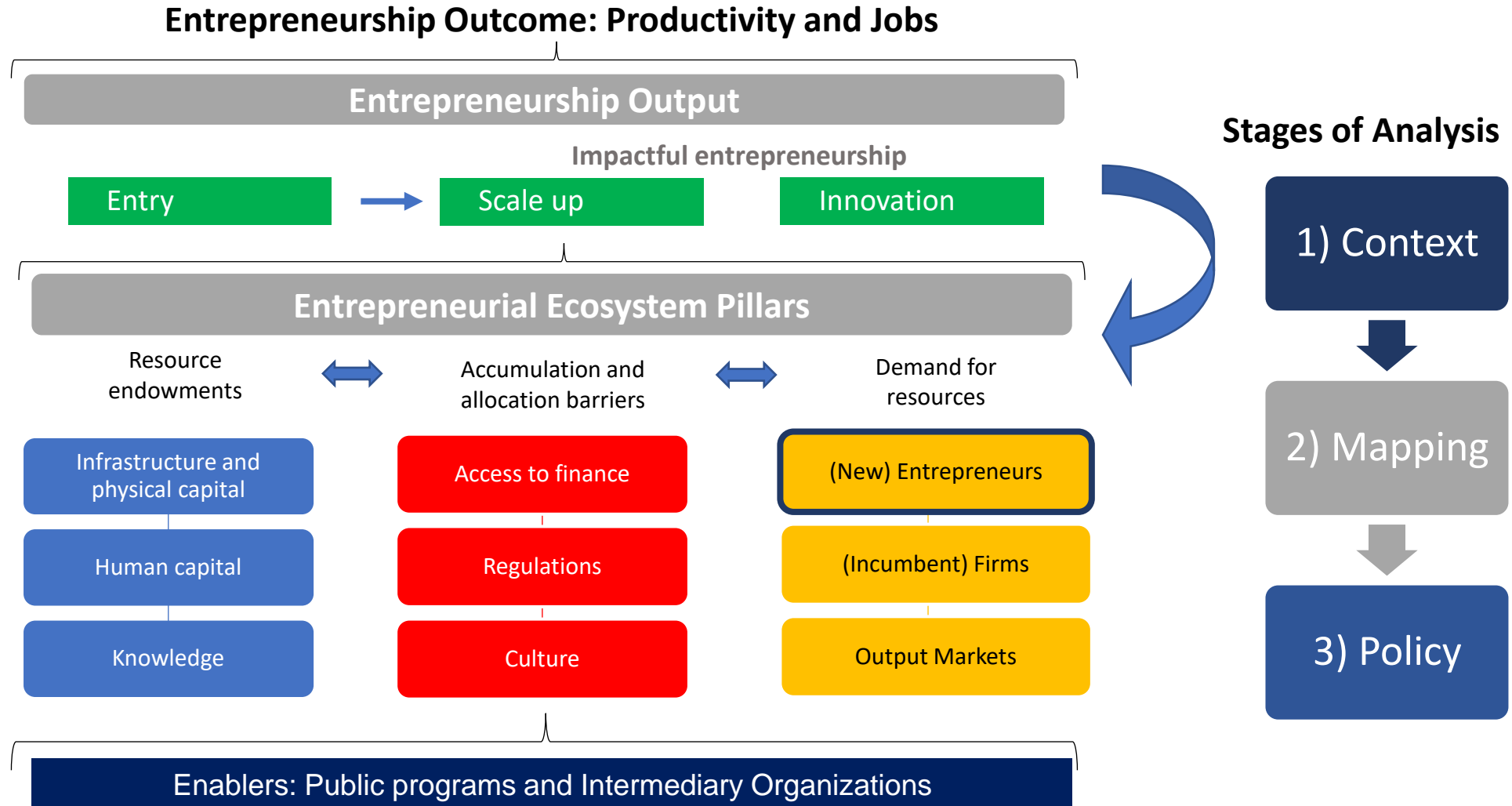


Developing Entrepreneurial Ecosystems for Digital Businesses and Beyond

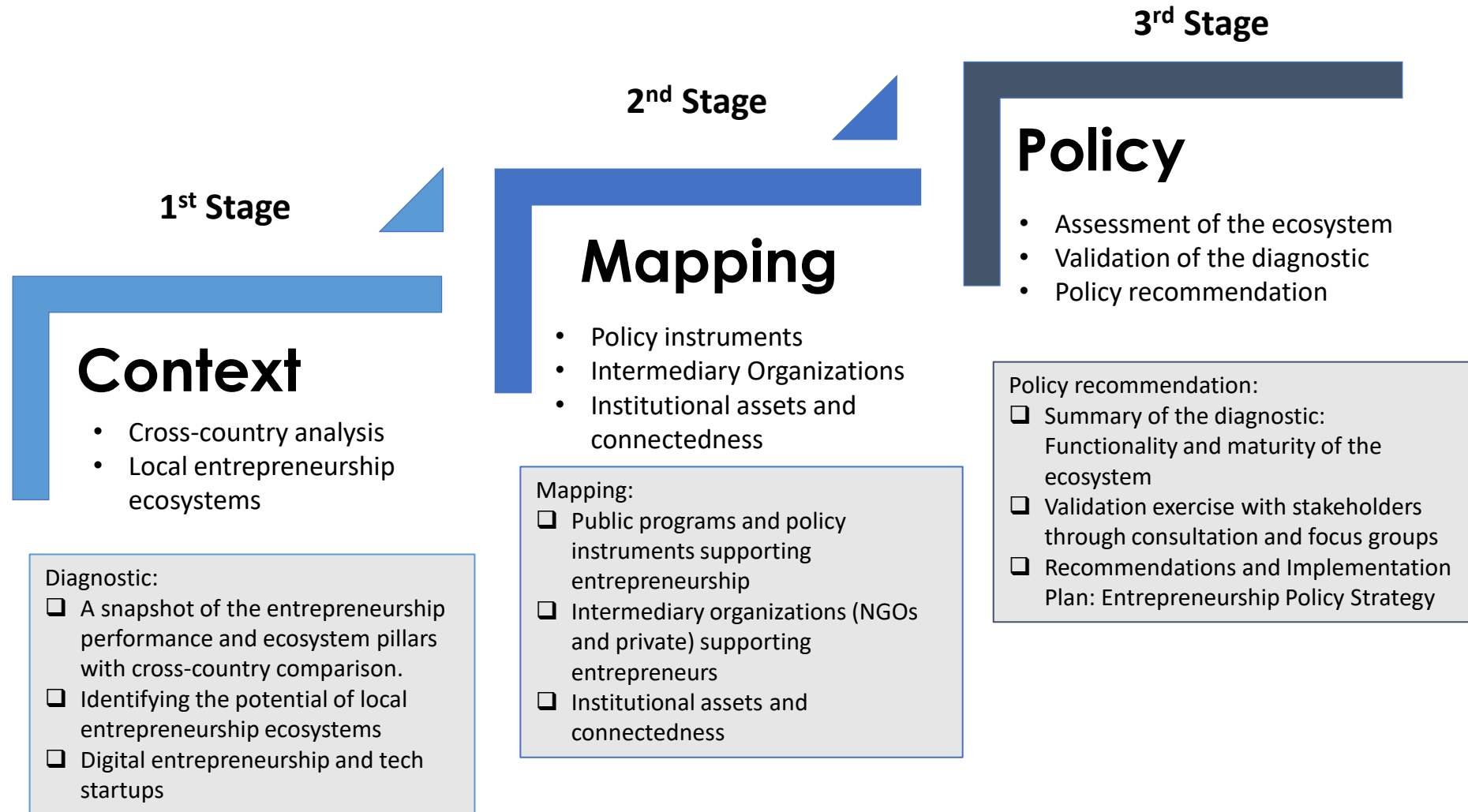


TDLC, Japan (December 2023)
Contact: Marcio Cruz, Juni Zhu

Conceptual Framework



Entrepreneurial Ecosystem Assessment



Entrepreneurial Ecosystem Assessment

Diagnostic Toolkit

Entrepreneurship Ecosystems (General)

Modules 1 and 2
Cross-country analysis
Local-ecosystem potential

Module 4
Public programs
Intermediary organizations

Module 6
Policy Recommendations

Digital entrepreneurship

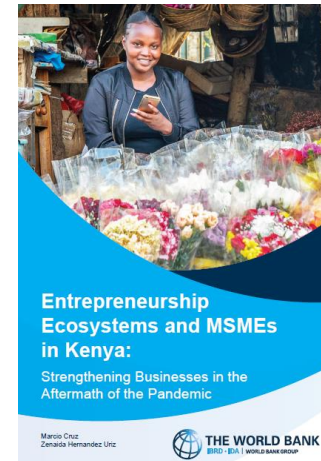
Module 3
Digital pathways and startups
(Adjusted modules 1 and 2)*

Module 4 and 5
Public programs
Intermediary organizations
Digital regulations

Module 6
Policy Recommendations

10+ Pilot countries

Kenya



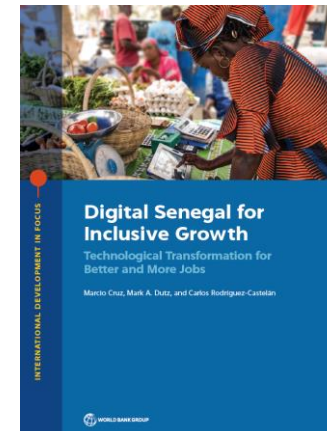
Romania



Mexico



Senegal



Vietnam



Central America



Identifying cross-cutting challenges with country benchmarking

Example: Romania

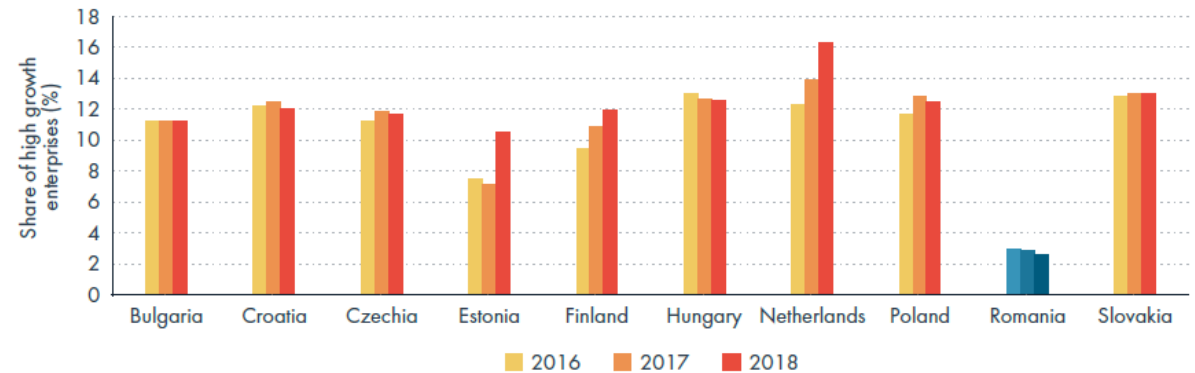
Business Creation Normalized by Working Age Population with Respect to Per Capita Income



Source: World Bank Group Entrepreneurship Survey and World Development Indicators.
 Note: BG = Bulgaria; EE = Estonia; FI = Finland; GDP = gross domestic product; HR = Croatia; HU = Hungary; NL = the Netherlands; PL = Poland; RO = Romania; SK = Slovakia. Year: 2019

Although Romania has a relatively high entry rate, its firms are less likely to achieve high growth.

