

WHITE PAPER – Aspen Economic Opportunities & Financing the Economy Program

ECONOMIC OPPORTUNITIES AND FINANCING THE ECONOMY

IMPACT OF COVID19 AND THE LOCAL BUSINESS
ENVIRONMENT INDEX (LBEI) 2020

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Aspen Economic Opportunities & Financing the Economy Program

The **Public Policy Programs** of the Aspen Institute Romania seek to improve the formation of policy through transparent, non-partisan, evidence-based, multiple stakeholders' dialogue. Based on the **Aspen Method**, our programs offer public decision-makers, private stakeholders and representatives of the non-governmental and academic sectors an exceptional platform for reflection, aiming to reach consensus on concrete policy recommendations in Romania's most relevant policy fields. By engaging with public decision-makers from the start of the reflection process, in an informal and informed dialogue, mutual ownership of our policy recommendations is fostered.

Under the umbrella of **Aspen Economic Opportunities & Financing the Economy Program** a community was created comprising multiple stakeholders from the public, private, and non-governmental sectors, aiming to identifying key constraints and untapped opportunities facing the existing economic, investment, and development model of Romania and to formulate public policy recommendations regarding investment prioritization, public and private resources mobilization and complex projects implementation capacity.

To achieve this, since its launch in September 2017, the program addressed various broad topics each year. In the first edition of the Aspen Economic Opportunities & Financing the Economy Program, we focused on three major topics: **identifying a wider range of viable financing sources** for key infrastructure projects, **setting priorities for public and private investments**, and identifying **policy solutions for rising inequality**, and closing economic disparities. The main topics addressed during the subsequent program iterations were related to **financial education and financial inclusion**, especially in rural areas and lagging regions. In addition, subjects concerning the role of **digitalization** in promoting financial inclusion and improving the quality of financial services were also addressed.

The 2020 edition of the program has addressed the various changes in our society emerging from the COVID-19 crisis, and the formulation of a **new social contract** between the business sector, government and society. Workshop discussions have covered the new measures needed to support the economy and the financial sector, as well as the **new economic model** that Romania, alongside the rest of the world, has to transition to. Solutions based on **digitalization** also impact the way both the public and the private sector, on the way we live, and work and on the extent to which businesses can adapt to the accelerating changes in our societies.

Executive Summary

The Economic Opportunities & Financing the Economy Program in 2020 was informed by the unexpected developments generated by the Covid19 pandemics. However, many of the economic and societal trends in Romania and elsewhere were mere accelerations of existent tendencies.

One major challenge was to mediate the negative economic effects of the crisis. The impact on the Romanian economy was severe, and numerous public policy measures were adopted to facilitate the economic recovery. As such, the basis of a more active role of the state was laid, at both central and local level. More responsibility lays on local governments to be proactive in facilitating economic activities and supporting the local business environment.

Diagnostic tools become vital for evidence-based policy and decision-making. Such a dashboard for the public and private sector is the Local Business Environment Index (LBEI) that the Aspen Institute is publishing yearly as part of the Economic Opportunities & Financing the Economy Program.

It clearly shows how local public support and the availability of capital have a significant impact on business development and economic growth. Some cities in Romania, such as Cluj, Alba-Iulia, Sibiu or Oradea are ranked consistently high in terms of innovation, entrepreneurship and local public support, while for the majority of other cities, there is still untapped potential for development. The access to capital is important, as there are cities like Târgu Jiu, Satu Mare, Suceava, Pitești, Bacău, Ploiești and others where the high level of Credit sub-pillar index (i.e. lei and foreign currency loans to non-financial companies) succeeded in last three years in generating more jobs at local level.

A better collaboration between the public and the private sector is needed in a global context in which there is a clear reformulation of the social contract and how to achieve shared prosperity and collective wellbeing. Key drivers of economic development and resilience are digitalisation and innovation, and entrepreneurial initiatives with higher value added. Our data shows that Romania has much ground to cover especially concerning the latter aspect, but it also has key advantages in terms of initiatives and education.

As such, we recommend a series of policy measures that would harness key innovative sectors in our economy and entrepreneurial initiatives. Digitalisation and de-bureaucratisation will improve significantly the relationship between citizens and the public administration but will also create efficiency gains in both the public and the private sector. Finally, collaborative solutions between the state and companies should support the liquidity of the private sector and the development of the financial market in order to ensure the economic resilience of the Romanian economy.

RECOMMENDATION	MOTIVATION AND DETAILS	KEY ENABLER OF CHANGE
<p>Digitization and de-bureaucratization of the public administration</p>	<p>It is recommended to change the institutional culture, especially in the field of public administration in order to adapt to the online environment. For digitization, projects such as Digital First or Cloud First would be required, implemented at the highest level in Romania. Beyond online interaction, the cloud system is important in ensuring the interoperability of public services.</p> <p>Beyond digital infrastructure this process of adaptation also requires digital training for public sector employees.</p>	<p>Public sector</p> <p>Private Sector counterparts</p>
<p>Supporting key innovative and competitive businesses</p>	<p>The strategic development of innovative sectors with higher added value should be pursued. Romania could be competitive in creating innovative start-ups and higher value-added products.</p> <p>An area of special interest may be the green economy, where the EU has high global ambitions. Investments will be reoriented within the Green Deal all throughout the EU, and companies should be ready to take advantage. On the public sector side, a functional structure of cooperation between the line ministries — agriculture, environment, economy — must be developed. At the moment, the Green Deal is not economically efficient, and thus foreshadows a significant increase in the role of the state in the economy.</p> <p>State aid rules have been relaxed for all member states, and while cautiousness should be exerted not to fuel inefficient businesses, such state funding schemes could contribute to the growth of key innovative companies, or nearshoring production in a context of strategic realignment of global supply chains.</p>	<p>Public sector</p>

Strengthening resilience of the Romanian economy and society	<p>Based on the first Strategic Foresight Report of the EC, Romania has a socio-economic vulnerability concerning the level of liquidity of individuals, households and businesses. Also, it has a poor efficiency in the goods market and an insufficiently developed financial market. All these elements should be addressed in order to achieve a higher level of socio-economic resilience.</p>	Public sector
	<p>Based on measures taken by both the public and the private sector, enhancing the Romanian economy's ability to react to shocks and bounce back, is the only way to mediate the negative economic impact of the prolonged health crisis and the high level of uncertainty in the regional and global markets.</p>	Private sector

Supporting entrepreneurial initiative	<p>Romania not only has a low level of entrepreneurial initiatives, but it is also stagnant across time and there is a poor transposition between individual ideas and initiatives and the rate of start-ups.</p>	
	<p>One direction of intervention is facilitating the access to capital for new businesses and SMEs in Romania. Especially in the context of the Covid19 crisis, ensuring the liquidity of SMEs was vital to their survival. As such, state guaranteed schemes of funding, and European funding can help ease the pressure on the financial sector and prevent a penury of capital in the market.</p> <p>A second equally important area of intervention is that of a better mapping of successful start-ups, especially those in higher value-added sectors in order to identify contextual drivers of success and scale-up good practices at local and national level. Two types of businesses are particularly relevant to the resilience of the Romanian economy: innovative companies that can be export competitive, and social entrepreneurship that can mediate the negative effects of the crisis in local communities.</p>	Public sector Private sector

Promoting digital payments

Governments play a pivotal role when it comes to digitizing payments in an economy. By shifting government wages and social transfers into accounts, governments can lead by example and play a catalytic role in building a digital payments infrastructure. But the public sector also has an essential role to play in creating an enabling regulatory environment and promoting consumer protection and education to facilitate the shift to digital payments beyond government payments.

Shifting to digital payments has many potential benefits: it can improve the efficiency of making payments by lowering the cost of disbursing and receiving them, and by increasing the speed of payments. Digitalization can increase the transparency of payments, and thus reduce the likelihood of leakage between the sender and receive. It can counter fiscal evasion and increase collection without raising taxes. Further, digitalization can enhance the security of payments and thus lower the incidence of associated crime. It can also provide an important first entry point into the formal financial system, thus increasing financial inclusion and economic opportunities.

Public sector

Current Context: Economic Fallout and the Way Forward Post-Covid19

The anticipated economic decline for Romania as a result of the effects generated by COVID19 varies significantly among international and domestic organizations, the working assumptions and the magnitude of the anticipated shocks considered by each being different.

Economic Fallout

On the one hand, the Government, through the National Commission for Strategy and Forecast, initially predicted a decrease of GDP of 1.9% in 2020, going on a rapid recovery scenario, type V, the economy recovering starting with the third quarter. Also, in the context of a heavier recovery, the economic downturn was revised during summer 2020 at 3.8%. On the other hand, the International Monetary Fund (IMF), World Bank (WB) and the European Commission (EC) estimate a decrease of 5% (April Forecasts), 5,7% (June 2020) and 6% (Summer Forecasts), respectively, in 2020, with a stronger recovery starting next year.

From our perspective, the strongest negative impact on the real GDP growth rate in 2020 will come from industry and trade, while the agricultural sector is expected to decline significantly amid this year's drought. At the same time, the construction sector is expected to have a slightly positive contribution, below 0.5 pp. to economic growth. In addition to construction, a positive contribution will be made by the public sector (by increasing government intervention and health spending) and the information and communications sector, as a result of more intensive use of software, data transfer, Internet and working solutions at distance. Another negative contribution, of about half a percentage point, will have the component of other services, which include professional, scientific and technical activities, administrative service activities and support service activities, but also entertainment, cultural and recreational activities; repairs of household products and other services. All this means that in the basic scenario, the Romanian economy will decrease in real terms by 4.4%.

