

The Accelerator and Incubator Ecosystem in Europe

Telefonica





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Accelerators, incubators and so-called “company builders” are innovative investment vehicles and business service providers that have made a novel contribution to advancing entrepreneurship around the globe, helping an entire generation of young companies, and particularly high-tech startups, to grow, prosper and thrive. These startup programmes have become many young companies’ principal source of knowledge and support; they are in a position not just to help the needy, but to encourage the worthy.

To have a complete picture of the different entrepreneurial ecosystems around Europe and a better understanding of the different initiatives and best practices, Telefónica set out to map accelerators, incubators and company builders in leading European countries,¹ creating a first-of-its-kind portrait of the relative density and scope of accelerators and incubators in 10 key European economies.² By mapping the different entrepreneurial ecosystems we can understand the different stages and needs of each ecosystem, gain first-hand insights from local players through interviews, site visits and conference calls and learn how to scale up existing programmes to mobilise European talent for startups. The results are fascinating (See the key findings on page 2 and the map on page 4 for an overview).³

This research, conducted independently, forms part of a pledge to the Startup Europe Initiative of the European Commission. For more information, visit <http://ec.europa.eu/digital-agenda/en/startup-europe>.

The opinions expressed in this research paper are those of the principal authors and project team leaders alone and do not necessarily reflect the views of Telefónica, the European Commission or any of their associates.

Key Findings

- 1 Europe has a healthy and thriving early stage startup scene.
- 2 Europe and the United States have a comparable number of startup programmes per capita. We found 260 startup programmes in the 10 countries surveyed, compared to roughly 200 in the US.⁴ Given the relative similarity in population density between the two economic areas (the US has a population of 316 million, and the 10 countries surveyed here have roughly 361 million people). This means that, on a per capita basis, Europe has roughly as many and perhaps even more accelerators than the US.
- 3 The number of European accelerators and incubators has increased dramatically since the start of the financial crisis. Between 2007 and 2013, the number has risen nearly 400%.
- 4 The accelerator and incubator landscape in Europe is diverse, with different geographical models running on different principles. In the United Kingdom and France, most accelerators and incubators are concentrated around the national capital while in other countries (i.e. Spain and Sweden), the business startup programmes tend to be spread more evenly throughout the territory.
- 5 Information or benchmarks of the different programmes is not easily available.
- 6 European accelerator programmes vary widely in terms of the amount of equity they ask in return for funding or for accepting a company into their mentoring programme. The equity cost to attend accelerator programmes also varies greatly across and within countries.
- 7 Good, sound policy initiatives at the European level could do much to boost the potential of European entrepreneurs.