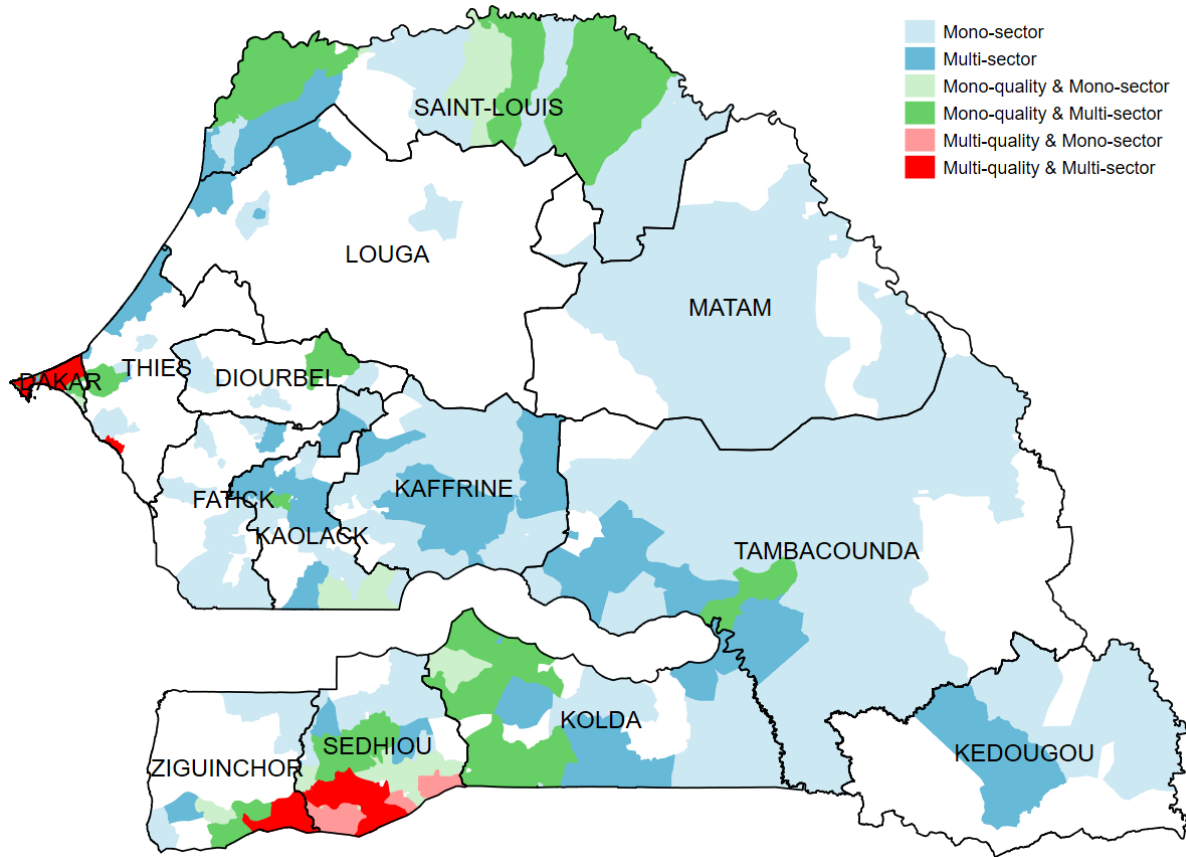
High-Growth Firms by Year



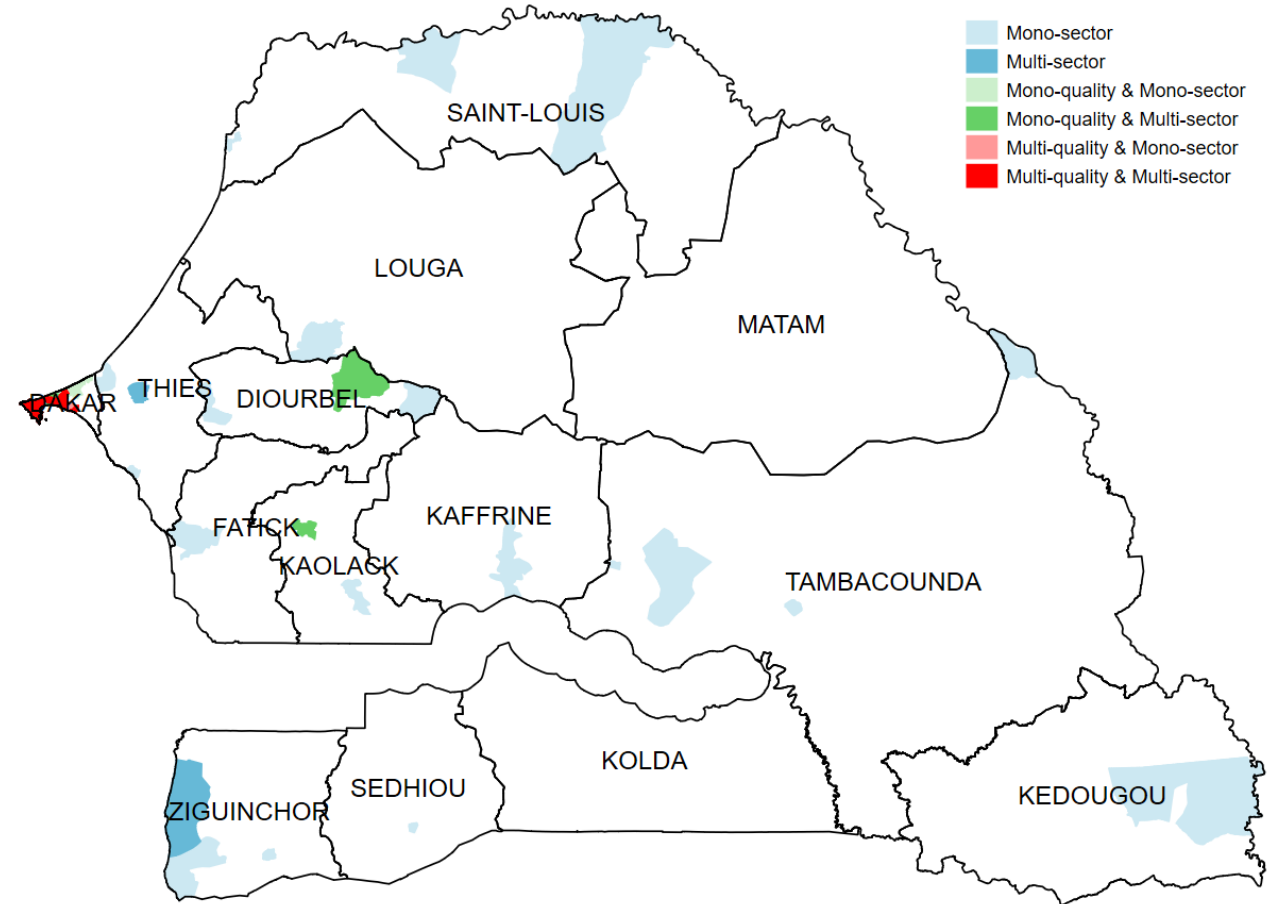
Source: Eurostat 2020.
 Note: Based on the OECD-Eurostat definition of high-growth firms.

Identifying local ecosystems with firm-level data

Local agribusiness ecosystems in Senegal

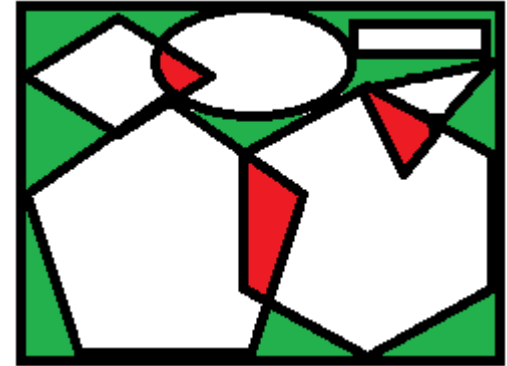


Local Digital ecosystems in Senegal



Mapping policy instruments

- Clarity on existing support mechanisms is crucial:
 - Several mechanisms across different agencies often coexist, without an overall picture
 - Policy advice often most valuable when improving existing initiatives, before suggesting new ones
 - Important to understand if interventions are connected and cover all areas/stages
 - Mapping informs policy conclusions of other modules
- Map both (i) public programs and (ii) intermediary organizations (IOs)
- Answer questions on:
 - What are the resources, main objectives and characteristics of existing public programs/IOs
 - Do they follow best practices?
 - Is the policy mix consistent with the policy objectives and covering key pillars of the ecosystem?
 - Where are there redundancies or gaps in policy?
- Mostly use administrative/budget data and standard surveys in partnership with the government



There are complementarity between public programs and intermediary organizations, but they lack further coordination and evaluation

