economic and social dynamization of the cities and region in which they operate. Finally, we have analyzed the extent to which the development of this sector can influence and support the creation of a dynamic entrepreneurial ecosystem, a solid infrastructure, that supports medium and long-term economic growth in these areas.

Keywords: *SMEs, startup, regional strategy, entrepreneurial ecosystem*

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1 INTRODUCTION

Someone may think that success will be guaranteed by applying a simple formula when launching a business. As per an article in Harvard Business Review, to launch a business (both classical enterprises and startups), one must "write a business plan, pitch it to investors, assemble a team, introduce a product, and start selling as hard as you can" (Blank, 2013). Given these modern times that we live in, such an approach might not be considered suitable for forward-thinking and fast-moving startups. Even so, innovation, in terms of business models, does not, and should not, refer only to novel business models (created from scratch). Actively seeking ways in which already existing models can be improved and developed in terms of innovation should constantly be on the agenda of every company, be it classical brick-and-mortar business ventures or startups (IBM Global Business Services, 2008). We are not referring here to online businesses only. One should not consider a startup as existing only online. Depending on the sector in which they would like to be active, some startups should have both a physical manifestation of their activity and an online presence.

Startups are affected by both internal and external factors. Following the same logic, we can conclude that business models have both intrinsic (internal) and extrinsic (external) facets/values. While the internal structure sets norms, actions, and rules, the external aspect deals with how the new company will harmonize with external factors and forces (Casadesus-Masanell & Heilbron, 2015). Though norming the main activity is vital, it should not occur at the expense of creativity and innovation. This business model cannot and should not be used to diminish or decrease innovation-related returns. The business model can be based on innovation and should be used as a driver for creativity development and enhancement.

There is no clear academic consensus concerning the business model in terms of its functions, scope, and limits. Some authors consider that a "business model is a framework for making money. It is a set of activities that a company performs, the way how it performs them, and when it performs them to offer benefits to its customers. They also want to make a profit (Affuah, 2003). Other authors consider it a formula of profit (where learning and business systems meet) (Baden-Fuller & Morgan, 2010).

The previous definitions consider the meanings and aspects of a business model from an economic standpoint. However, it should be noted that a mere economic perspective does not justify this concept. The business model should also be viewed from a value creation perspective to cover an essential part of modern business – the client, final customer. Let us not forget that value creation is significant not only for the end-user/customer but also for companies and startups.

2 CREATIVITY, INNOVATION, AND BUSINESS DEVELOPMENT

Even though it is more than common to consider that creativity or the ability to think creatively is a prerogative applicable only to a lucky group of individuals, virtually any person or group of persons can acquire the necessary knowledge to arrive at an epiphany moment. Being different is what keeps an organization alive and going. Equally important, startups are the center of making a difference regardless of the field that they operate in. Even though creativity is highly desirable, on the path to becoming creative enterprises and startups must first answer several questions. Is creativity a process? Or should it be considered as being a result (outcome)? Could it be that both answers are correct?

Instead of simply defining creativity, authors such as Mumford decompose and deconstruct the notion of creativity in terms of its comprising elements and implications. In this respect, creativity acts as a measure of performance. It refers to what an individual or a group does. Secondly, creativity is the result of human cognition. Third, as opposed to automatic cognitive activities (such as recollection or recognition of information), creative problem solving is of the high-end level of human cognition (Mumford, 2012). Another definition of creativity given by authors such as Torrance (1965) somewhat places the space of creativity inside the everyday life of organizations. It goes as follows: "a process of becoming sensitive to problems, deficiencies, gaps in knowledge, missing knowledge, missing elements, and disharmonies"

(Torrance, 1965). This solution places importance on accumulated knowledge, but also on the environment. Csikszentmihalyi talks about creativity in terms of the place(s) where creativity results/stems from. Per him, "creativity results from the interaction of a system composed of three elements: a culture that contains symbolic rules, a person who brings novelty in the symbolic domain, and a field of experts who recognize and validate the innovation" (Csikszentmihalyi, 1998). Outcomes of creative thinking improve and enrich the organizational culture of the company. They get better the quality of the work environment and the quality of products, services, and customer satisfaction. The system model developed by Csikszentmihalyi, which accompanies his notion of *flow*, argues that creativity is composed of 3 elements: the domain (culture), the field (it monitors the domain), and the person.