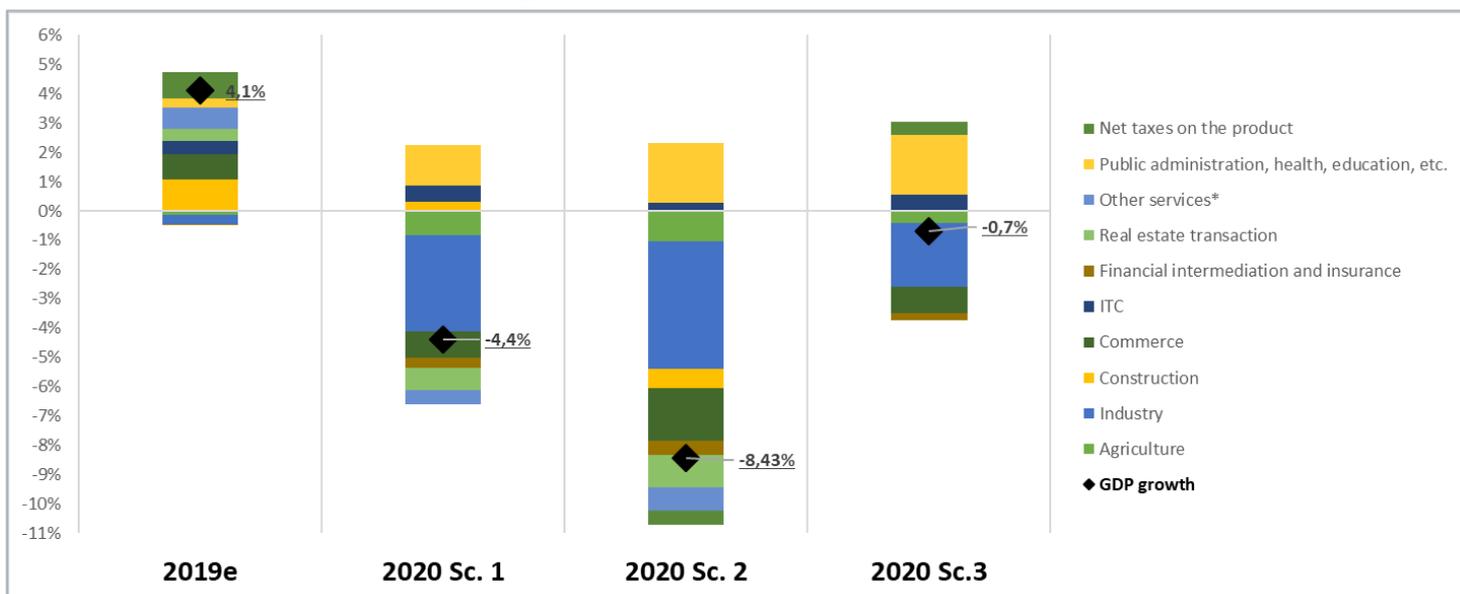
In the cautionary Scenario 2, the decrease in external demand and the inability to produce as a result of isolation measures further lower the industry, while construction decreases by 10%. Real estate transactions and the trade sector, including HORECA and transport, are also falling sharply, while financial intermediation and insurance are declining significantly, pulling down the real GDP growth rate by more than 1.5 pp. As in the baseline scenario, the public sector and JTIs make a positive contribution to growth.

The optimistic scenario 3 estimates a more moderate decline in industry (-10%) and a smaller decline in trade (-5%), while the government and the ITC sector make a positive contribution to growth. In addition, real estate and construction transactions stagnate, while financial intermediation decreases less than in previous scenarios. This scenario envisages a temporary decline in activity in the second quarter and then a gradual recovery by the end of 2020.

Therefore, estimates show that changes in GDP components by the production method in 2020 may lead to:

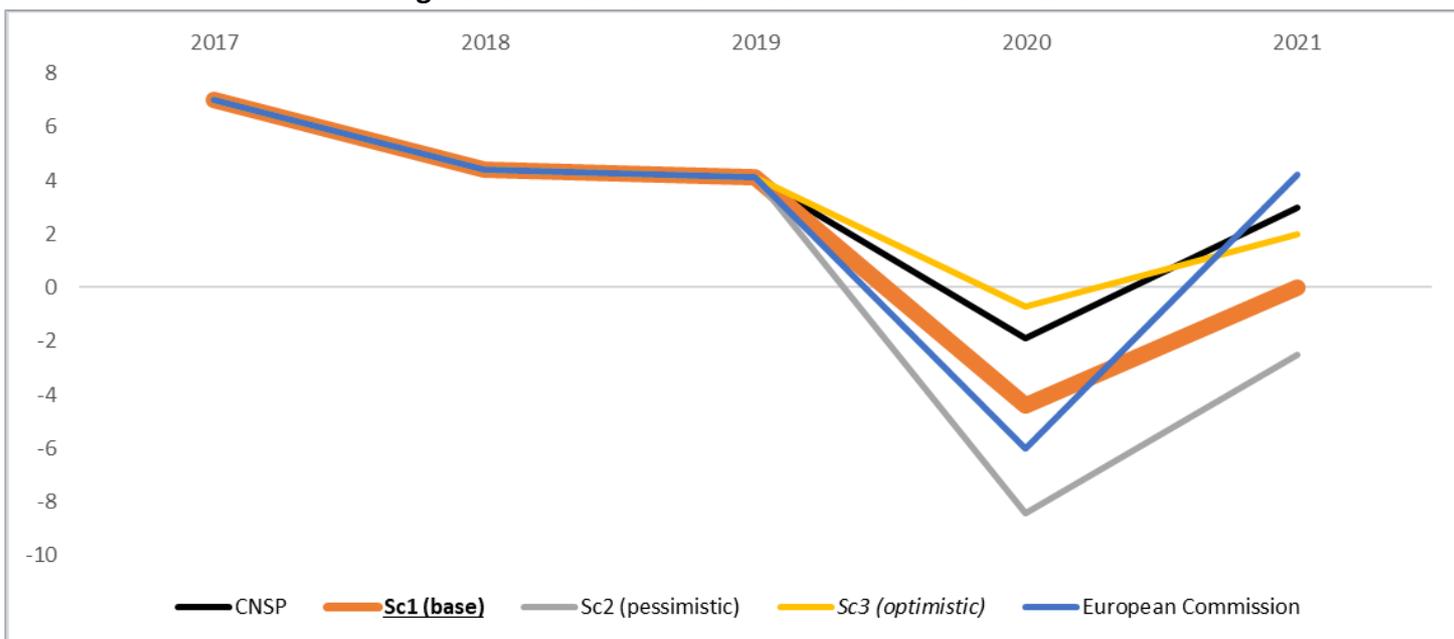
- Scenario 1 - baseline scenario: decrease in real GDP by 4.4%
- Scenario 2 - cautionary scenario: decrease by 8.4% of real GDP
- Scenario 3 - optimistic scenario: 0.7% decrease in real GDP

Figure no. 1: GDP evolution scenarios



Source: INSSE and own calculation

Figure no 2: Real GDP evolution on the medium term



Source: INSSE and own calculation

The economic downturn will be transmitted later to the labor market, to the number of employees and the unemployment rate. As a result of job losses, the ILO unemployment rate will increase, with an increase in the unemployment rate in the baseline scenario estimated at around 10%. However, these estimates exclude people who are technically unemployed in companies in difficulty, the number of those who could actually lose their jobs is quite difficult to anticipate. The maximum could reach a pessimistic scenario of up to about 12 or 15%.

Public Sector Measures: Mitigation of the Negative Impact of the Crisis

A number of public sector measures have been and continue to be needed to mediate the economic crisis caused by the pandemic. However, these measures must be developed and implemented not only by political consensus, but broad consultations with employers' associations, entrepreneurs, but also employee representation structures. The main objectives at present are the protection of employees and the provision of liquidity for companies. The government is developing on the one hand a category of programs to mediate the short-term economic effects of the pandemic and on the other hand a category of programs aimed at facilitating the faster recovery of the Romanian economy. Although a large economic recovery package is being prepared, it will not rise to a level of 10-15% of GDP like those in other European countries, because tax collections in Romania are very low, thus making the budget range much narrower. Thus, the financing solutions proposed by the Government go in the direction of making more efficient the use of European funds, but also on the use of public investments in large infrastructure and the private environment in order to entail effects of economic multiplication. It is intended to provide public support of approximately 1 billion euros for SMEs in Romania.

Regarding the protection of employees, a series of measures have been taken, such as that of technical unemployment, postponement of instalments at the bank, postponement of payment for utilities and rents. The partial unemployment tool is built on the German Kurzarbeit model and is intended for companies that have had technically unemployed staff. Through this instrument, for a period of time, the state will pay between 30 and 40% of the gross salary in order to reduce the incidence of dismissals. The hope is that a series of large public investment projects will also lead to a substantial demand on the labour market, recently signing contracts to finance 3 regional hospitals in Iasi, Cluj and Craiova and starting work on lots 4 and 5 of the Sibiu-Pitești highway.

Regarding the liquidity for companies, we can mention the SME Invest program which has several objectives: in addition to the capitalization of SMEs, we want a rebalancing between bank credit granted to SMEs and commercial credit. The current 1:3 ratio of these is considered by the Government as unhealthy for the Romanian economy. Basically, we want to encourage banks to lend to SMEs: the ceiling was initially 15 billion, but the ceiling of state guarantees increased in August 2020 at 20 billion lei due to strong demand from the private sector.

Moreover, because there are requests for deferred payment to suppliers and suppliers demand the money down, the Government intends to give a state guarantee to ensure commercial credit, to ensure continued economic flows and avoid too long payment terms. Thus, by maintaining the speed of money transactions, no significant economic multiplication effects are lost in the context of crisis.

Thirdly, Eximbank is implementing a working capital insurance program for large enterprises. The need for a program dedicated to them is reflected in the fact that there is a ratio of over 8: 2 between the turnover achieved by large companies in Romania and SMEs on the other side.

One of the biggest challenges in ensuring the package of public measures to support the Romanian economy is to ensure the sustainability of the public budget. The European Commission estimates a deficit of Romania's budget of 9.2% in 2020 and 11.4% in 2021. The risk of a large deficit is to reach inflation in order to be financed. There is no simple solution

to this, given that there will be implicitly sacrificed alternatives to public spending. There are a number of proposals regarding the efficiency of the administrative apparatus in order to save both public and private sector resources.

Building a New and Resilient Economic Model

In charting the road ahead, a special importance should be given to the issue of digitalization of the public and private sector in Romania. Furthermore, there is a broad and ambitious challenge ahead of all member states in Europe—that of developing a new smart economic model, including sustainable and green.

In the context of the Covid19 pandemic, the digitization process, both in the public and private sectors, has accelerated dramatically. These changes pave the way for new ways of interacting between citizens and the state, between customers and suppliers, and between employees and employers. In turn, this creates new business models and a fundamental redesign of the labour market, contributing to a higher level of financial inclusion. These new processes represent a particularly important step forward because they can offset the negative effects of the economic crisis caused by the pandemic, which are to be substantial.

Considering this context, there is a need for a new development model for Romania: intelligent, inclusive and sustainable. To make this goal a reality, we need integrated national programs endorsed by all political forces. These must be in line with the new economic policies at European level in order to be eligible for funding in the broader transition process.