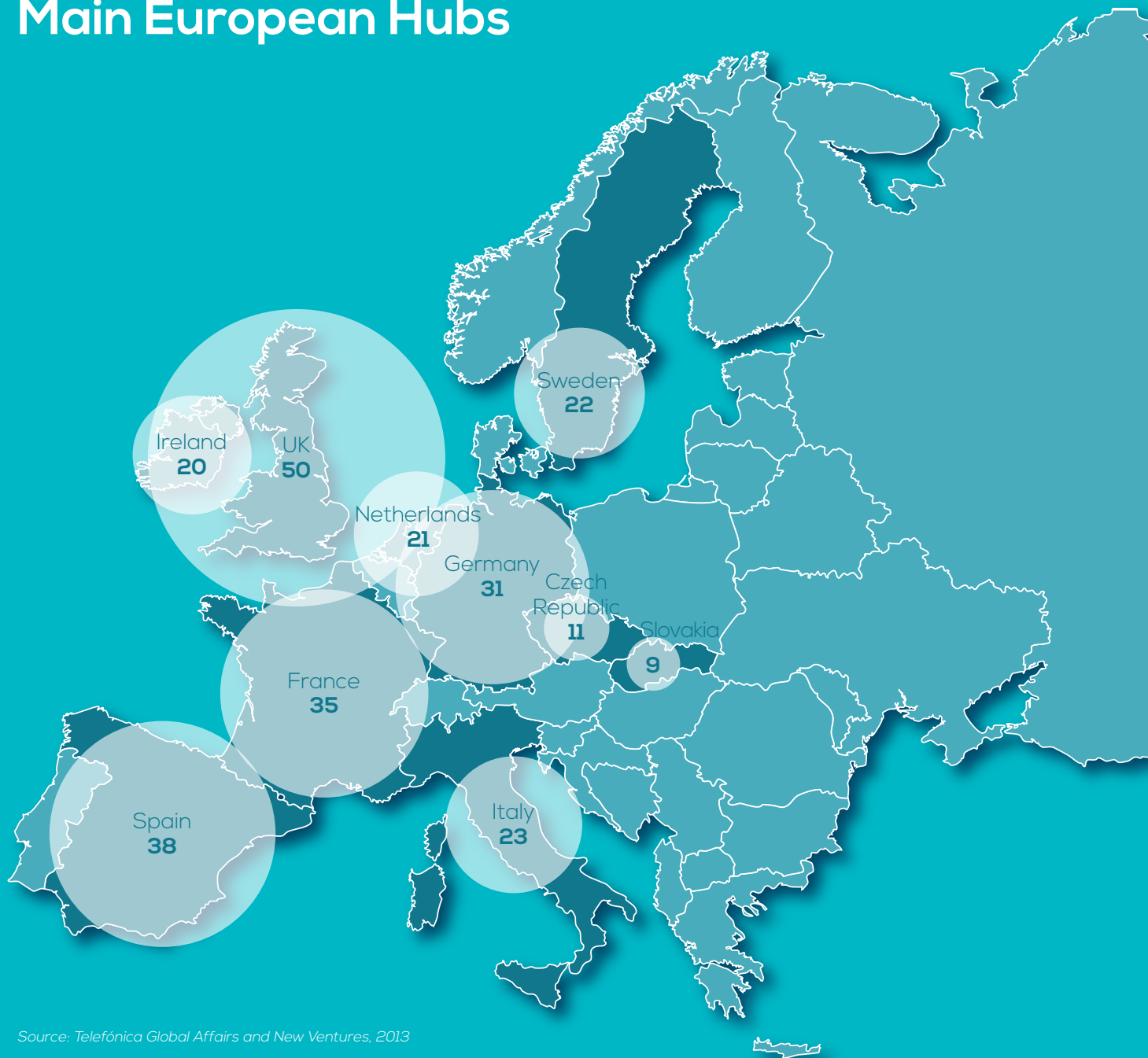


Among the key policy recommendations which emerge from the study we identified the following 'policy decalogue':

- 1 When it comes to pan-European entrepreneurship policies, the one-size fits-all model does not fit. Policymakers must implement different policies for centralised and decentralised ecosystems.
- 2 Mind the funding gaps: Different ecosystems have different needs – and different gaps – when it comes to funding. Policymakers in Czech Republic, Italy, Slovakia and Spain should increase the amount of early seed stage funding available to entrepreneurs. At the same time, all countries surveyed should increase the amount of so-called "Series A" and "Series B" funding available to young companies.⁵
- 3 Policymakers should boost sector-specialised programmes by ensuring that they receive at least 50% of available European funding resources. An effort should be made to create a balance between specialised and generalist programmes of roughly 50-50.
- 4 European leaders should take decisive steps to make country borders meaningless for entrepreneurs. The full single market – 28 countries, 507 million people, €12 trillion of annual gross domestic product – should be as accessible for every startup as their home-country market is.
- 5 Simplify and unite: Policymakers should reduce bureaucracy and facilitate startup rollouts across Europe.
- 6 Policymakers should increase transparency by making comparable data in key areas more widely available.
- 7 Policymakers should create incentives to encourage competition and innovation among euro-entrepreneurs. Entrepreneurs should be the new "rockstars."
- 8 Close the loop: Policymakers should facilitate connections between university hubs, research institutes and business schools. They should allocate around 50% of the beneficiaries of pan-European funding in these types of institutions.
- 9 Policy should activate technical talent to get involved in entrepreneurial ventures. One way of doing so would be to create an "Erasmus" programme for programmers, designers and engineers with rotations across different European countries, using startup programmes as coordinating agents.
- 10 Measure all aspects of the socio-economic impact that startups are causing to provide greater transparency and to increase awareness of the vital role startups play in creating and sustaining prosperity.