As other authors have suggested, being original does not necessarily mean that someone is creative. Besides originality, the ambiance, or the situation in which a person is at a particular moment, in time can impact creative thinking and influence the creative outcomes, both positively and negatively. Even though, at first glance, it seems that all it takes for creative thought to occur in a split second, the situation is quite different. Hard work, tears, and sweat are often required. In the end, this exercise is compensated by the outcomes, by the rewards that this creative thinking process has to offer, not only for the individual but also for the company.

As regards their development strategy, firms and decision-makers need to carefully think about what kind of strategic choice they make regarding innovation and research and development: they can either choose an offensive business model and strategy (pushing innovation) or defensive strategy (market takers to a certain extent), and thus, startups can adopt one of the following strategies: imitative strategy, dependent strategy, or opportunistic strategy (Miles & Snow, 1978). The speed at which startups adapt both to internal and external factors has to at least be maintained (ideally, this speed of adaption should increase), but at the same time, firms need to make sure that they retain the essence of their core business model, and that the evaluation of risk as regards a new strategy could allow for measures to be taken to minimize said risk (Cohen & Levinthal, 1990).

The Oxford Handbook of Innovation offers the following systematization of innovation: regional, sector-based, and ultimately, national (Fagerberg, et al., 2005). During an economic downturn, constant financial attention headed towards innovation and R&D is of key importance (Archibugi, et al., 2013).

3 NEW BUSINESS CREATION IN THE NORTH-WEST REGION OF ROMANIA

Romania consists of eight development regions: Western region, Bucharest-Ilfov Region, Central Region, Southern-Muntenia Region, North-West Region, South-Eastern Region, South-Western Oltenia Region, and North-Eastern Region, considered as NUTS2 level (a geocode standard for referencing the subdivisions of countries for statistical purposes). In our analysis, we will look at the Northwest Development Region, and we will analyze two counties (out of 6 constituent counties), Bihor County and Cluj County. Given the essential economic and social role of the main urban centers in these regions, our analysis will go in-depth, with Oradea and Cluj-Napoca cities (see map in Figure 1 below).

Fig. 1. The development regions of Romania (https://annamap.com/romania/,2011)

Oradea, the 10th largest city in Romania (221,413 inhabitants as of January 2020), is the capital city of Bihor County (Romanian National Institute of Statistics, 2020). By size, Oradea is the second biggest city of the North-West region (after Cluj-Napoca, which ranks first).

For 2014 levels, the business/enterprise density in Oradea was 46.75 enterprises per 1000 inhabitants, whereas the average for the North-West region during the same year was that of

26.18 enterprises per 1000 inhabitants: moreover, 76.76% of revenues from the trade the sector and 78.7% of revenues from the services sector at the county level are attributable to companies/enterprises operating/registered in Oradea (City Council of Oradea, 2019). Thus, from an economic standpoint, Oradea has manifested a growth trend over the years. Increased involvement from local authorities (and a fairly stable regional political climate) and fruitful collaborations with the business environment have generated an accelerated and long-term economic upturn for the city of Oradea.

Out of a total county population of 737,992 as of July 1st, 2020, Cluj-Napoca, the largest town, and the county capital, has a population of 307,000 individuals (Romanian National Institute of Statistics, 2019). Cluj-Napoca is by far one of the largest and most respected academic, cultural, industrial, and business centers in Romania. Cluj-Napoca is not just one of the main IT clusters in Romania (currently, 1 in 11 people in Cluj-Napoca works in IT or related fields). It is also one of the cities (at the European level) with the highest quality of life. Over the years, he has constantly improved and excelled in this chapter (European Commission, 2016). The city has managed to integrate numerous individuals from different countries and cultures. The presence of foreign immigrants has increased several times in of Cluj-Napoca city over the years.

Table 1 (Appendix) reveals data on the number of newly registered companies in the case of Bihor and Cluj compared to the national level. We can see that no district shows spectacular numbers. In the case of Bihor County, the average share of total / national newly registered companies from 2009 to 2019 is 3.69%, while in the case of Cluj the average is 5.07%. Even with such data, the fact is that these numbers have been relatively consistent over the years. That is an indicator of the overall stability of the regions and their potential. In Bihor County, we have 3 cases when registrations of new companies in a given year (2014, 2016, and 2019) have been lower than in previous years, whereas, in Cluj County, we have five such occurrences: 2013, 2014, 2016, 2018, and 2019. It is important to mention here the fact that the performances of the two counties have been quite positive over the years: in the case of Bihor, in 11 years, it has had negative evolutions only during a 3-year, whereas, in the case of Cluj, during the same period, it has managed only 5 negative evolutions, at the national level, the evolution being a negative one during 6 out of the 11 years. The highest number of newly formed companies as regards Bihor County, 1549, has been registered in 2017, and in the case of Cluj, 2858, has also been registered in 2017. There is a positive but weak correlation between the evolution of registered companies and the evolution of the GDP. Only 0.07% of the GDP change is due to the evolution of the number of registered companies" (Badulescu, et al., 2019); as such, it is not the number of newly registered companies that matters in the case of the suitability of a region/city to house and promote the growth and development of startups.