Good governance is essential for a transformation of the Romanian economic model, and it requires:

- **Coherence and continuity in public policies** in Romania, a warning also reflected in the country specific recommendations of the European Semester.
- Updated, integrated, **national strategies in key areas**, aligned with the objectives of the European Union.
- An integrated strategy and an adequate **prioritization of infrastructure projects**, covering all stages of investment, from the part of strategic planning to implementation, and which uses a greater variety of financial resources, not only European funds and the state budget.
- **De-bureaucratization and digitalization** of the public administration, as these reforms can lead to business development and substantial increases in tax collection.
- Monitoring and evaluation of the **performance of central and local governments**.
- **A trilateral strategic partnership**: public - private - citizens / civil society.

In the current context, Romania must change its philosophy of production, focusing on goods and services with high added-value. For this, Romania must be part of the discussion on new technologies. However, in order to be able to adopt and create new technologies, a reform of education and the research and development sector is absolutely necessary. Lifelong learning programs need to be thought out, from kindergarten to lifelong learning. In order for the new generations to be able to adapt to the demands of the workforce of the future, digital and entrepreneurial skills must first and foremost be developed.

Although in Romania there are top specialists in the IT sector, the general population does not have the necessary skills in the labour market. A potential measure to improve the digital skills of the population would be to test computer science at the end of the 8th grade, at the National Assessment. Also, computer science should be a compulsory subject in high school, regardless of the profile of the students. Regarding entrepreneurial skills, a whole range of skills and knowledge must be introduced from the general school, because the labour market will be different from 10-20 years ago. In the future, there will be a more entrepreneurial trend in the labour market, as well as more self-employment. In order to encourage the entrepreneurial spirit of young people, high school counselling and business acceleration programs in college should be considered.

In addition, the capacity for collective innovation needs to be developed, both at the public and private sector levels. By developing the research and development sector, the conditions for the emergence of the "entrepreneurial state" can be created. This should be a major goal of decision-makers, as a state that fosters long-term innovation will also enjoy the economic growth associated with innovation. Key sectors to be developed are the technology and energy sectors. In the technology sector, the digitization of SMEs must be prioritized and investments in start-ups must be encouraged, in order to benefit from economic champions that produce high added-value. The energy sector also needs progress based on innovation, digitalization and green technologies, in line with the Green Deal strategy and taking advantage of funding opportunities from the Just Transition Fund. The energy sector is one in which the digitization process has become increasingly relevant, in the context in which the EU's priority is to focus on electrification, switching to renewable energy sources. The Green Deal will lead to an expensive and complex transition, but the benefits for citizens will be visible. The digitalization of the energy system is a process of democratization, being about micro-networks in which consumers will also be producers. Thus, the customer will be at the centre of the energy paradigm. The Green Deal will be based on a quantum technological leap, and the European Commission's vision is to develop European technologies for this. By developing European solutions, such as hydrogen energy storage or battery storage, it will be possible to develop a European technology cluster.

At European level, the multiannual financial framework 2021-2027 will focus on investments in new and sustainable technologies, in order to reduce the environmental footprint. In addition, there will be investment opportunities in areas such as automation, robotics and artificial intelligence. The digitalisation of SMEs' production processes is a priority not only at European but also national level. In this regard, in the short term, the Government will launch 2 programs, one that will provide grants worth 150 million euros for equipment for SMEs, and the other, worth 30 million euros, for digital education of employees. The Start-up Nation program will also be renamed Tech Nation and will prioritize the digital transformation and innovation component.

During the pandemic, the public administration made progress on digitization and interaction with the citizen, and at the national level there was an increase in electronic interaction. Recent developments include:

- ✓ The connection of electronic fiscal cash registers has started, and software solutions have been identified so that in the future the received data can be analysed.
- ✓ The development of the SAF-T computer system - the standard audit file, is in the final stage. In other countries, this system has contributed to a significant increase in budget revenues.

- ✓ New documents can be issued in the virtual private space, including the tax record.
- ✓ Services are being developed regarding the implementation of forms and documents in electronic format.
- ✓ Proposals for a unique, centralized, e-invoicing system are analyzed.

It is particularly important to maintain the trend of digitalization and de-bureaucratization of public administration even after the end of the restrictions caused by the pandemic. The main goal should be for every public policy measure and normative act to be thought out and digital, to have a digital implementation component, to transform the public administration and to adapt it to the new digital economy. For better economic and social inclusion, extensive transformations are needed through measures such as digital national identity and digital national currency, already proposed in countries in the region.

At European level, the implementation of standard digitization policies during the pandemic has not produced the expected efficiency. There is a need for digitalisation and increased financial inclusion policies with a greater degree of adaptability and greater attention to economic and social disparities. For example, in Romania there continues to be a large discrepancy between large cities and rural / small towns regarding e-commerce, electronically paid taxes or the number of people using an electronic payment instrument. To reduce this discrepancy, financial education is needed, for example programs to serve people who have access to smartphones and high-speed internet but do not use the technology available for such payments. However, during the pandemic there was a trend of digitalization of the financial sector, and banks and customers have adapted to the new context. There has been an increase in the use of digital channels, such as card payments, telephone payments, a higher rate of use of mobile applications and internet banking.

Local Business Environment Index (LBEI) 2020: Challenges and Opportunities

Starting with 2018, as part of the Aspen Economic Opportunities & Financing the Economy Program, we developed the Local Business Environment Index (LBEI). It is meant as an instrument to measure economic opportunities at local level, allowing for a better anchoring of public policies and strategies of financing the economy.

LBEI is the first such composed metric for the assessment of economic activity at local level in Romania. The theoretical framework behind our analysis consists of the pillars identified by the Austrian economist Joseph Schumpeter to be essential in the capitalist development model, namely:

(1) local entrepreneurship (E);

(2) innovation (I);

(3) investment financing (C).

These three layers are embedded in local policies and economic ecosystem, encourages market competition, new products and jobs, economic development and capital accumulation. Entrepreneurs support innovation through new ideas and, at local level, risk-taking creditors finance the implementation.

To these three pillars, we added one more, represented by **(4) local public support (LPS)**. In the current context, in which a large set of measures are being deployed at European level to support and encourage entrepreneurship as a driver for economic growth, local governments' involvement is an essential metric for the quality of the local business environment. We also included this dimension to mirror the way national evaluations or country risk assessments of the business environment are frequently looking at both economic and political traits.

Table 1 shows the economic data used to build every pillar and the importance (*weight*) associated with those pillars in our model. We developed the Local Business Environment Index (LBEI) on these four domains that comprise a total of 11 components to estimate the extent to which Romanian municipalities are attractive in economic terms (i.e. entrepreneurial activity, capital availability, innovation), and how the local authorities succeed in supporting private initiative. In order to "normalize" the data in a statistical sense and to obtain comparable indicators for every pillar within LBEI index, we used the figures reported at number of citizens or number of firms from every capital-county municipality.

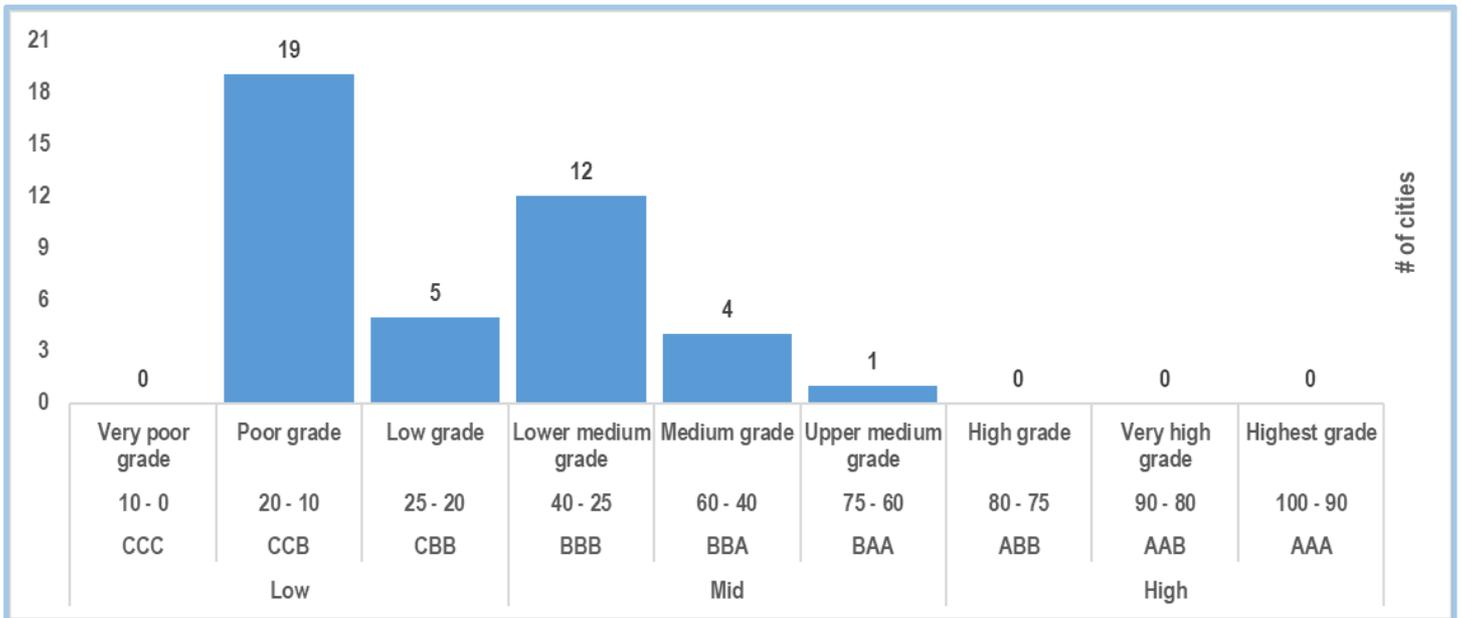
Table 1. The pillars of Local Business Environment Index

Local entrepreneurship (E)	Innovation (I)	Investment financing (C)	Local Public Support (LPS)
30%	20%	35%	15%
Number of active companies with Romanian capital (10%)	Number of employees from high tech sectors (10%)	Loans to non-financial companies (Romanian Lei and foreign currencies) (20%)	Capital expenditures (5%)
Number of active companies with foreign capital (10%)	Number of students (10%)	Foreign Direct Investments (10%)	EU funds expenditures (5%)
SRL-D companies (10%)		Access to banking infrastructure (5%)	Highways connection (5%)
Data sources			
National Institute of Statistics, Registry of Commerce, Listafirme.ro	Integrated Educational Registry, National Institute of Statistics	National Bank of Romania	European Funds Ministry, World Bank
Local Business Environment Index			
<div style="display: flex; justify-content: space-between; align-items: center;"> Very low High </div> <div style="display: flex; justify-content: space-between; align-items: center; margin-top: 5px;"> 0 25% 50% 75% 100% </div> 			

Source: National Institute of Statistics, Registry of Commerce, Listafirme.ro, Integrated Educational Registry, National Institute of Statistics, National Bank of Romania, European Funds Ministry, and the World Bank.