Main European Hubs



Source: Telefónica Global Affairs and New Ventures, 2013

We analysed the top seven countries by GDP in Europe (France, Germany, Italy, the Netherlands, Spain, Sweden and the United Kingdom) and we added three other interesting cases: Czech Republic and Slovakia, two examples of a nascent entrepreneurial ecosystem, and Ireland, a small tight-knit community now living a second wave of entrepreneurs after the late 90s.

Please note there are many other entrepreneurial initiatives and lively communities in other European countries which have not been included in the scope of this paper. Additionally, there are other aspects of entrepreneurial activity which have not been covered due to our focus on startup programmes. A broader approach to entrepreneurial ecosystems can be found at the Startup Ecosystem Report 2012, Part One.⁶

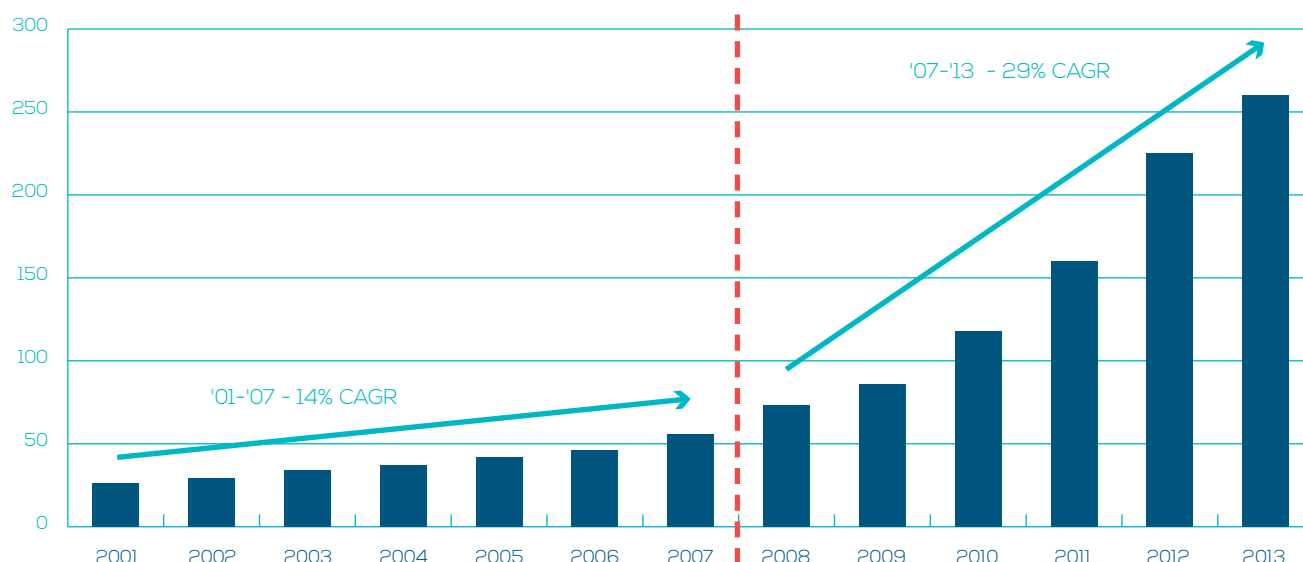
Entrepreneurship Ecosystems in Europe: Alive and Kicking

Across the continent, Europe boasts a dynamic and healthy landscape of accelerator and incubator initiatives. In this survey of 10 representative European economies, we identified 260 startup programmes; in the US, there are approximately 200.⁷ Therefore, from a quantitative standpoint, both markets are comparable in terms of the number of programmes.

Interestingly, we found that most of these programmes were launched after the financial crisis struck in late 2008. The compound annual growth rate for accelerators in Europe more than doubled in the last 12 years to 29% post crisis, up from 14%

pre-crisis, and increased by nearly 400% since the start of the crisis.⁸ This reflects an impressive counter-cyclical capacity of startup initiatives across the continent.