4 OVERVIEW OF THE EFFORTS UNDERTAKEN BY THE CITIES OF ORADEA AND CLUJ-NAPOCA TOWARDS STARTUP DEVELOPMENT

In the Romanian economic landscape, innovation tends to be somewhat neglected. Building on the research of authors such as Bruederl and Schuessler (1990) and Freeman et al. (1983), we find that innovation has the potential to emerge at a much faster and accelerated pace in SMEs than in full-fledged companies. That occurs for several reasons: less rigid administrative and legislative frameworks and working conditions for SMEs, faster adaptation to external and internal factors, and openness to market disturbances. No SME, regardless of the level of development, place of business, or size, is exempt from this.

From 2014 to 2019, new company registrations at the national level have increased by 26.25%. The biggest increase occurred in 2017, when, at national levels, we have had 22,999 new registrations/creation of new companies. The North-West region has been faced with diminishing numbers. 2019 showed a lower level of creation of new companies than in 2014 (North-West Regional Development Agency, 2020). According to the same report, among the challenges faced by new entrepreneurs/when registering new companies, we have the following: lack of resources (72.2% of cases), limited access to credit (28.2%), lack of customers or customers

who pay late (38.1%), limited access to well-trained employees (46.3%), lack of technology (23.2%) and lack of raw materials (14.6%).

To promote new business creation, especially for new businesses wanting to be active in creative/innovative sectors, resources, policies, and efforts have been channeled towards the creation of clusters and hubs across this North-West region of the country. For 2018 levels, the following clusters are active in the North-West region. They are mostly concentrated in the city of Cluj-Napoca, but we also notice other such units active/present throughout Bihor and Cluj counties (North-West Regional Development Agency, 2020).

Although they are not as numerous as in other regions of Europe, the activity of such clusters is crucial for the development of the two counties and regional development. Moreover, activities of these units have promoted close cooperation not only between the public and private sectors (also encouraging research and technological development and dissemination) but also between regions and areas. The previous clusters are usually located within industrial parks. At the North-West region level, there are 23 operating industrial parks housing 178 companies/ enterprises and spanning on a surface of 764 hectares of land. The number of such industrial parks, and their sizes, are growing and developing (North-West Regional Development Agency, 2020).

All information regarding the general innovation efforts and scores of the various Romanian regions point to a somewhat grim reality: regardless of the year we are referencing, the innovation footprint of the county tends to be given secondary importance, so much that during 2020, Romania has yet again scored last in terms of innovation at EU 27 level (European Commission, 2020). To avoid this situation repeating some policies are necessary to shift this paradigm. What is more, a certain synergy between national and regional policies should exist to maximize innovation success chances of the regions and the country as a whole.

4.1 Startups in Oradea

A study conducted by online startup UrbanizeHub ranks Oradea in the first place as concerns the most efficient cities of the country. Given the efforts of the public authorities, Oradea has managed to invest over 240 million euros in capital investments and various projects during the last eight years, (an investment of 1225 euros per inhabitant). In the case of Cluj-Napoca, which ranks 8th in the same chart, as regards capital investment, it has managed to spend 253 million euros (translated into 781 euros per inhabitant) (UrbanizeHub, 2017).

In terms of business infrastructure, the city of Oradea has 4 industrial parks. From the beginning of industrial/business parks in Oradea, 387 million euros have been generated/attracted for the municipality. In terms of employment, various companies in the business parks of Oradea employ a total of 8500 individuals (The City Hall of Oradea, 2020). Even though fully operational companies are active in all industrial parks, the management team of the four industrial parks in Oradea is actively involved in attracting and finding startups to promote improvements for the city of Oradea. Through their BrightNights incubator, on the March 12th, 2021, the Oradea Local Development Agency and 'Make-IT in Oradea'[1] have promoted a startup competition aimed at finding (and developing) startups to bring improvements (social, economic, cultural, technological, etc.) for the city of Oradea. No upper limit of projects/startups has been set. (Oradea Local Development Agency, 2021). As a guide and support for their growth, startups will use the knowledge of industrial park managers and the knowledge of representatives of companies operating in them.