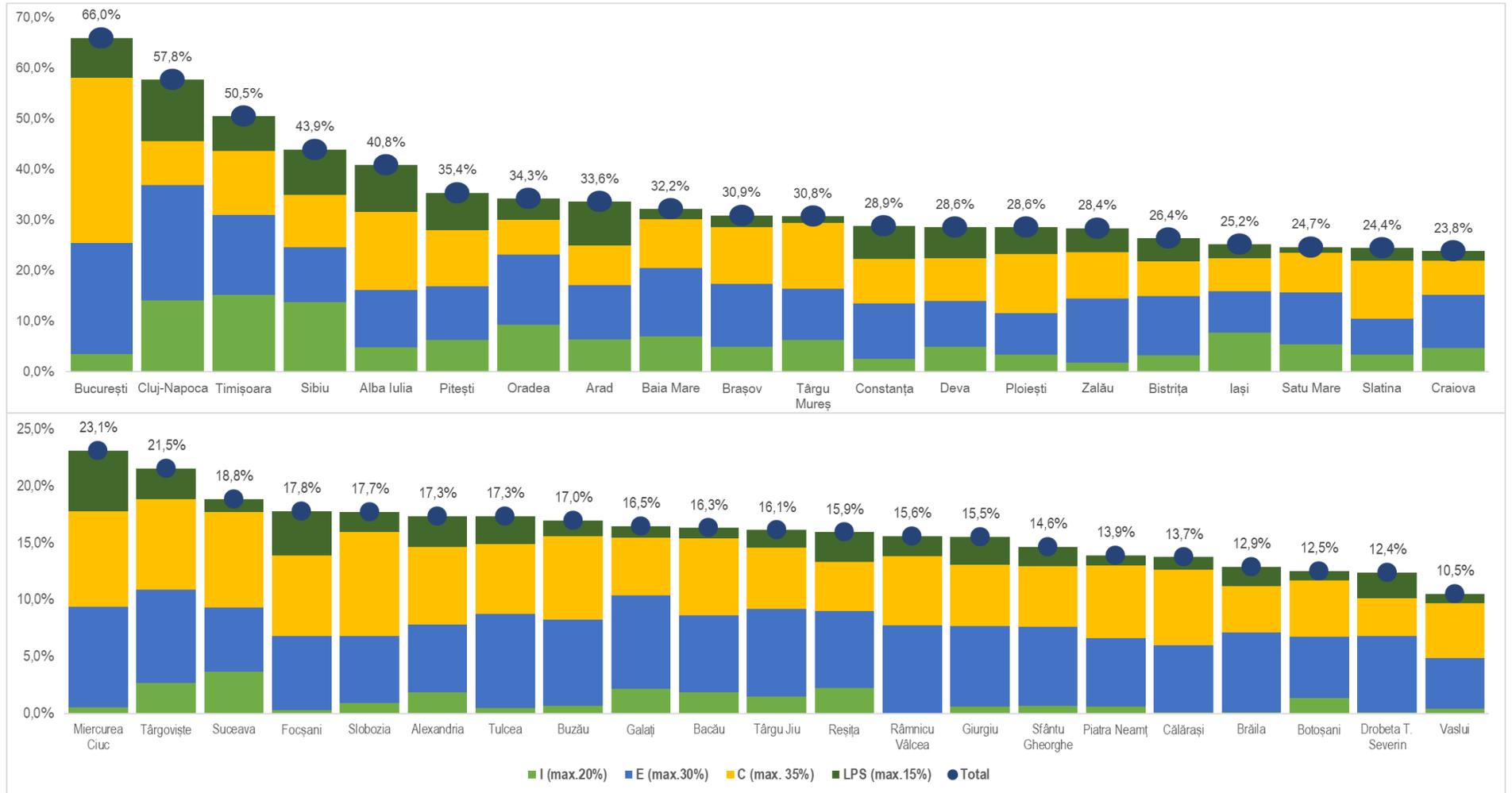
Figure no. 3: LBEI ranking categories

Ranking table					# of Cities
High	AAA	100 - 90	Highest grade		0
	AAB	90 - 80	Very high grade		0
	ABB	80 - 75	High grade		0
Mid	BAA	75 - 60	Upper medium grade		1
	BBA	60 - 40	Medium grade		4
	BBB	40 - 25	Lower medium grade		12
Low	CBB	25 - 20	Low grade		5
	CCB	20 - 10	Poor grade		19
	CCC	10 - 0	Very poor grade		0
Total					41



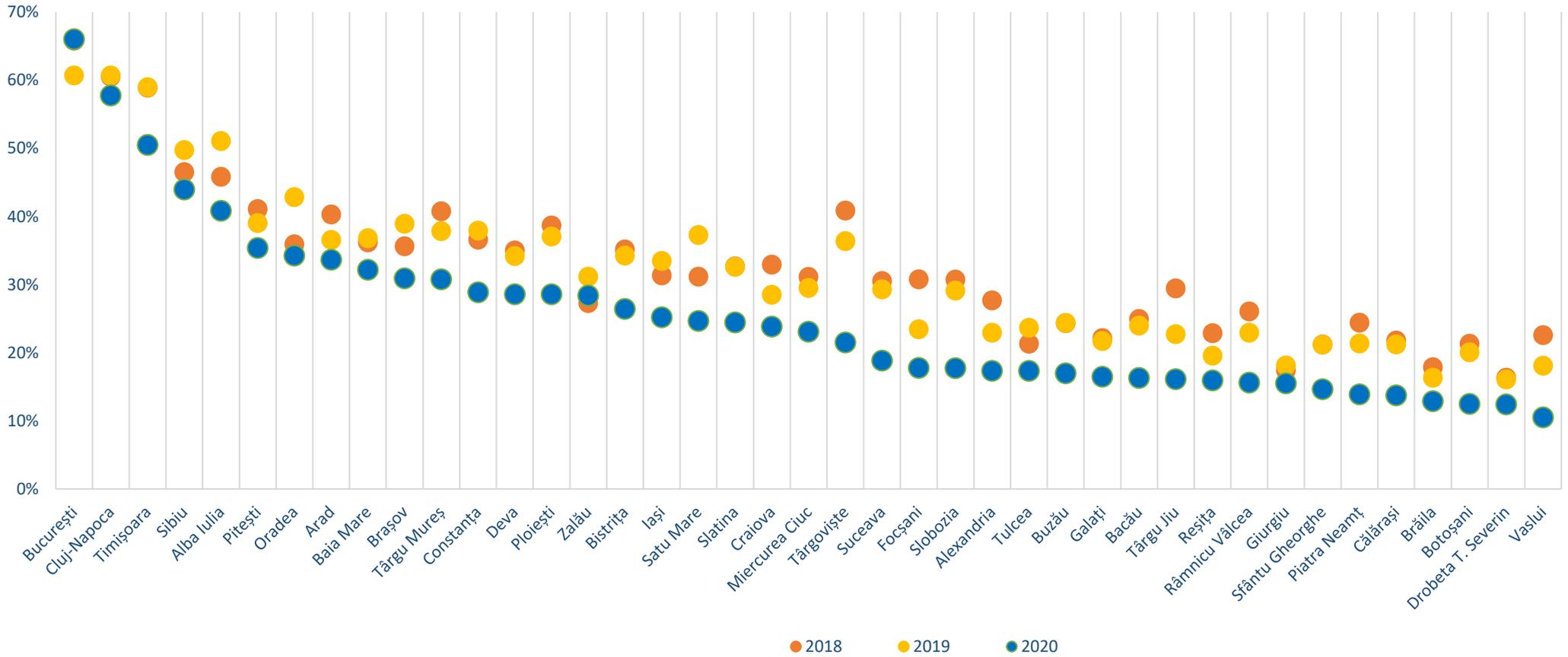
Source: Authors' calculations

Figure no. 2: Municipalities Ranking based on Local Business Environment Index (LBEI)



Source: Authors' calculations

Figure no. 3: Municipalities LBEI evolution (2018-2020)



Source: Authors' calculations

Local Entrepreneurship Pillar

Based on the evolution of domestic companies, foreign companies and new start-ups indexes, we estimated the municipalities ranking from the perspective of entrepreneurial pillar. As in the previous edition of the report, Cluj-Napoca is the top-ranking municipality, close to Bucharest where, important to note, a large contribution is from the foreign-capital companies (see Fig. 5).

Significantly below Cluj-Napoca and Bucharest are Timișoara, Oradea and Baia Mare. Also, Oradea, Alba Iulia and Cluj-Napoca have an important driver in domestic companies' contribution in the entrepreneurial environment (see Fig. 5).

On the other side, Vaslui, Botoșani, Suceava and Călărași are the latest municipality from the view of entrepreneurial pillar, especially due the lack of foreign companies and new start-ups. Unsurprisingly, in these municipalities and counties there is also the lowest levels of foreign direct investment stock (See Fig. 5).

In comparison to the last two editions of the Entrepreneurial pillar, it seems that currently Cluj-Napoca and Bucharest are maintaining their initial positions, while Zalău (+3 p.p.) and Sibiu (+1,4 p.p.) have the most important increases. Also, the pillar index values in 2020 in Suceava and Satu Mare slightly decreased comparatively with 2018 (see Annex 1).

We use answers from the Eurobarometer on Entrepreneurship related to perception / self-perception of individuals regarding the role of educational environment, risk and the ability to generate ideas. We selected only the sum of the "Agree" and "Strongly Agree" at questions from the table below provided by those surveyed. Then, some answers of those questioned were correlated with the number of private sector companies per 1000 inhabitants in the EU Member States.

Table 2 shows the answers of Romanian respondents at European Commission Eurobarometer. We bundled the self-perception of Romanian respondents regarding their entrepreneurial characteristics in four main groups: (i) Education; (ii) Ideas; (iii) Risk; (iv) Self-determination. Also, the comparison with EU average helped us to consider that, in terms of self-perception and capability, it seems that Romanian youngsters are above EU27 average when we look at the support of education for entrepreneurial capabilities (i.e. *to understand the entrepreneurs and their role in society*). At the same time, there is a self-perception in terms of new ideas and taste for taking risks above the EU27 average. Below, but close the EU27 average, is the percentage of people who consider that, in general, life is determined mainly by the chance and not by the own actions.