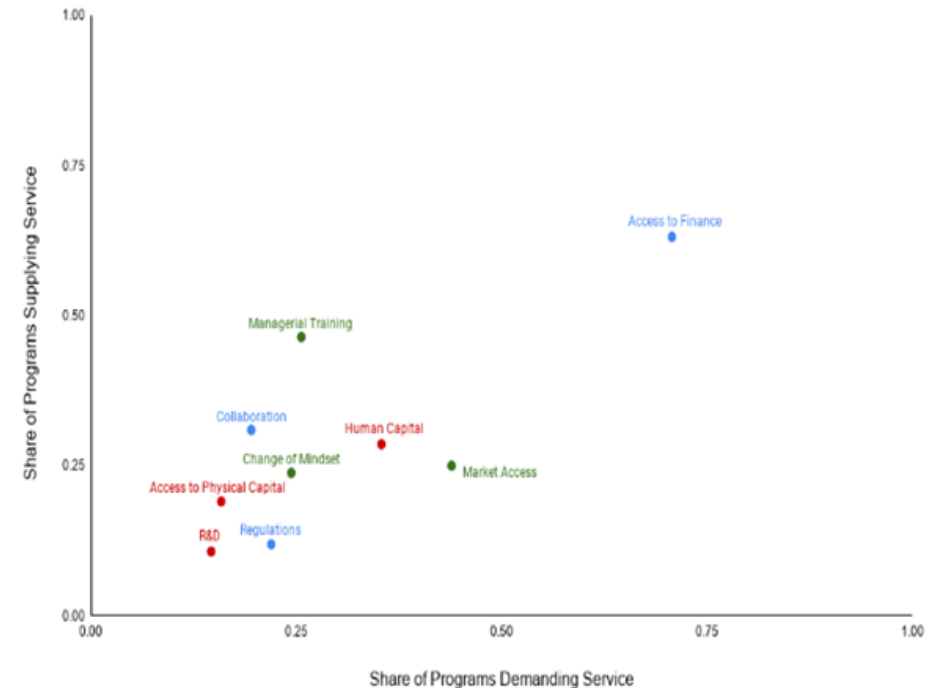
Mapping 27 public programs and 62 intermediary organizations in Kenya

- About 65% of public programs and IOs do not conduct rigorous evaluation
- A large share of IOs receive resources from government and donors

Table 10. Heat map: allocation of budget by sector and service provided (the darker the color the more budget allocated)

	Ecosystem pillars/ Sector	No sector	Agriculture	Manufacturing	Other services
Supply pillars	Physical	Light Green	Light Green	Dark Green	White
	Human	Light Green	Light Green	Dark Green	White
	Knowledge	White	Light Green	Light Green	White
Barriers	Access to finance	Light Green	Light Green	Dark Green	Light Green
	Regulations	Light Green	White	White	White
	Culture/Network	Light Green	White	Light Green	White
Barriers	Market access	Light Green	Light Green	White	Light Green
	Managerial training	Light Green	White	Light Green	White
	Change of mindset	White	Light Green	White	Light Green

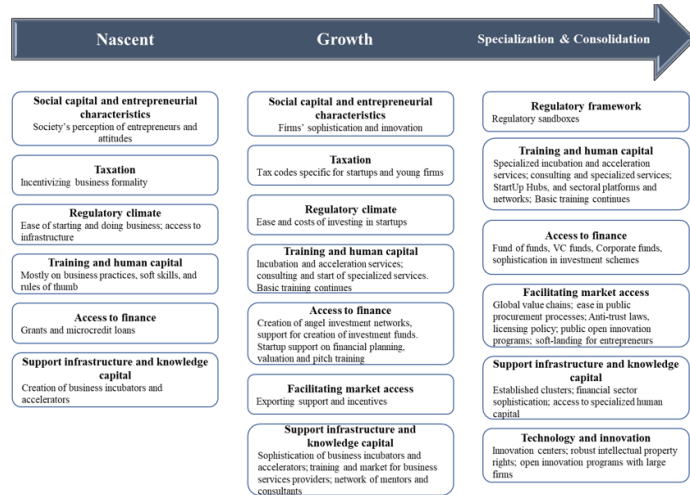
Supply of services versus main barriers identified by program managers



Policy Recommendations

The toolkit provides a conceptual framework, existing evidence, and a process to create and prioritize a policy-mix that can unbind existing constraints and exploit complementarities

Romania example



Policy area	Category	Evidence	Success/Failure factors
Training and capacity building	Trainings	<p>Trainings is one of the main mechanisms that governments have implemented across developing countries. Evidence on the impact of such trainings is mixed, but on average, it seems to have a positive effect on sales (+5.6%) and profits (12.1%).</p> <p>However, results highly depend on the population being treated, the duration of the training, and the quality of the trainers. In most cases, the impacts on better management practices are short-lived and that might hinder the impact that trainings can have.</p>	<p>* Quality of trainers and intervention matters</p> <p>* Although positive impacts are found, a cost-benefit analysis needs to be done in each case to evaluate if the monetary value of the profits increase would be cost-efficient</p> <p>* Programs that incorporate behavioral and operational mechanisms (e.g. follow-ups, mentors, reminders) to incentivize entrepreneurs to keep implementing good practices can generate</p>

Validation with Stakeholders (Focus Groups)

Diagnostic

Instruments available

POLICY RECOMMENDATIONS	PRIORITIZATION	TIME SENSITIVE	QUICK WIN
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Establish a one-stop agency "Ecosystem Hub"	Mission critical !!	Yes ⌚	Yes 🏆
Strengthen ecosystem enablers	Flagship ▶	Yes ⌚	
Create a startup fund	Flagship ▶		
Improve Entrepreneurship Education and strengthen the role of Universities in the ecosystem	Flagship ▶	Yes ⌚	
Implement Startup Visa Program	Flagship ▶	Yes ⌚	Yes 🏆
Build and promote a network of Romanian founders and diaspora	Flagship ▶		
Scale-up through exports	Flagship ▶		
Incentivize innovation to foster knowledge spillovers into the private sector	Foundational longterm 🏠	Yes ⌚	
Promote the digital economy	Foundational longterm 🏠	Yes ⌚	



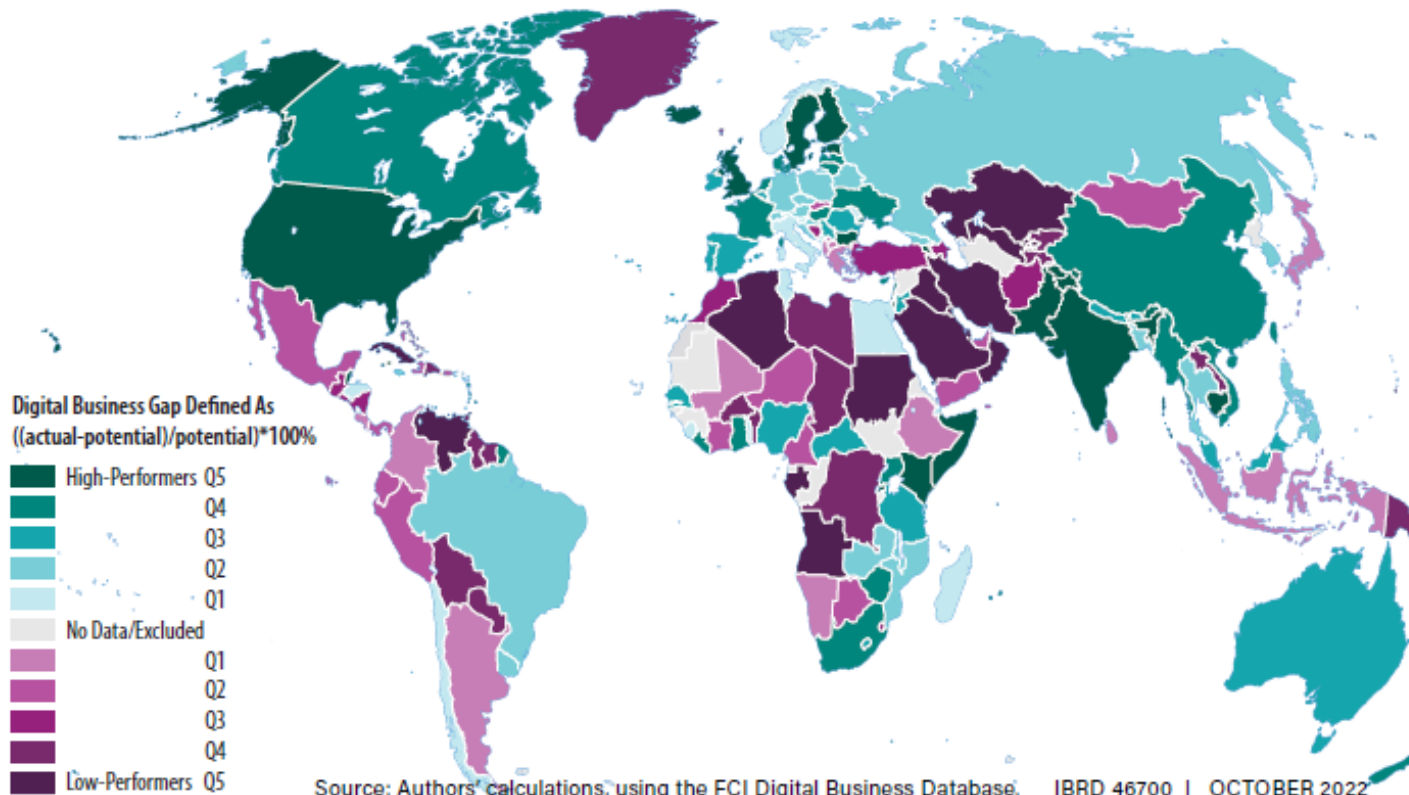
Why Digital Entrepreneurship?

Digital entrepreneurs are not just R&D researchers. They are also “strivers”, who are trying to elbow their way up, not only in economic terms, but also in matters of ideas, spirit, and attitude.

Most entrepreneurship support programs in countries *de facto* pivot resources to support this group of highly dynamic, well-educated, and well-connected entrepreneurs because they are more likely to be successful and create impactful businesses and good jobs.

But the global digital business landscape is uneven, with some large countries and companies dominate the market.