Such partnerships between the public and the private sector are increasing in number and quality. A recent project started by the University of has resulted in it winning a grant of 6.5 million

[1] NGO formed through the participation of the City Hall of Oradea and the city-specific/wide technology community

euros which will be used at creating a technology-transfer center. This project will have four laboratories aiming to create and develop innovative technologies. In addition to the laboratories, this technology center will also have co-working spaces, conference halls, course halls, and it will be of the "smart-campus" type. An important area of interest expressed by the local authorities in Oradea is related to the increase of innovations, more precisely, to the development of "locally produced" innovations. Representatives of local government have expressed interest in increasing the production of innovative products and services by 45%, at the local level. Another such project aimed at intensifying the presence of creative industries in Oradea city is the creation of a business incubator specifically for creative and innovative industries. The Oradea Local Development Agency will be at the forefront of this project, as they will be administering this incubator. The value of this project is 3.8 million euros, and the project was financed by European funds (The City Hall of Oradea, 2018). It will be interesting to see how projects of this incubator will unfold and what types of startups it will nurture. Here again, we must mention that even though such projects are at their infancy in Oradea, they represent a vital starting point, and through collective performance (public and private), such endeavors can become more common and faster-paced.

4.2 Startups in Cluj-Napoca

As in the case of Oradea, the representatives of the local government in Cluj-Napoca (the city hall) have had an increasing influence, impact, and involvement over the years, being one of the key decision factors which have shaped the city into what it is today. From an innovative, creative, and cultural perspective, Cluj-Napoca is one of the most generous cities in the country. It is at the forefront of cultural development and enrichment in recent times. The city positioned itself as “27th in the group of 40 ranked European cities with 250000 to 500000 inhabitants, mainly due to its 22nd position on Cultural Participation and Attractiveness; 3rd spot on Openness, Tolerance and Trust, 4th position on New Jobs in Creative Sectors and is 9th as regards Creative Economy” (European Commission, 2019).

The economy of Cluj-Napoca has doubled in the 2008–2018 timespan, this leading the city to undergo various changes. This doubling of its economy has thus marked the inclusion of Cluj-Napoca, for 2018, in a top of 50 most developed EU cities (The City Hall of Cluj-Napoca, 2020). As for the development of Cluj-Napoca in terms of industrial development, numerically speaking, the situation is identical as in Oradea. Each city has four industrial parks (even though the volumes and number of active companies in each of the industrial parks are higher/more developed in the case of Cluj-Napoca) (Cluj-Napoca City Council, 2020).

From a value perspective alone, Cluj-Napoca far exceeds Oradea. In 2019, the total sum invested in startups at the Cluj-Napoca level was 3 million euros (startupsnthecity.com, 2020). We do notice that the number of organizations supporting and nurturing both the creation and development of startups has started growing; there are several accelerators tasked with improving the likelihood of success of startups (Techcelerator, Spherik Accelerator, and Tech’n Trade being the most vocal such examples), and also several other organizations which deal mainly with developing the startup ecosystem and landscape in Cluj-Napoca: Cluj-Startups (tasked with organizing events, workshops and networking opportunities between founder and resource owner), ClujHub (organizing of events dedicated for startups), Silicon Forest (co-working spaces for startups and freelancers), Transylvania Angel Network (a collaboration between angel investors and mentoring of founders and startups) (startupsnthecity.com, 2020).

From a perspective of numbers, Cluj-Napoca has the upper hand, and it has outclassed and outperformed Oradea, but then again, this is not a competition, nor should it be considered as it is. In 2018, the Cluj-Napoca city has had 1235 IT companies functioning within city limits. They employed 14036 individuals. They accounted for 8.7% of the total workforce of the city. (www.humandirect.eu, 2018). To put matters even more into perspective, during the 2011–2016-time interval, the number of IT-focused startups has nearly doubled in size, “growing from 1.806 in 2011 to 3.795 in 2016. In Cluj-Napoca, the share of IT startups has grown from 18.4% to 26.5% in the six years” (www.humandirect.eu, 2018). Part

of the reasons for doubling these numbers relates to the general stability of the city of Cluj-Napoca, from a dual perspective: the private and public sectors. Although the previous numbers point to the general strength of the Cluj-Napoca city, it is noteworthy to mention that regarding official statistics, given that there is (to the extent of our knowledge) no official registry (neither at national nor at regional/city levels) with the real numbers of startups. Various sources will end up offering different and sometimes contradictory information. As long as no official registries exist with companies that identify as being startups, major differences as regards knowledge of the totality of these organizations will become even more so burdensome.