Romanians have a good self-perception regarding entrepreneurial abilities, despite the fact that the factual results are very low. Romania has the lowest no. of private sector companies per capita, despite the good scores regarding both creativity self-perception and educational system support (see Fig. 3 and Fig. 4). We see in Romania a very positive perception of individuals entrepreneurial capabilities – one of the best in EU, but there is no capacity to translate these characteristics into strong, sustainable businesses.

One of the explanations could be the institutional barriers to start and develop a business in Romania. One instrument to support investment could be state aid schemes, that in the last ten years were an important source of funds for some sectors with good results in Romania

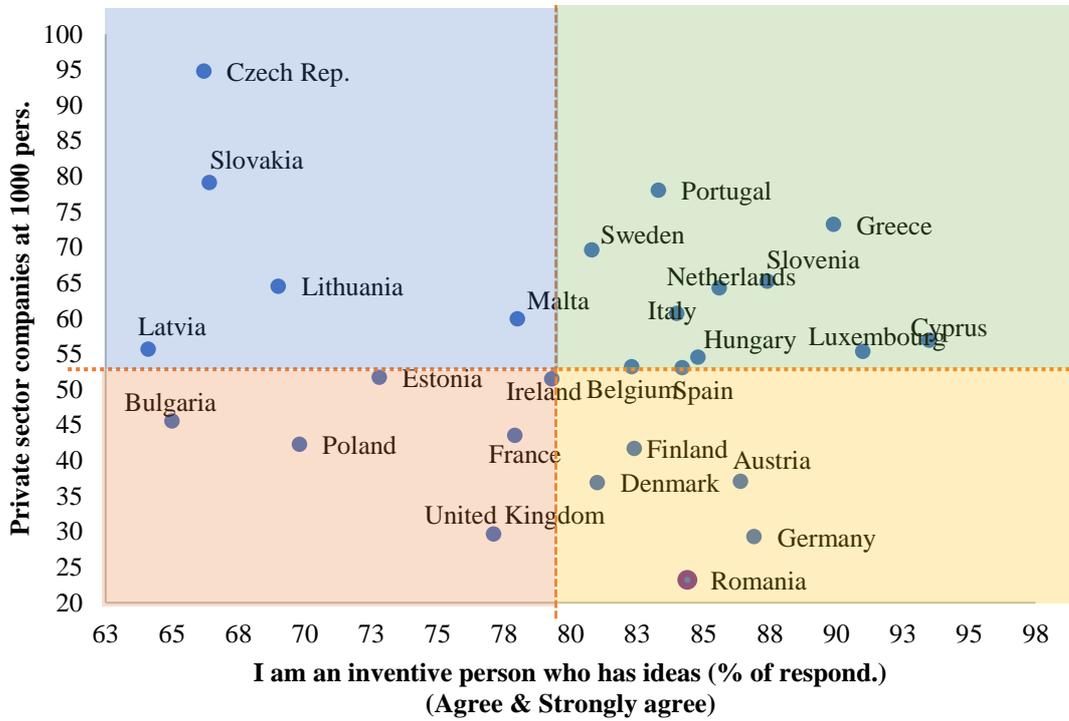
(e.g. automotive, aerospace and IT) in terms of regional development and jobs (See also Ștefan *et al.*, 2016). The transition from ideas to results has been increasingly supported by the financial sector in Romania in recent years, not only by providing not only capital, but also technical support or networking platforms for new businesses.

Table 2. Perceptions of Entrepreneurial Capabilities

Group	Questions	RO	EU27	Diff. vs. EU 27
Education	<i>My school education made me interested to become an entrepreneur - Do you agree with?</i>	41.4%	24.4%	Above average
	<i>My school education helped me to better understand the role of entrepreneurs in society - Do you agree with?</i>	56.1%	44.4%	Above average
	<i>My school education gave me skills and know how that enable me to run a business - Do you agree with?</i>	44.2%	39%	Above average
Ideas	<i>I am an inventive person who has ideas - To what extent do you agree with the following statements?</i>	84.4%	80.8%	Above average
Risk	<i>In general, I am willing to take risks - To what extent do you agree with the following statements?</i>	72.9%	64.9%	Above average
Self-determination	<i>My life is determined by my own actions, not by others or by chance - To what extent do you agree with this statement?</i>	81.8%	84%	Below average
	<i>If I see something I do not like, I change it - To what extent do you agree with the following statements?</i>	83.8%	84%	Below average

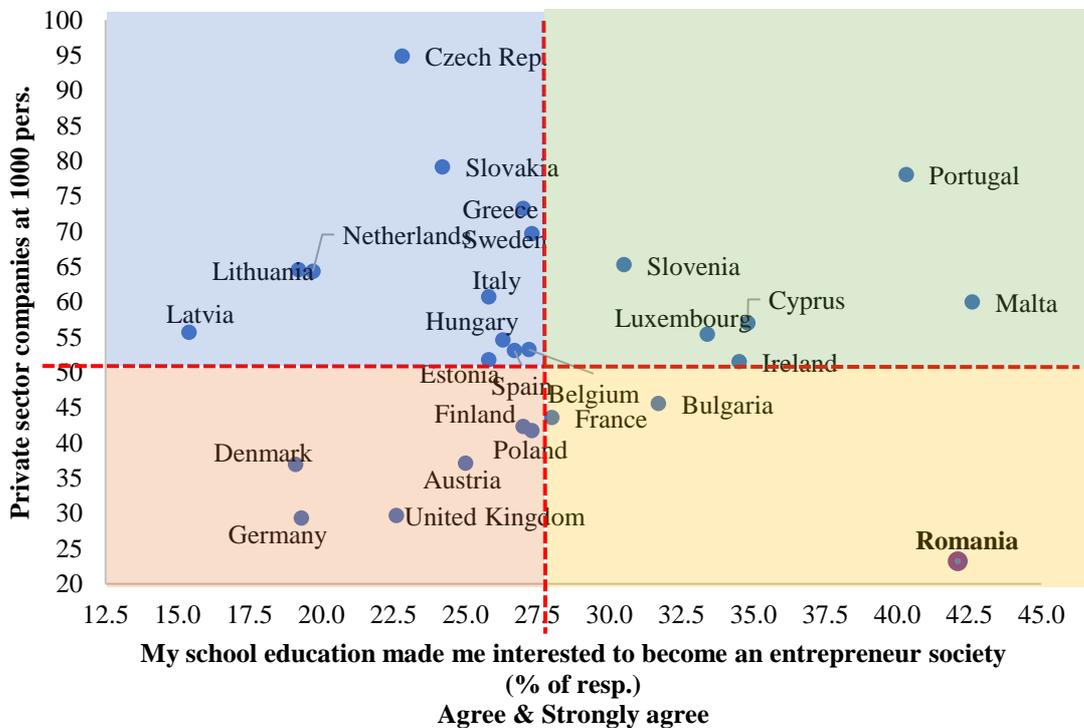
Source: Eurobarometer on Entrepreneurship 354

Figure no 4: Number of companies vs. entrepreneurial ideas



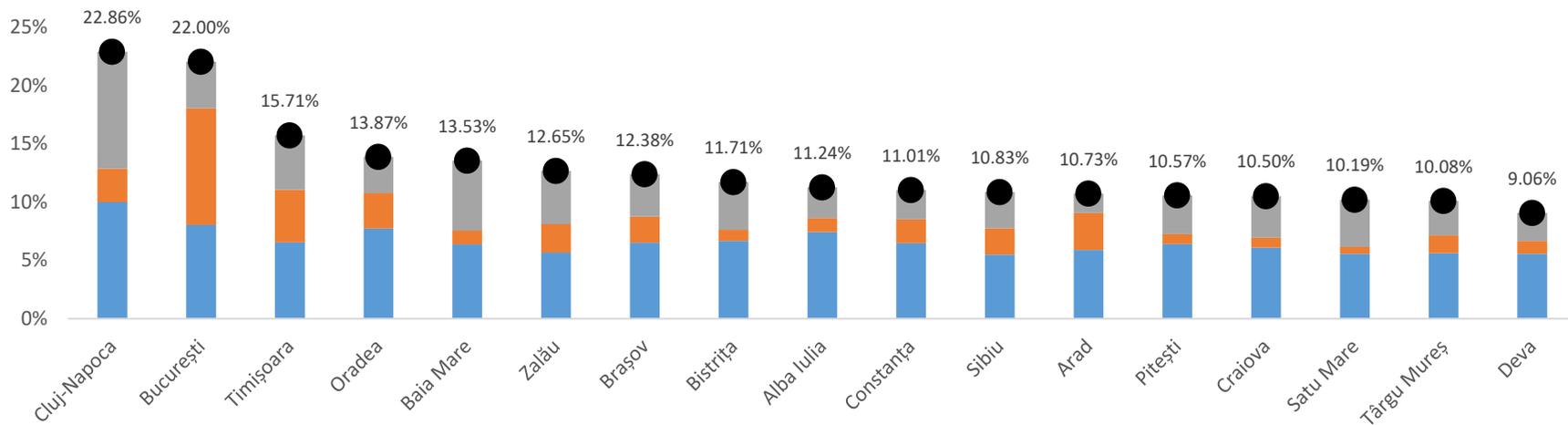
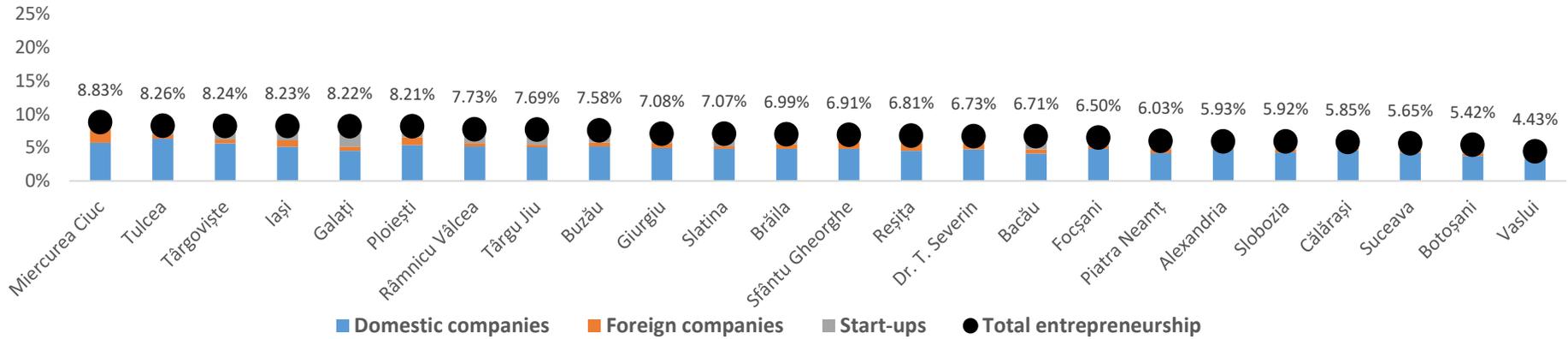
Source: Eurobarometer on Entrepreneurship 354, Eurostat and Romanian National Institute of Statistics