Digital Business Density Across Countries



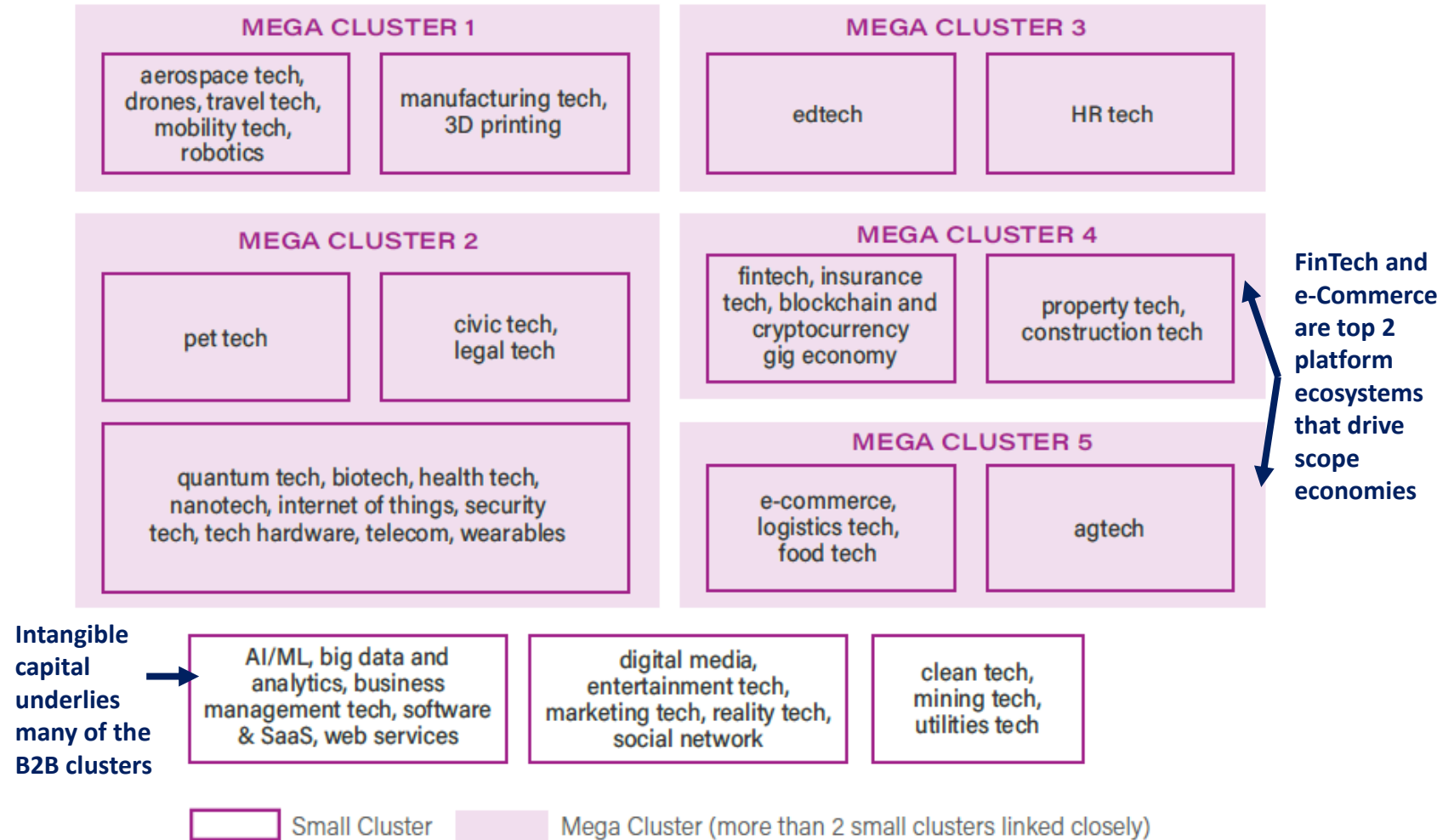
Top 20 High-Performing Countries by Digital Business Density After Controlling for Population and GDP

- | | |
|-------------------|--------------------|
| 1. Estonia | 11. Pakistan |
| 2. Kenya | 12. Singapore |
| 3. India | 13. Sweden |
| 4. Israel | 14. Bulgaria |
| 5. United Kingdom | 15. Cayman Islands |
| 6. United States | 16. Canada |
| 7. Iceland | 17. Lebanon |
| 8. Armenia | 18. Vietnam |
| 9. Cambodia | 19. Myanmar |
| 10. Finland | 20. South Africa |

Why Digital business models favor large markets and large companies?

- **Scope economies at play (not just scale economies):** 60% of digital firms in the world provide solutions in more than one product market (e.g., e-Commerce firms also provide services in LogisticTech, AgTech, FoodTech). The ability to scale and expand to multiple product markets to recruit and lock-in users and build network effects is the core competency and value of a digital business → birth of platform ecosystems.

- **Intangible capital accumulation** (data, capabilities, software licenses) are needed to build good quality digital products, but big techs are likely accruing most of these intangible capital, making it a major challenge for developing countries to catch up.



Source: Based on 200,000 digital businesses globally; Uniform Manifold Approximation and Projection (UMAP) was used for this analysis; this is a dimension reduction technique in data science to visualize sparse multidimensional data and examine both local and global structures of clusters.

This concentration pattern doesn't mean smaller countries have no prospects. Countries can have different digital entrepreneurship growth pathways, considering four minimum prior conditions.

I. Digital market size

As market size matters for network effects and economies of scope, a country's number of digital businesses is influenced by GDP and population (critical mass of demand for digital solutions)

II. Availability of financing

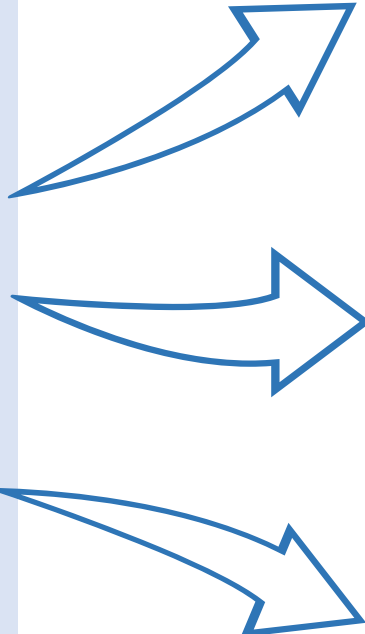
Digital startups have different financing needs than other startups (e.g., need to scale faster, lack of tangible assets) – VCPE markets

III. Regulatory environment for the digital economy

Digital entrepreneurship requires digital market regulations that encourage the adoption of digital businesses models, support them to scale, and allow them to engage in equitable competition, especially vis-à-vis big techs

IV. Digital infrastructure, digital payments and digital skills

Digital pathways have traditionally been affected by other pre-conditions of the digital economy

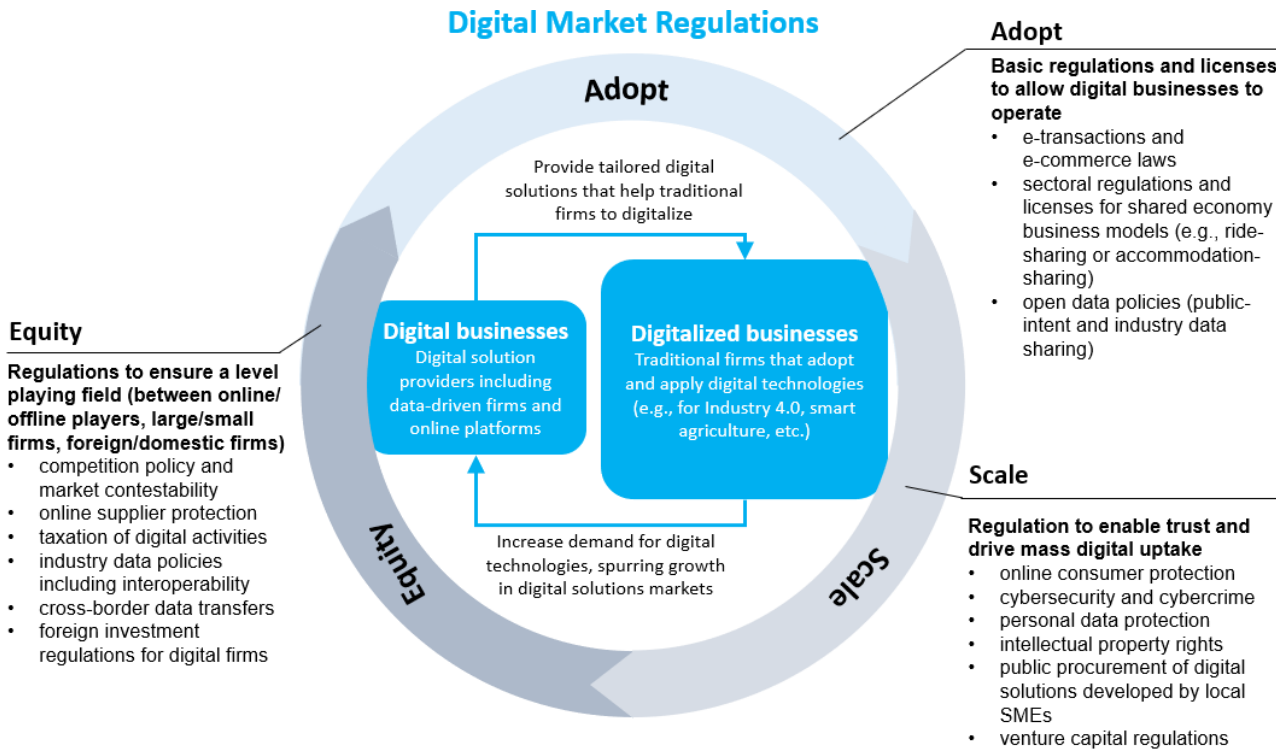


Type 1: Large economies like BRICs countries have sufficient domestic market size that allows digital startups to develop minimum viable products (MVPs) and reach scale, before international expansions. [China, India, Nigeria]

Type 2: Small, open economies with progressive policies compensate for their limited market size and serve as the “regional gravity” of digitalization, e.g., by adopting bold policies on tech experimentation, cross-border flows of data and talent attraction and retention. [Estonia, Armenia, Ghana]

Type 3: Small, closed economies are in a difficult position to grow their digital entrepreneurial ecosystems, but can consider tapping into regional hubs and driving digital adoption first, to eventually build up the culture and capability of entrepreneurship

New types of digital market regulations will affect digital entrepreneurs. Prioritize digital policies tailored to countries at different digital development levels following the ADOPT-SCALE-EQUITY framework.



Next phase of this digital market regulation tool is to put in center the enforcement capabilities of government agencies, including the use of sandboxing, co-regulation mechanisms with the private sector.