A more detailed report from the Cluj-Napoca municipality reveals that in eight years, 2011-2019, only 3% of all newly registered companies managed to transit to startups. That transition can happen only if a company achieves an annual revenue growth rate of at least 20% per year in the first three years of work. This percentage translates into 102 new startups per year (on average) in the Cluj-Napoca city and 129 startups in the metropolitan area/area of Cluj per year (on average) in the considered period. (Interdisciplinary Center for Data Sciences, 2020). The distribution of startups in the Metropolitan Area of Cluj-Napoca is as follows: 107 startups in IT&C, 73 in creative industries, 62 in hospitality services, 32 in health and social assistance, 86 in business support services, 34 in engineering and research, 14 in financial services, 97 in transport, 18 in real estate, 12 in education, 35 in the automotive industry, 15 in the pharmaceutical industry (Interdisciplinary Center for Data Sciences, 2020).

Here, we must point out that different sources on the same topic offer different figures. A report by the municipality of Cluj-Napoca reveals the following concentration of clusters (8 clusters) and companies/startups (but without differentiating between startups and fully-grown companies) (393) in the city during 2019. The TREC cluster (17 startups/companies), Agro Transylvania cluster (53 startups/companies), Cluj IT cluster (36 startups/companies), Mobilier Transilvan cluster (44 startups/companies), iTEch Transylvania cluster (66 startups/companies), Transylvania Creative Industries cluster (40 companies/startups), Transylvania Taste cluster (24 companies), Transylvania Lifestyle cluster (113 companies) (The City Hall of Cluj-Napoca, 2019).

5 CONCLUSIONS

The present-day evolution of the entrepreneurial system shows that valuable resources such as talent, know-how, information, and sources for funding are mostly located around large and well-developed metropolitan zones. The exponential growth of such metropolitan areas will attract FDIs, which in turn will lead to knowledge spillover to adjacent regions and contribute to the future development of startups. The North-West of Romania has the potential of becoming one of the most important and vocal innovation hubs in Eastern Europe. We must tread lightly though, given that regardless of efforts, synergies, and recommendations, the transformation of the country and the North-West region cannot occur overnight. An increase of collaboration between the public and private sectors, and the various stakeholder present in the North-West region is vital for the better development of the startup infrastructure and ecosystem. The link between the number and increase in the number of startups and GDP, and between the number and an increase in the number of startups and unemployment, leads us to believe that more startups will appear in cities with lower unemployment. A higher GDP favors an increase in the number of startups.

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APPENDIX

Table 1. Evolution of the number of newly registered companies from 2009 to 2019 for Bihor and Cluj counties (in %) as compared to national levels

Year	% County evolution	National evolution	% National evolution	% of national	% County evolution	National evolution	% National evolution	% of national
	Bihor County				Cluj County			
2010	13.55%	7,216	6.45%	3.57%	9.70%	7216	6.45%	4.16%
2011	5.84%	13,021	10.94%	3.41%	23.02%	13021	10.94%	4.61%
2012	0.62%	-6,466	-4.90%	3.60%	5.14%	-6466	-4.90%	5.10%
2013	9.61%	-787	-0.63%	3.97%	-3.87%	-787	-0.63%	4.93%
2014	-24.07%	-23,189	-18.58%	3.71%	-5.21%	-23189	-18.58%	5.74%
2015	9.16%	11,540	11.36%	3.63%	1.80%	11540	11.36%	5.25%
2016	-7.98%	-7,185	-6.35%	3.57%	-4.51%	-7185	-6.35%	5.35%
2017	40.94%	30,717	28.98%	3.90%	50.37%	30717	28.98%	6.24%
2018	7.73%	-1,167	-0.85%	4.24%	-12.97%	-1167	-0.85%	5.48%
2019	-15.86%	-1,312	-0.97%	3.60%	-11.96%	-1312	-0.97%	4.87%

Source: Own calculations based on National Trade Register Office (2021)

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