Figure no. 5: Number of companies vs. entrepreneurial education



Source: Eurobarometer on Entrepreneurship 354, Eurostat and Romanian National Institute of Statistic

Figure no. 6: LBEI 2020 – Entrepreneurial Pillar



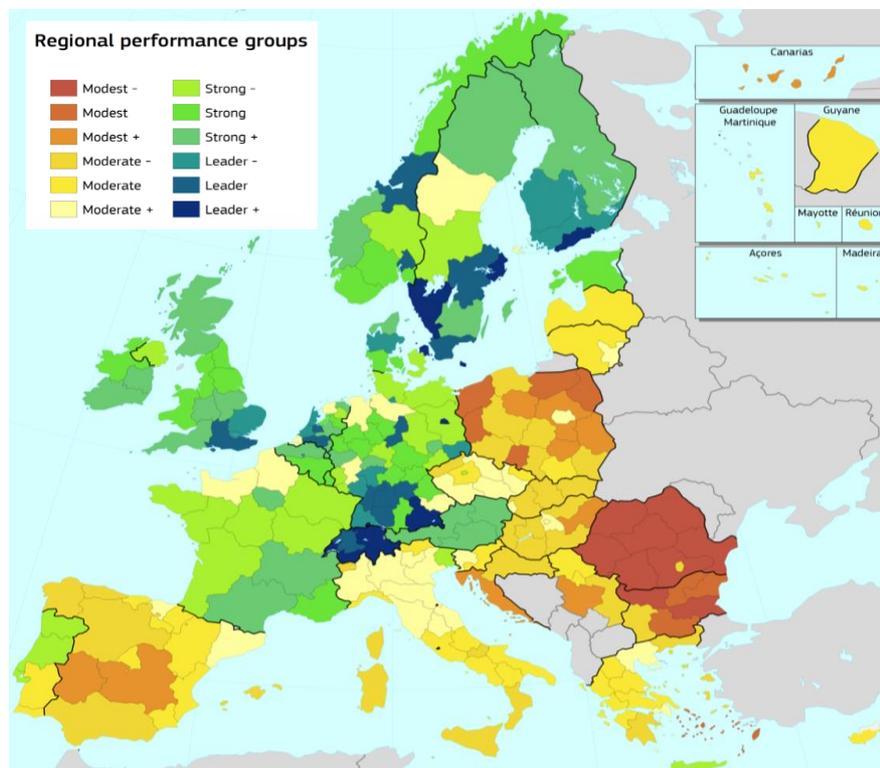
Local Innovation Pillar

Local Innovation Pillar was calculated based on two main indicators, respectively the number of employees in High Tech sectors (i.e. manufacture of basic pharmaceutical products and pharmaceutical preparations, manufacture of computer and electronic and optical products and manufacture of electrical equipment) and the number of students from every municipality. Thus, four of the most innovative cities were from Transilvania: Timișoara, Cluj-Napoca and Sibiu (see Fig. 7). These municipalities were followed by Iași (due the important number of students) and Baia Mare (due to the large number of employees from the selected innovative sectors).

Despite the innovation potential of some of the secondary cities in Romania, at regional level, Romania has the poorest scores in the EU in terms of innovation (see Fig. 6), with underperformance in such areas as R&D expenditures, public-private collaborations and firm innovations.

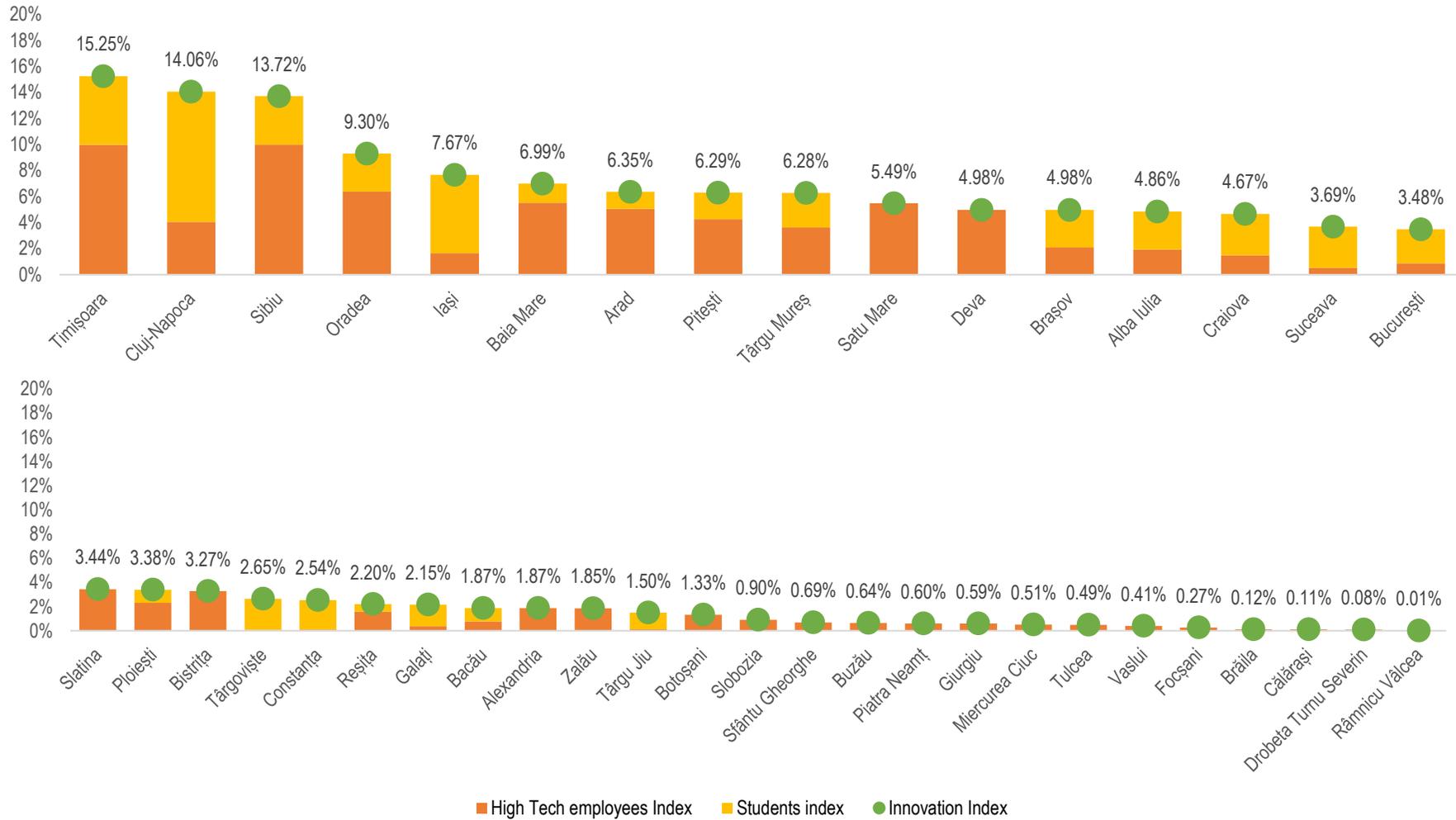
Comparatively with the entrepreneurship pillar, the local innovation pillar was more dynamic during the analysed period with more pronounced increases and decreases during the last years. Important improvements of the pillar in 2020 edition were in Oradea, Satu Mare, Slatina and Sibiu (see Annex 1). On the other hand, the index significantly decreased in Târgoviște (-7,8 p.p.) comparatively with 2018 edition.

Figure 6. Regional Innovation



Source: European Commission, Regional Innovation Scoreboard 2019

Figure 7. LBEI 2020 – Innovation Pillar



Local Financing Pillar

In current edition and in the previous editions of the LBEI index we calculated a specific sub-pillar in order to cover the dynamic of access to loans of non-financial companies in every county and how the private financing pillar contribute to business environment (alongside foreign investment and local banking infrastructure).

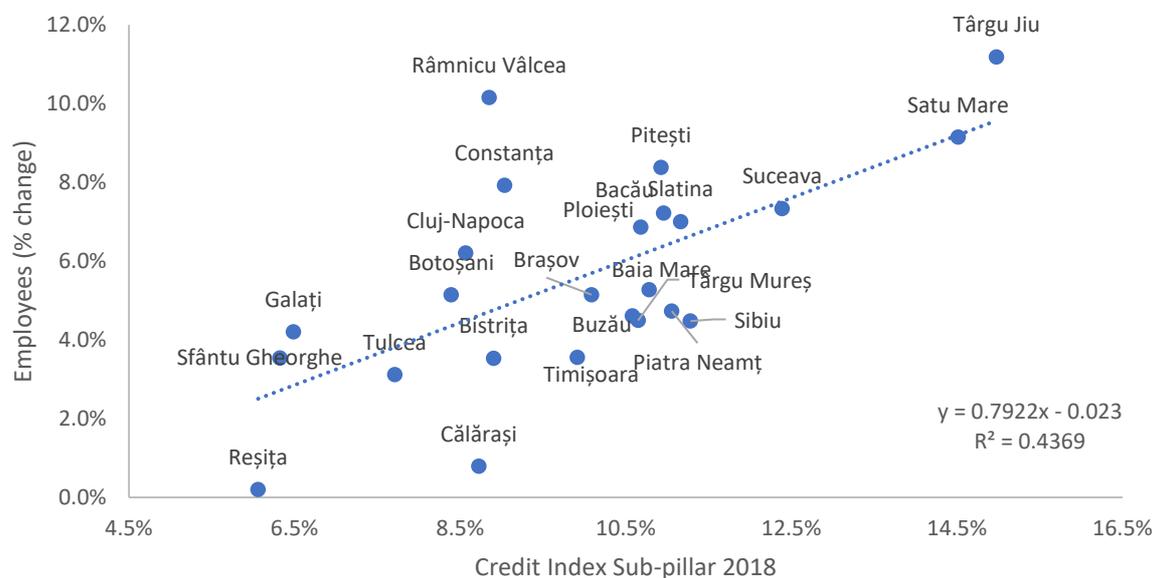
In Figure 8 below, we presented the relationship between credit index sub-pillar from 2018 edition and how it is correlated with the evolution of employees in the last three years. Also, we selected that municipalities were most influenced by the credit sub-pillar performances with the strongest relationship between variables.