Table 1: Performance assessment of Vietnam's regulations for digital businesses (heat map)

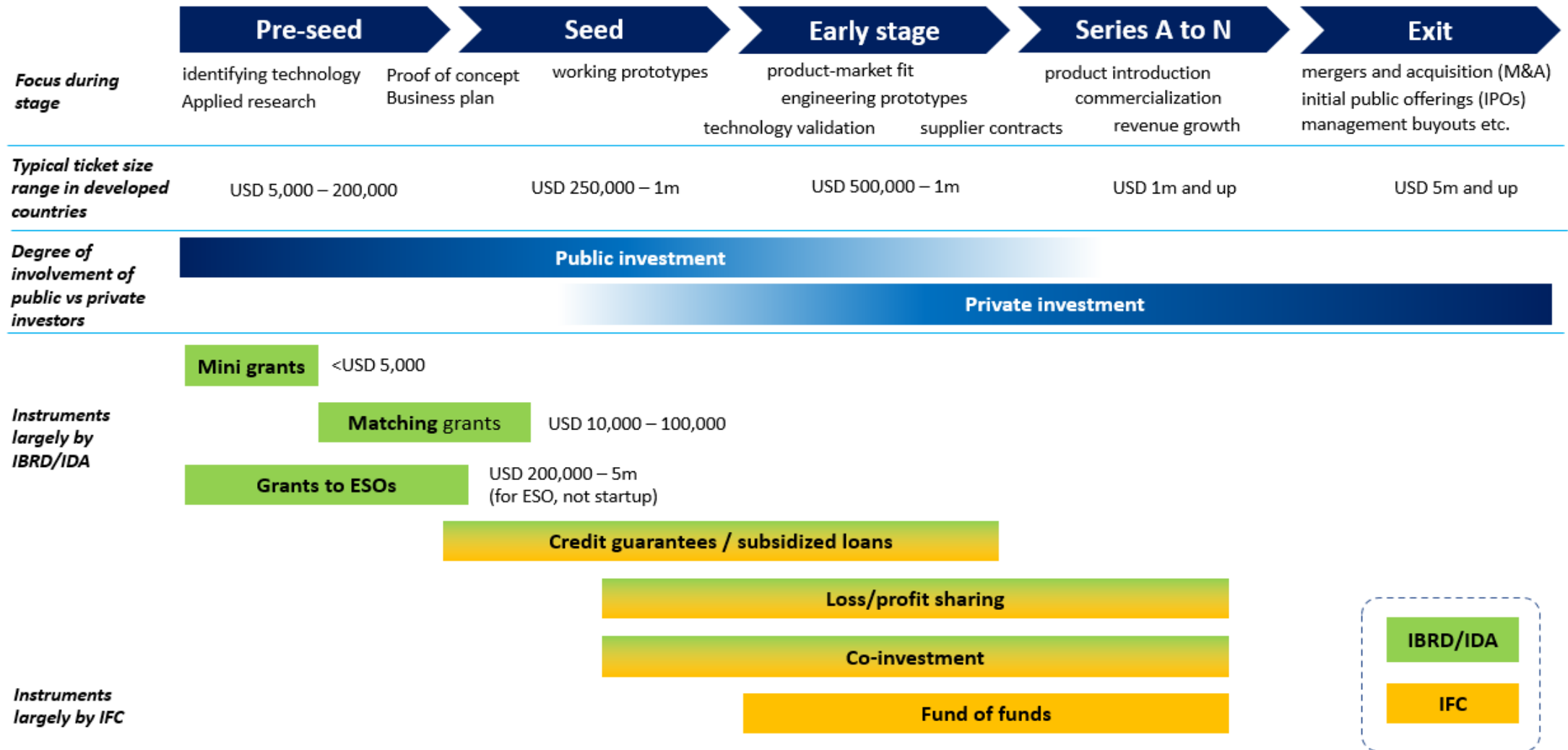
Regulatory areas		Performance
Adopt	E-transactions (e.g., regulations related to e-signatures, e-documents, e-invoices)	Green
	Cross-border data transfers (e.g., limitations on cross-border data transfer such as data localization requirements)	Yellow
	Regulations on gig economy platforms	Red
Scale	Ridesharing (e.g., licensing and background-checking of drivers, insurance)	Green
	Gig economy overall and accommodation-sharing (e.g., classification of gig economy workers as independent contractors or employees, required licenses/permits, zoning rules, host protection, taxation)	Red
	Personal data protection ¹ (e.g., processing of personal data such as the collection, storage, transfer and use of data; rights of data subjects; obligations of data controllers and processors)	Yellow
	Cybersecurity and cybercrime law (e.g., technical/organizational measures for protecting personal information and critical information systems; measures against cybercrimes)	Yellow
	Online consumer protection (e.g., responsibilities of organizations/individuals trading goods and services to consumers; dispute settlement for e-commerce transactions)	Yellow
	Online supplier requirements and protection (e.g., requirements for supplier-platform relations in e-commerce such as notification of changes in terms and conditions, transparency stipulations, MFNs)	Red
Equity	Intellectual property protection and public procurement (e.g., IPR protection, including copyright, industrial property rights; rules for participation in public procurement)	Yellow
	Open data policy and industry/non-personal data sharing (e.g., regulation of the ownership of non-personal or business data; rules to ensure certain data are available for businesses)	Red
	Competition policy and contestable digital markets (e.g., regulation of anti-competitive agreements, abuse of a dominant market position; prohibition of unfair competition practices, rules for mergers and acquisitions)	Yellow
	Taxation of digital activities (e.g., registration and taxation of digital businesses; harmonization of taxation between online and offline businesses)	Yellow

¹ Rating is due to the draft Decree on Personal Data Protection being delayed and not yet enacted.

Red	The legal framework is lacking key laws or has provisions that are significantly outdated.
Yellow	Relevant legislative provisions are in place but are not in line with international good practices or are lacking adequate implementation measures.
Green	Adequate legislation is in place and may only require partial improvements.

This is the [link](#) to the digital market regulation survey instrument with de jure and de facto questions.

Here is a list of key financing instruments in supporting tech startups. Key is to ensure the government “grant” portion focuses on financing “additionality” only, i.e. more risky technologies, and there are mechanisms for firms receiving grants to graduate to more private investor-driven credit or equity funds later, i.e. no “grant-hopping”.



Implementation of developing tech startups ecosystem: Lessons Learned in 20+ countries in the last decade

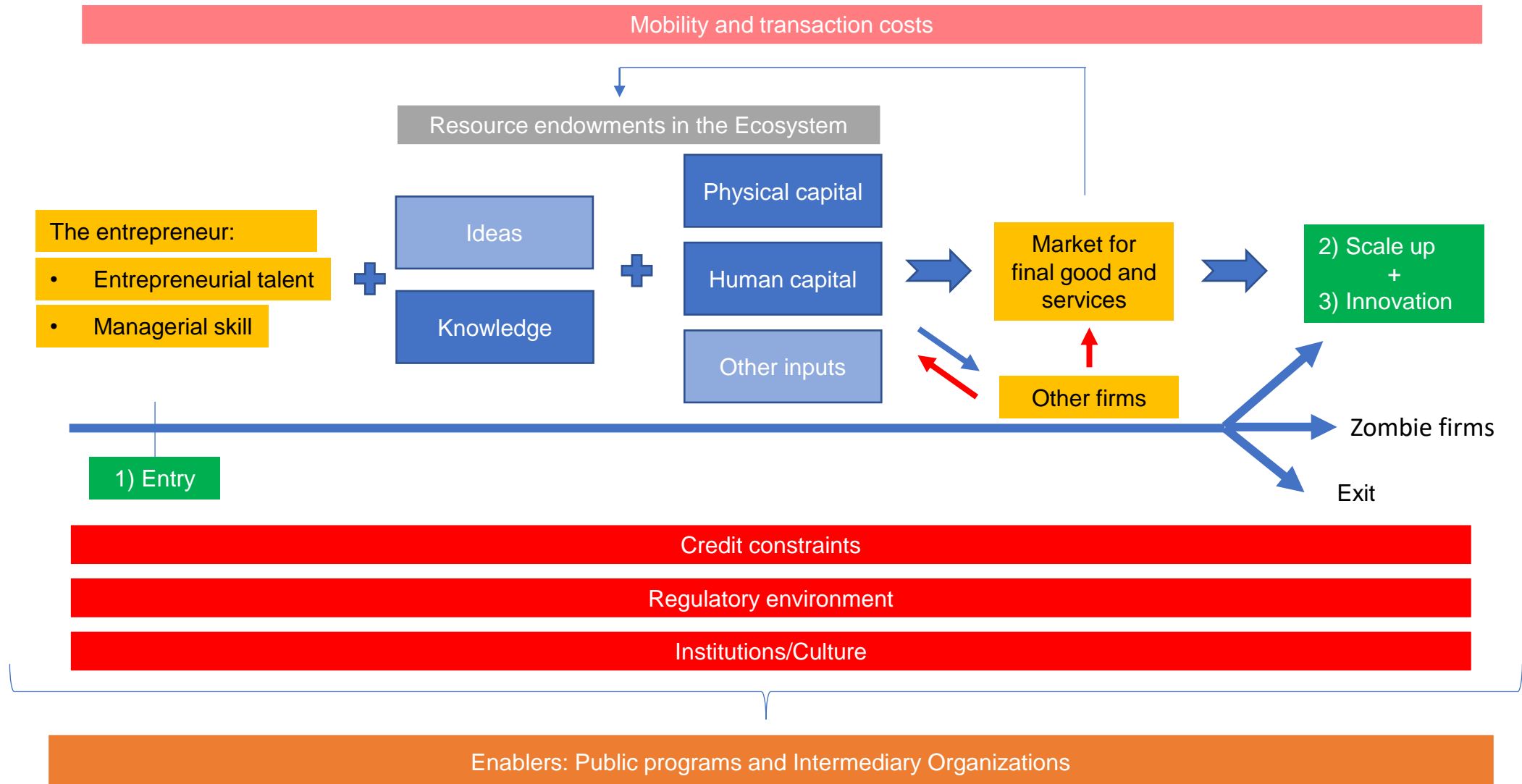
- Whether the classic **Silicon Valley–style** early-stage technology financing model works particularly well in many emerging markets is questionable. The lack of deal flows, difficulty in scaling up quickly (because of shallower markets, a small middle class, a more conservative corporate sector, weak enabling infrastructure, and hesitancy toward some digital business models), and general business regulation challenges mean that there is not the exit market (and returns) that fuels the US model.
- Expectations about entrepreneurship and its potential need to be managed. There is much discussion about **unicorns** (and “creating unicorns” is often a stated goal of entrepreneurship-support strategies). But the type of hyper growth that creates unicorns is very rare in emerging markets given shallow markets, talent shortages, and many other challenges.
- Ensuring incubation and acceleration centers have quality personnel and **a commercial approach is vital**. Too many ecosystem-support organizations are run in an amateur fashion by governments or universities or as property management ventures (for example, co-working spaces). They are rarely financially viable without subsidies at any stage of their operation and need several years of support before being able to stand on their feet (if ever)—rendering such facilities costly and often ineffective. Public or donor support to such ecosystem-support organizations needs to be contingent on the presence of a realistic commercial business model and performance-based indicators that capture the quality of their services (for example, the number of ventures that actually scale up in the medium term and not just the number of start-ups created).