We excluded from the figure municipalities like Deva, Alba Iulia, București, Focșani, Brăila, Giurgiu, Targoviște, Slobozia, Zalău, Oradea, Drobeta T. Severin, Arad, Iași, Craiova, Miercurea Ciuc, Alexandria, where the low level of correlation suggests that there are other relevant factors behind the employment growth.

The strength of the link is determined by the specific factors related with the local environment and by the structure of financing from the local companies (self-financing, intra-group financing via FDI, a more important role of local public authorities in employment, GDP evolution, tensions on the labour market, labour force deficit etc.)

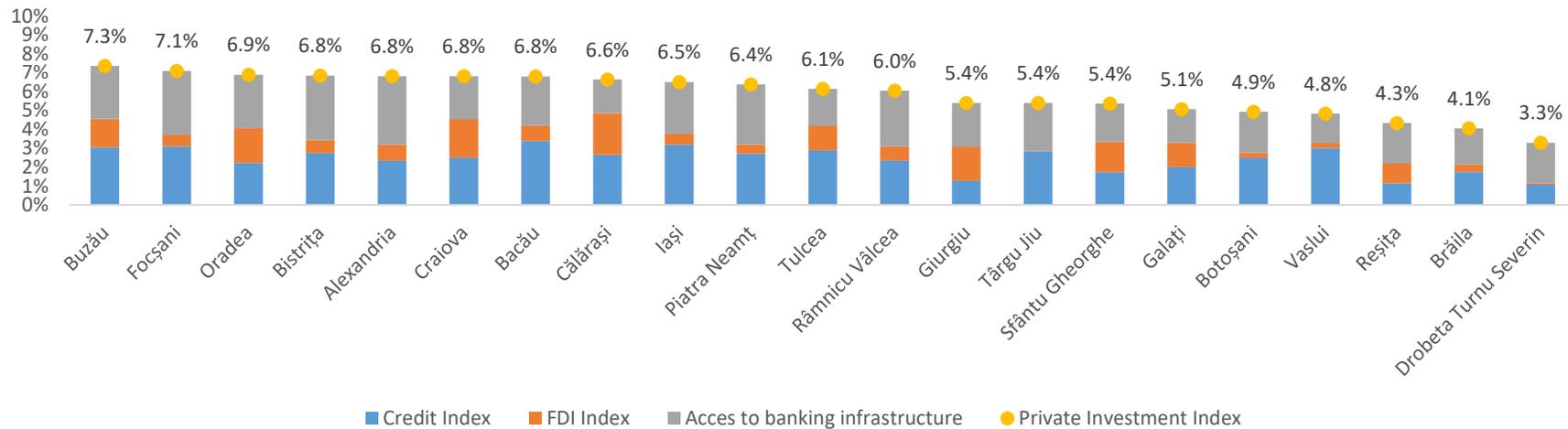
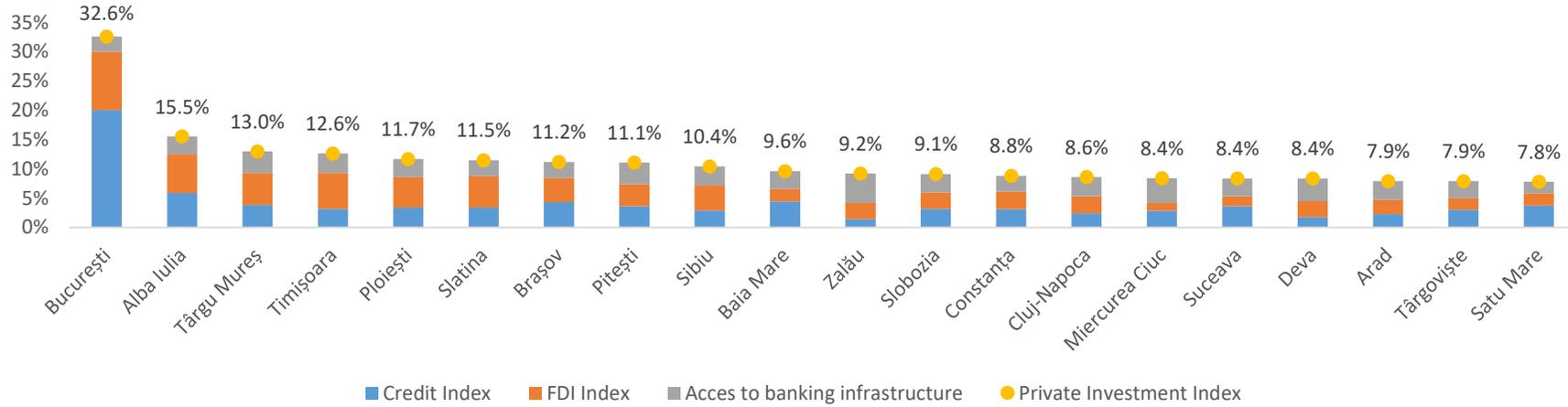
However, there are cities like Târgu Jiu, Satu Mare, Suceava, Pitești, Bacău, Ploiești and others where the high level of Credit sub-pillar index (i.e. lei and foreign currency loans to non-financial companies) succeeded in last three years in generating more jobs at local level.

Figure 8: Relationship between credit sub-pillar and employment growth



Source: Authors' calculations based on Eurostat and National Statistics Institute

Figure 9. LBEI 2020 – Financing Pillar



Local Public Support Pillar

Local public support represents one of the most important drivers for development at local level, and there are municipalities with good results, especially Cluj-Napoca, Alba Iulia, Sibiu and Arad. From the view of the public funds mix, the most balanced contribution at the index is in Cluj-Napoca (capital and EU funds expenditures). Excepting some municipalities like Zalău, Bistrița, Alba Iulia or Baia Mare, in the most cities the public expenditures are based on public budgets (see Fig. 11).

In comparison to the 2018 edition, Romanian municipalities have a mixed performance of the local public support pillar. Regardless of the public support type, some of them (Zalău, Giurgiu, Sibiu, Alba Iulia, Focșani, Oradea) increased and eventually spurred economic development (entrepreneurship, expenditures, firm revenues, employment, wages and, in general, local GDP growth), while the LPS index decreased for a large number of the municipalities (Timișoara, Craiova, Râmnicu Vâlcea, Ploiești, Slatina, Târgu Mureș) (see Annex 1).

If we correlate the LPS index performance with the nominal GDP per capita growth during the three editions of LBEI index (2017-2018; 2018-2019 and 2019-2020), there are some evidences that municipalities with better performances in terms of public administration (capital expenditures, EU funds expenditures, highways) succeed in their efforts to support economic growth – mainly expressed as GDP per capita increase rate (see Figure 10).

However, there are some municipalities (Timișoara, Craiova, Râmnicu Vâlcea) where despite the decrease of the LPS index, the nominal GDP per capita increased based on the other pillars – like innovation (see, for example, Timișoara).

Figure 10. Local Public Support and GDP Growth

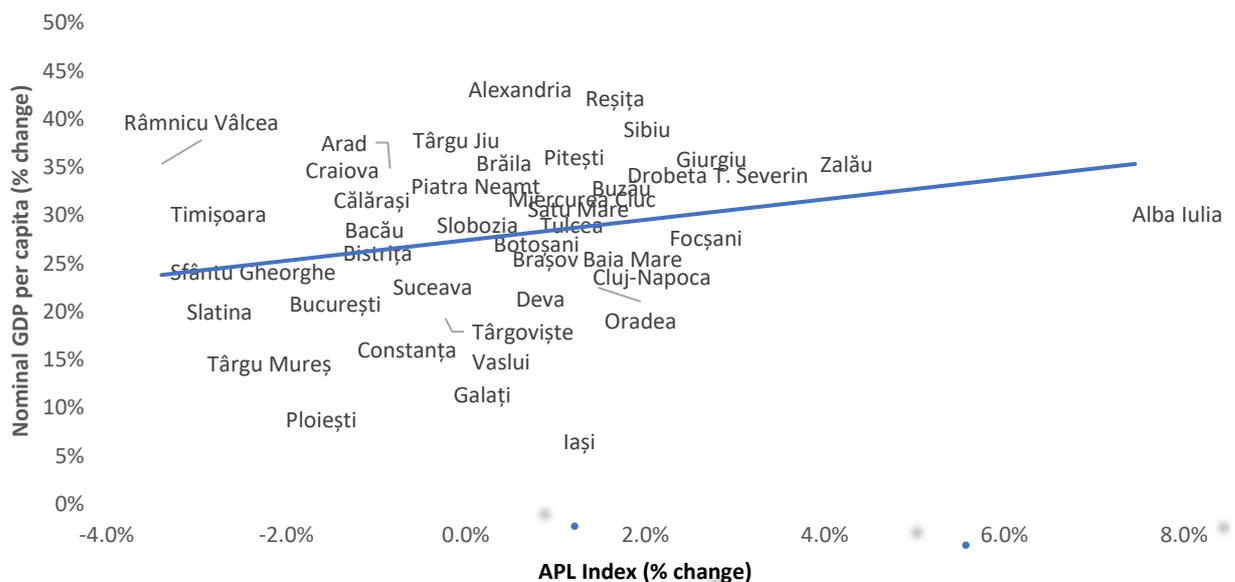
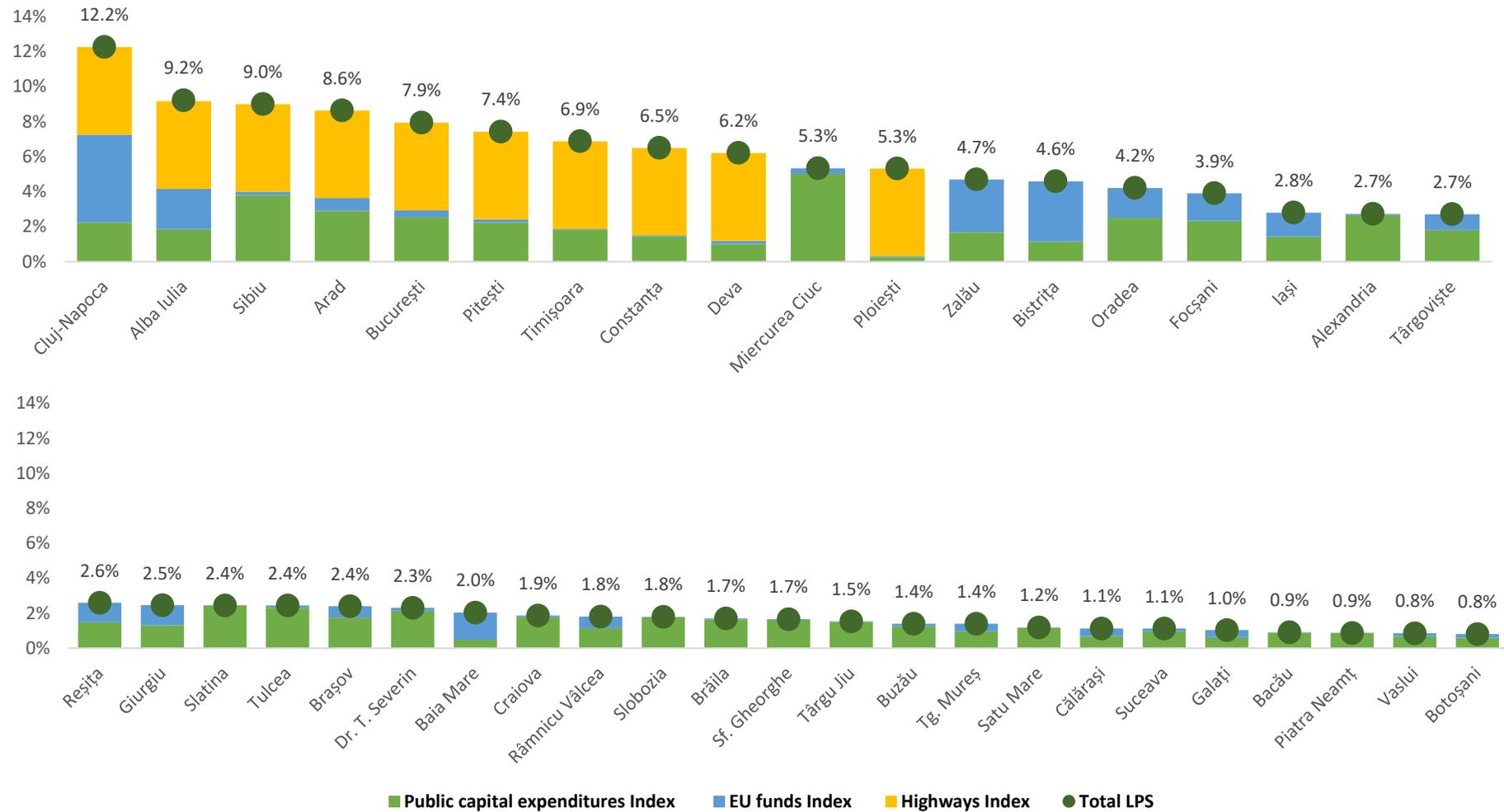