Discussion

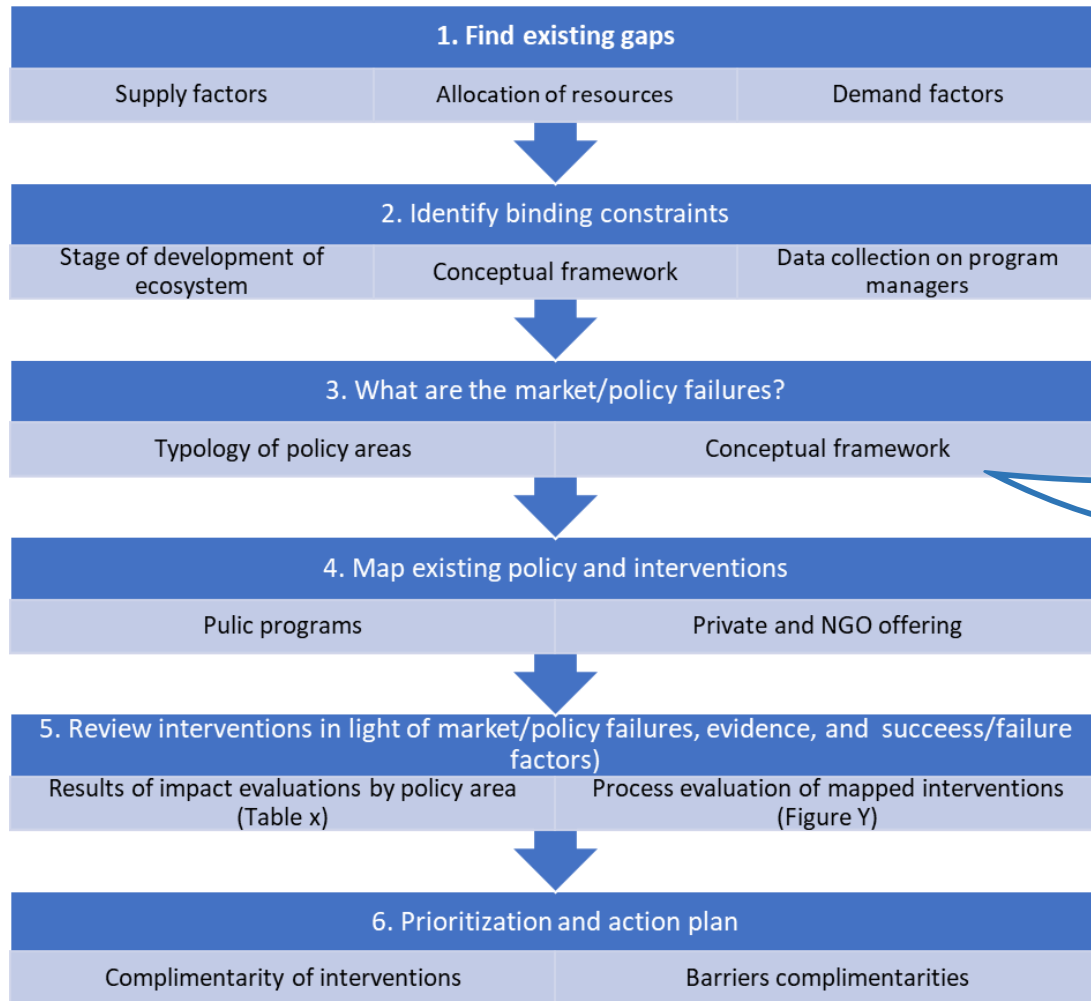
Thanks!

For more information on the toolkit, please visit this [link](#).

Introduction: The Entrepreneur's Problem



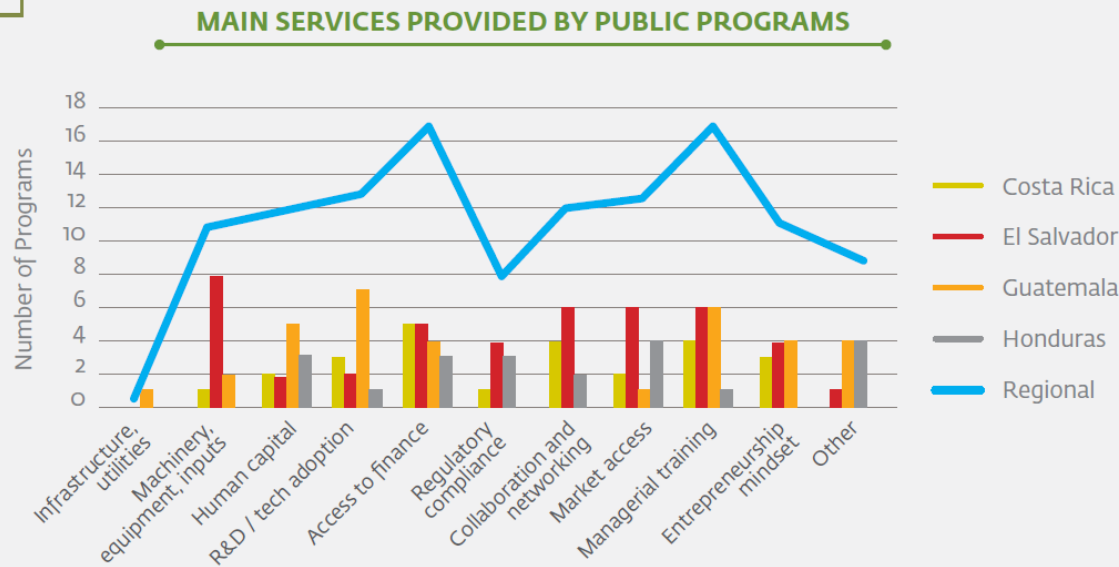
From the toolkit to practice: Romania's policy-mix prioritization



POLICY RECOMMENDATIONS	PRIORITIZATION	TIME SENSITIVE	QUICK WIN
Recalibrate the policy mix for starting and scaling high quality innovative firms by (a) Improving the functionality of instruments, and (b) Implementing a comprehensive package of reforms tailored to high quality innovative firms	Mission critical !!	Yes ⌚	Yes 🏆
Reform regulations to strengthen entrepreneurship & investments	Mission critical !!	Yes ⌚	Yes 🏆
Establish a one-stop agency "Ecosystem Hub"	Mission critical !!	Yes ⌚	Yes 🏆
Strengthen ecosystem enablers	Flagship ▶	Yes ⌚	
Create a startup fund	Flagship ▶		
Improve Entrepreneurship Education and strengthen the role of Universities in the ecosystem	Flagship ▶	Yes ⌚	
Implement Startup Visa Program	Flagship ▶	Yes ⌚	Yes 🏆
Build and promote a network of Romanian founders and diaspora	Flagship ▶		
Scale-up through exports	Flagship ▶		
Incentivize innovation to foster knowledge spillovers into the private sector	Foundational longterm 🏠	Yes ⌚	
Promote the digital economy	Foundational longterm 🏠	Yes ⌚	

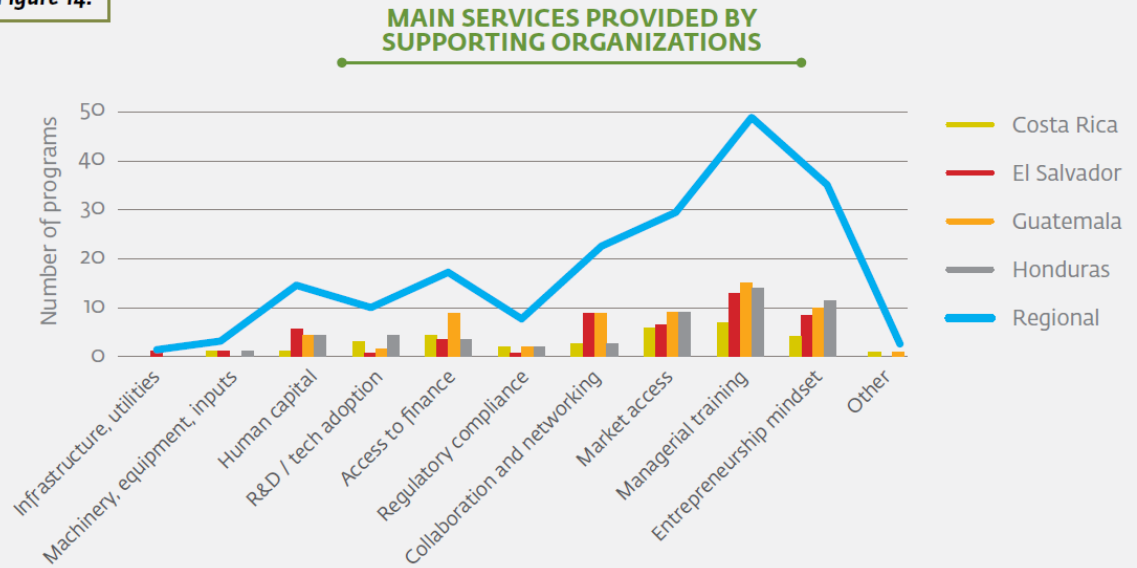
Policy mix mapping - LAC example

Figure 13.



Source: World Bank Entrepreneurship Enabler Survey 2020.
 Note: The line labeled "Regional" is the sum of responses from Costa Rica, El Salvador, Guatemala, and Honduras.

Figure 14.



Source: World Bank Entrepreneurship Enabler Survey 2020.
 Note: The line labeled "Regional" is the sum of responses from Costa Rica, El Salvador, Guatemala, and Honduras.

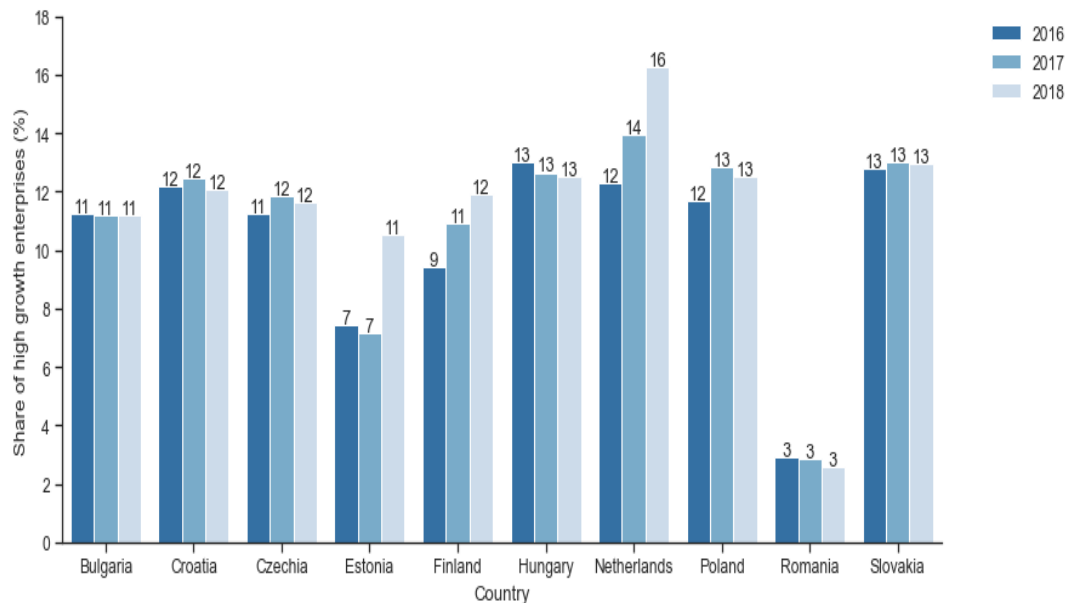
Starting Up (1): Entrepreneurship Ecosystems in Romania

Cross country analysis: high-level messages

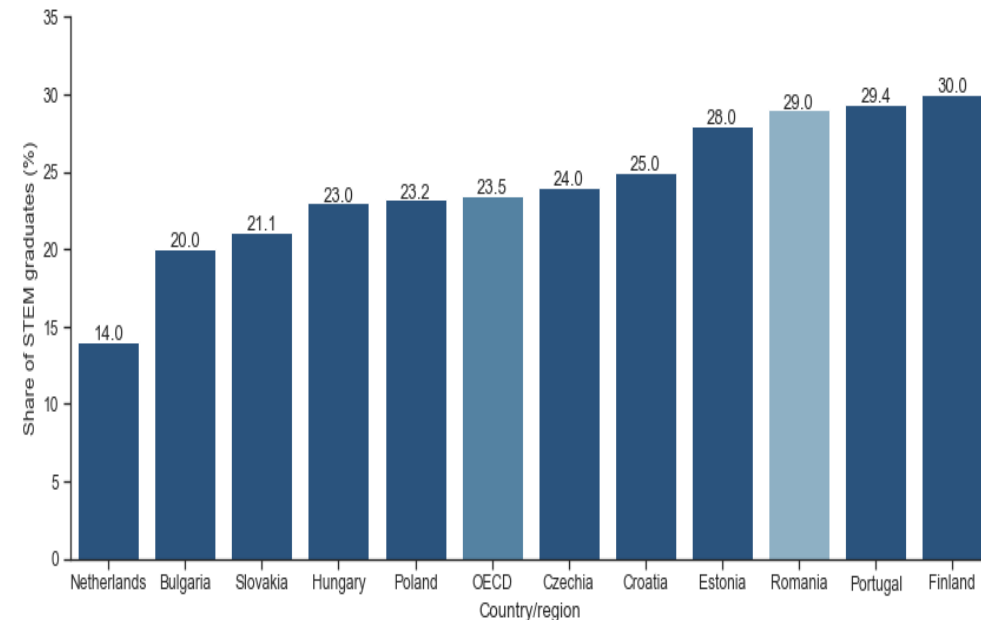
There is a lack of high-growth and innovative entrepreneurship

The availability of human capital in Romania is an opportunity to improve the quality of entrepreneurship

Share of High-Growth Firms among All Firms



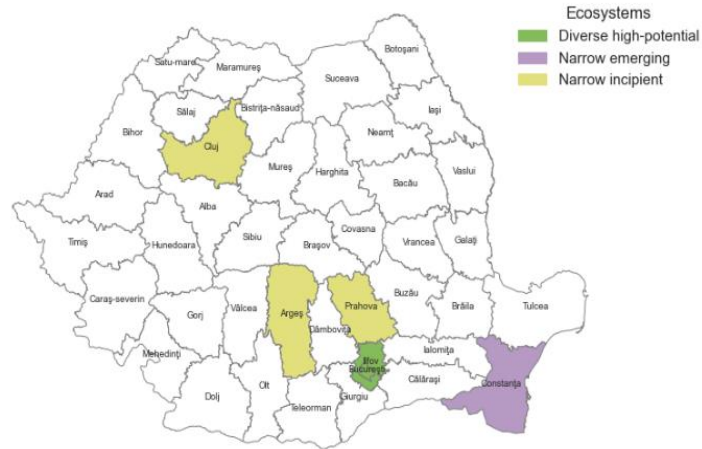
Share of Tertiary Graduates that Study STEM, by Country



Starting Up (2): Digital Entrepreneurship Ecosystems in Romania

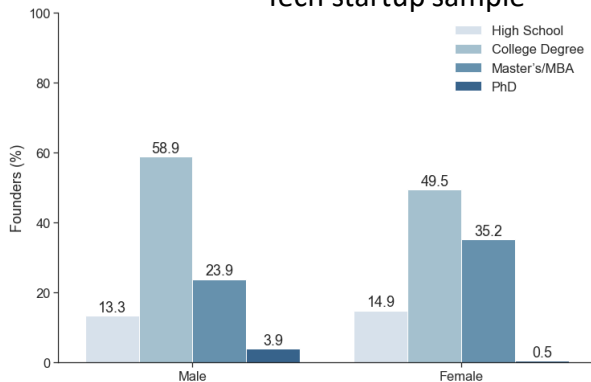
Digital Entrepreneurship Ecosystems in Romania

Most of the local startups relate to Bucharest's universities, accelerators, and founders

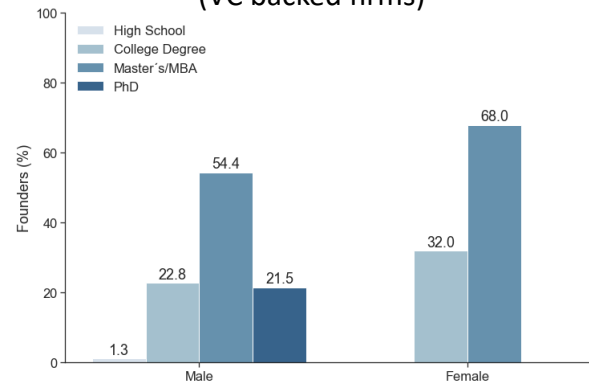


Founders in the high-potential sample are more educated, have more experience abroad, and previous experience as a founder.

Tech startup sample

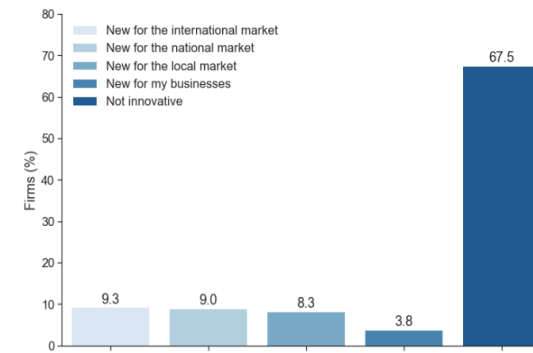


High-potential sample (VC backed firms)

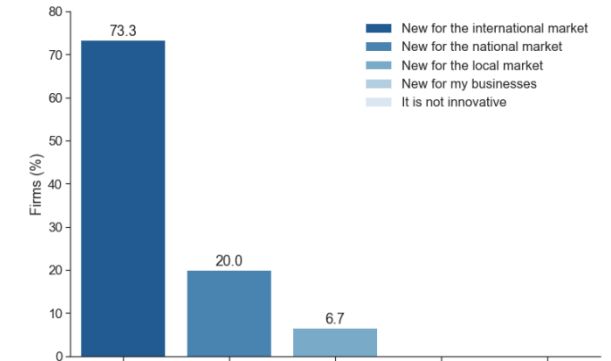


Most tech startups do not consider themselves innovative

Tech startup sample



High-potential sample (VC backed firms)



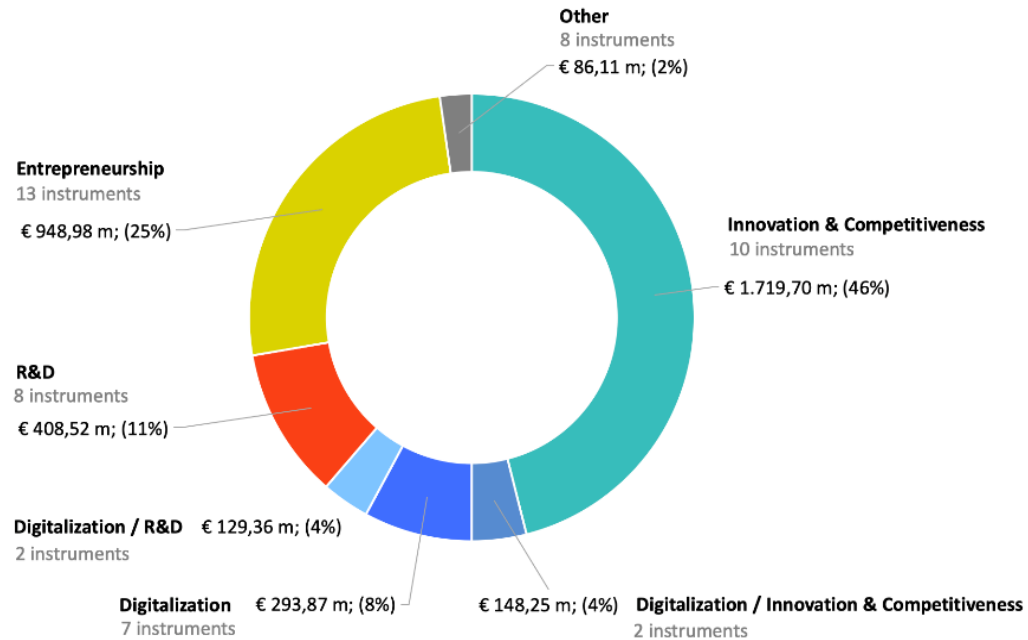
Lack of entrepreneurial mindset shows up as a key perceived obstacle to Entrepreneurship (Tech Startups)



Based on a new WB survey instrument "Startup Survey"

Starting Up (3): Mapping public programs and enablers

A little over one-quarter of the total STI budget allocation (€949 million total over the period) was allocated to entrepreneurship-related programs



Distribution of Estimated STI Public Budget Allocation in Romania by Top-level Objective, 2014–20, in € Million and %

Key messages

1. Lack of high-growth innovative entrepreneurship
2. Opportunities to improve human capital allocation
3. The government needs to improve the policy mix

POLICY RECOMMENDATIONS	PRIORITIZATION	TIME SENSITIVE	QUICK WIN
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Establish a one-stop agency "Ecosystem Hub"	Mission critical !!	Yes ⌚	Yes 🏆
Strengthen ecosystem enablers	Flagship ▶	Yes ⌚	
Create a startup fund	Flagship ▶		
Improve Entrepreneurship Education and strengthen the role of Universities in the ecosystem	Flagship ▶	Yes ⌚	
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Incentivize innovation to foster knowledge spillovers into the private sector	Foundational longterm 🏗️	Yes ⌚	
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Discussion

Thanks!