Figure 11. LBEI 2020 – Local Public Support Pillar

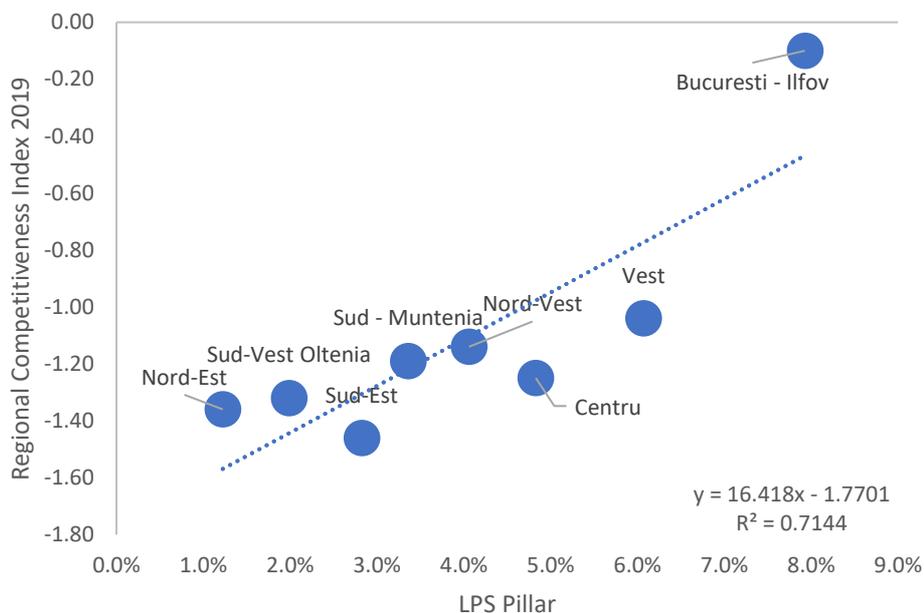


Moreover, based on our calculation and European Commission data¹ regarding Regional Competitiveness Index in EU the performance of local public administration is a very good predictor for the regional competitiveness (strong direct correlation, R-sq. = 71,4%), as we shown in the Figure 15 below.

As the local public authorities improve their level of performance in terms of capital spending in essential domains like education and healthcare, better EU funds absorption, access to infrastructure, the competitiveness of the region improves.

Additionally, the good performance of local administration is positively correlated with the sophistication level of companies from the region, the quality of capital spending and administrative capacity being directly correlated with a more sophisticated active firm.

Figure 12. Local Public Support and Regional Competitiveness



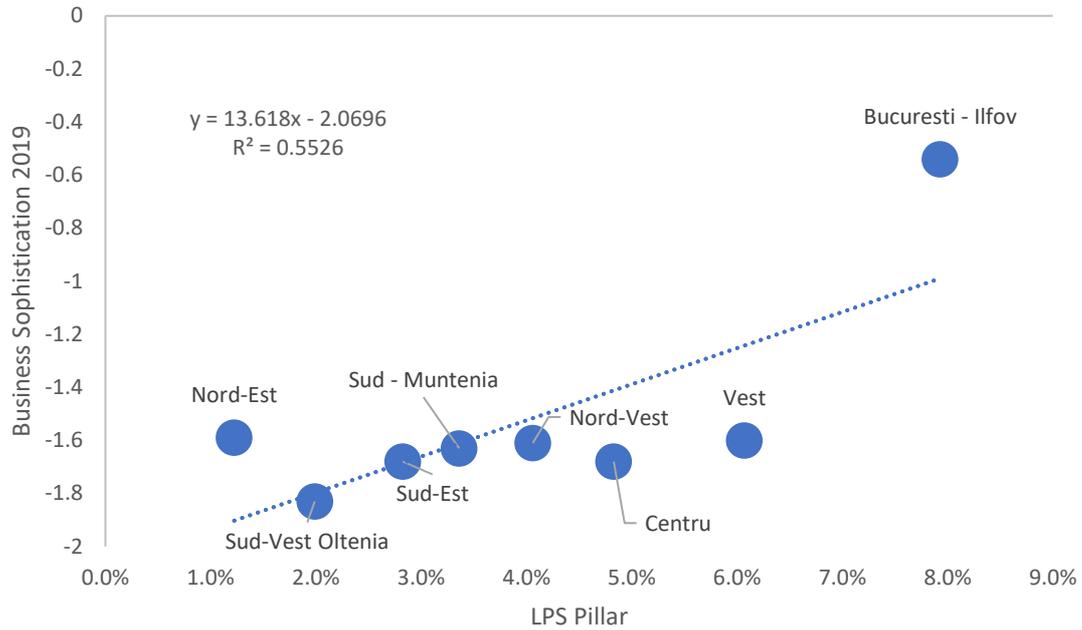
Source: Authors' calculations

Regarding the local public authorities, we look at the relationship between internet use within regional communities and among individuals for civil or political participation as a driver for better performances from the local public administrations.

Even that in Romania the use of internet in civil or political participation is relatively low comparative with Western Countries (8% of individuals in Romania, 29% in Denmark, 20% in Spain and Germany, 15% in Italy, 13% in France in 2017), there is a positive correlation between the use of internet in these areas and the LPS index, especially in more developed regions, as Bucharest-Ilfov, Center, West and North-West.

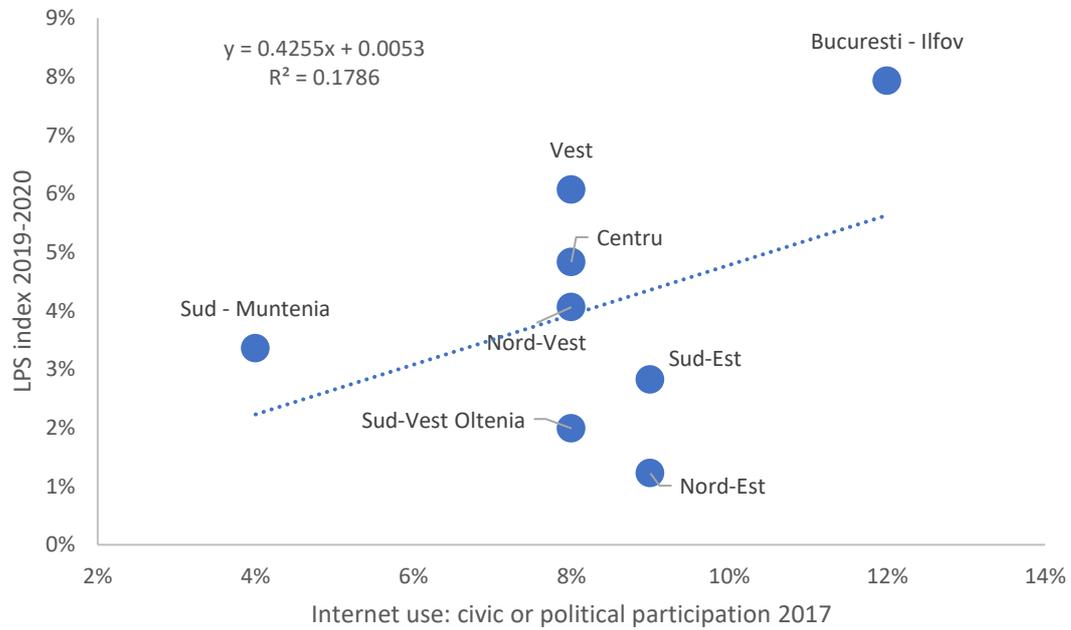
¹ See for more details https://ec.europa.eu/regional_policy/en/information/maps/regional_competitiveness/

Figure 13. Local Public Support and Business Sophistication



Source: Authors' calculations and European Commission - European Regional Competitiveness Index

Figure 14. Local Public Support and Digital Interaction with Citizens



Source: Authors' calculations; Eurostat

Annex 1. LBEI pillars evolution (2018-2020)