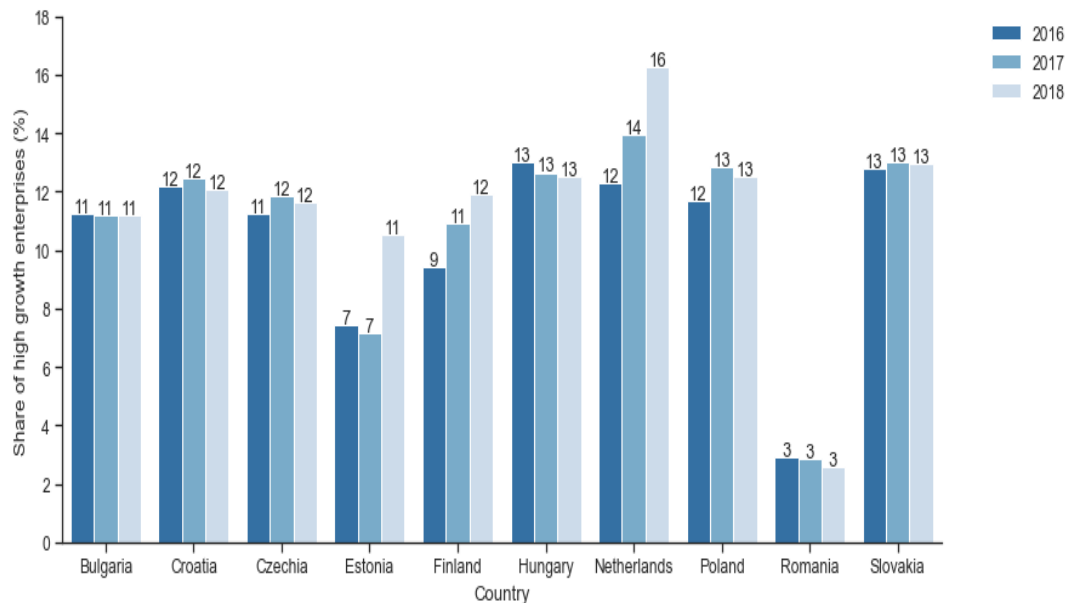
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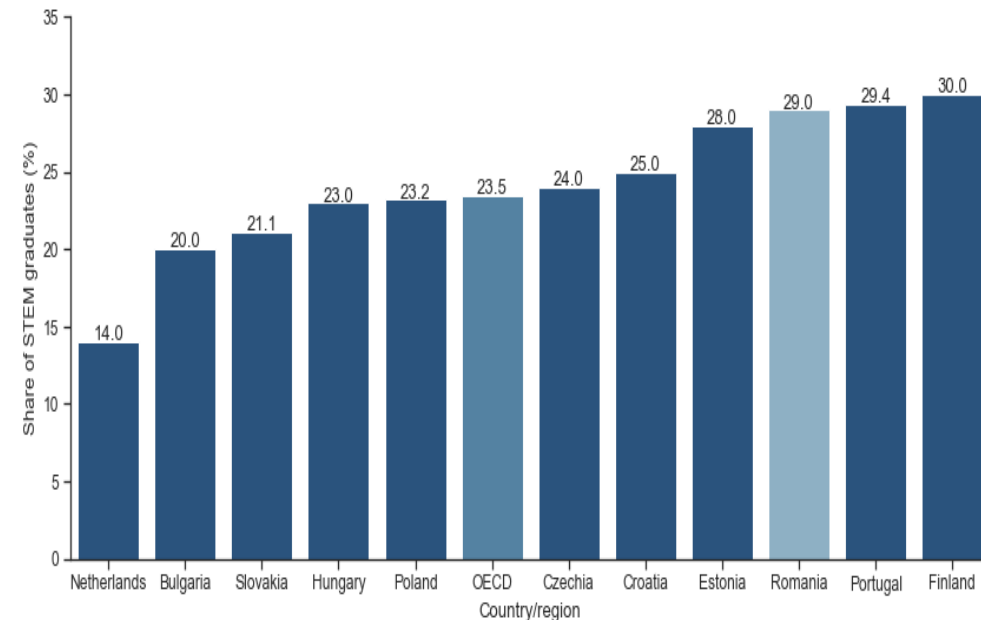
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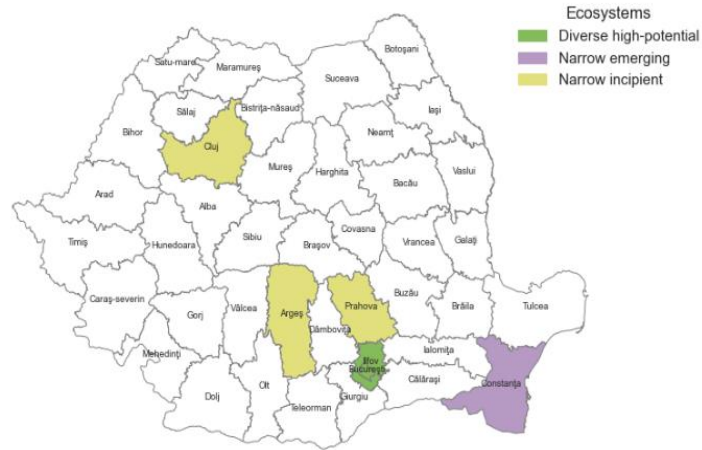
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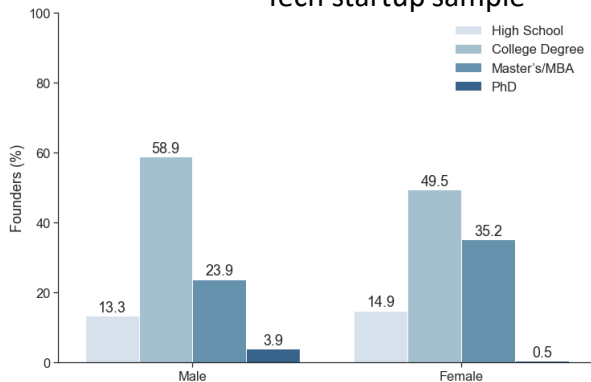
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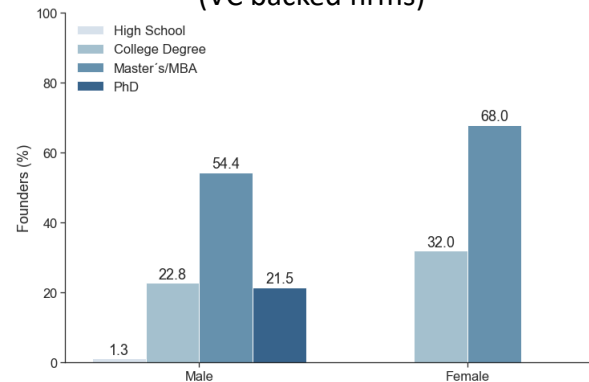


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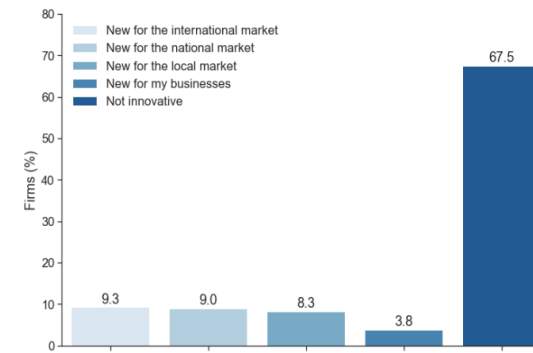


High-potential sample (VC backed firms)

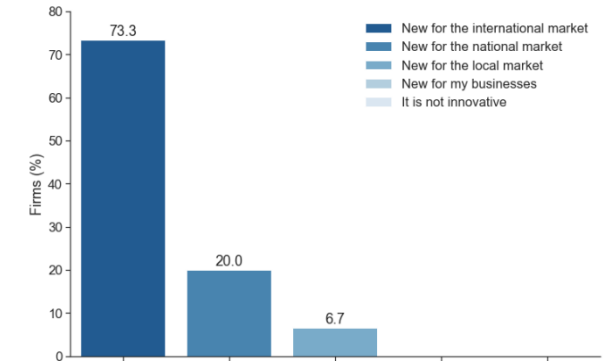


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Tech startup sample



High-potential sample (VC backed firms)



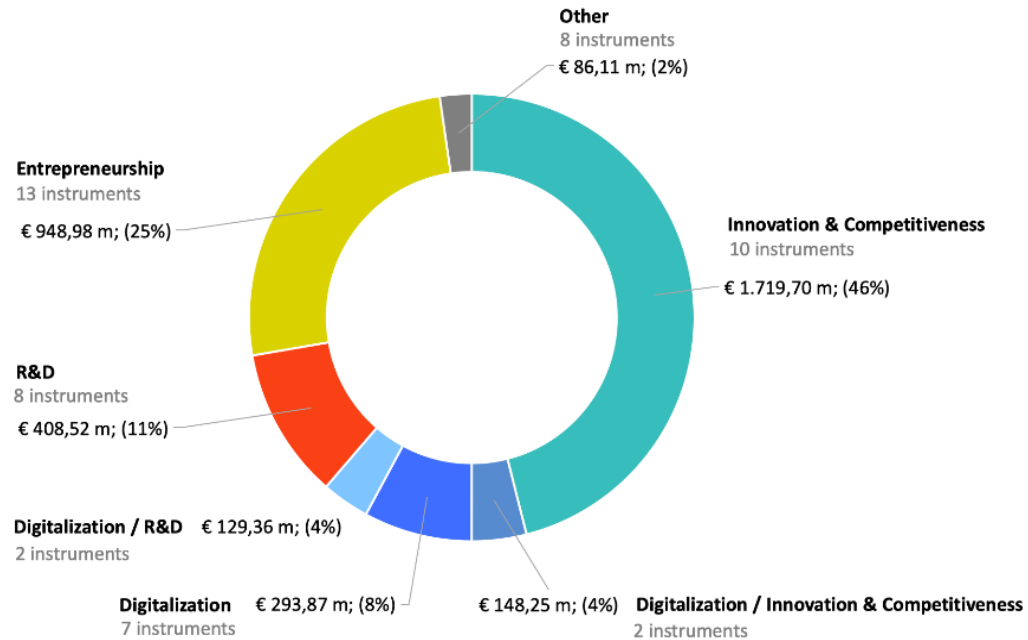
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Improve Entrepreneurship Education and strengthen the role of Universities in the ecosystem	Flagship ▶	Yes ⌚	
Implement Startup Visa Program	Flagship ▶	Yes ⌚	Yes 🏆
Build and promote a network of Romanian founders and diaspora	Flagship ▶		
Scale-up through exports	Flagship ▶		
Incentivize innovation to foster knowledge spillovers into the private sector	Foundational longterm 🏠	Yes ⌚	
Promote the digital economy	Foundational longterm 🏠	Yes ⌚	