Chart 1 Accumulated number of incubators and accelerators in the 10 survey countries since 2001



Source: Telefónica Global Affairs and New Ventures, 2013

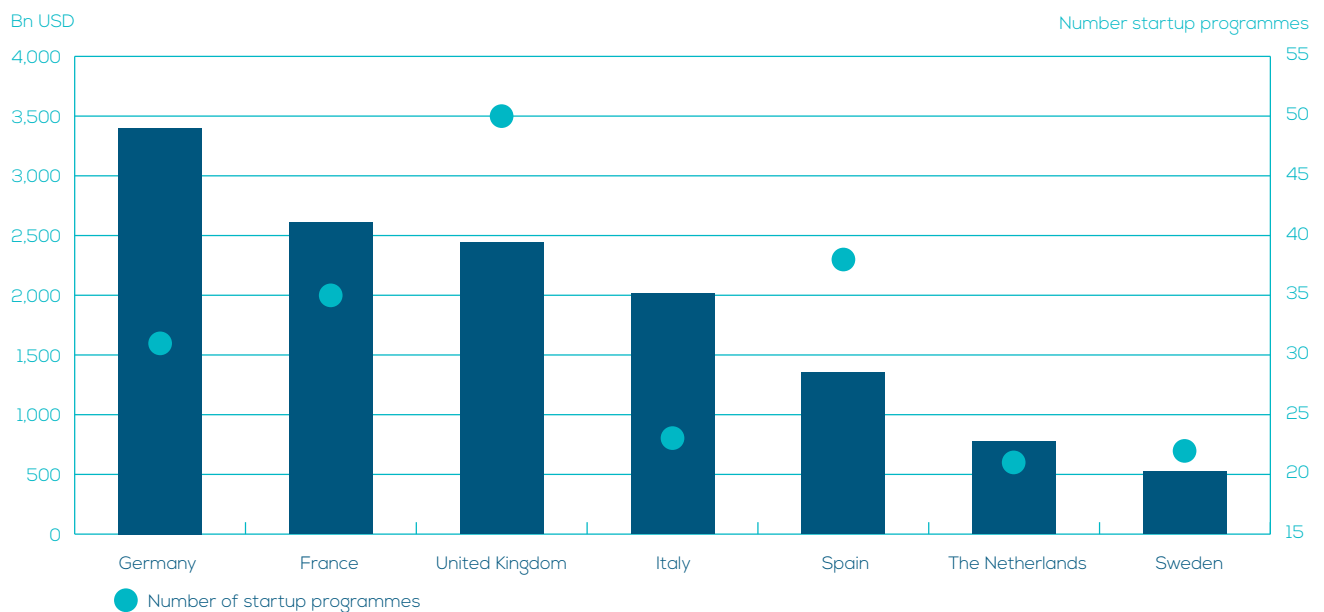
Table 1 Top seven European Union countries ranked by total GDP (2011)

Concept	Unit	Germany	France	United Kingdom	Italy	Spain	Netherlands	Sweden
Total GDP	Bn USD	3,400	2,608	2,440	2,014	1,352	773	526
GDP per Capita	EUR / inhabitant	30,100	27,600	30,400	22,800	20,300	32,700	★ 35,500
Population	million people	★ 81.84	65.33	63.26	60.82	46.20	16.73	9.48
Unemployment Rate	Total (%)	5.5	10.3	7.9	10.7	25	★ 5.3	8
Young Unemployment	< 25 yrs (%)	★ 8.1	24.6	21	35.3	53.2	9.5	23.7
Total Entrepreneurial Activity	% adult population	5	5	★ 9	4	6	★ 10	6
Nascent Entrep. Activity	% ad. Pop, <3 mth old	4	4	★ 5	2	3	5	5
Startup Programmes	Number	31	35	★ 50	23	38	21	22
Startup Programmes	Year First Launch	2001	2000	★ 1986	2004	★ 1989	2000	★ 1983
Startup Programmes	Average Year Launch	2001	2008	2009	2009	2010	2009	2007

★ = top performer in category

Source: Telefónica Global Affairs and New Ventures, International Monetary Fund, EUROSTAT (2013), GLocal Entrepreneurship Monitor (GEM), 2013

Chart 2 Top seven EU countries ranked by GDP – left axis (2011) and number of startup programmes – right axis.



Source: International Monetary Fund and Telefónica Global Affairs and New Ventures, 2013

In terms of population, the European market is roughly 1.6 times larger than the US. However, Europe is composed of a heterogeneous group of countries at different stages of development in their entrepreneurial activities. Within those countries, there are two clearly distinct models of startup development along geographical lines. One difference is the number of accelerators and incubators: while we identified 50 organisations that could be classified as accelerators or incubators in the UK (with 32 of them in the London area alone), most European countries have considerably fewer, as we can see in Table 1 on page 5. In addition, France and the UK have a centralised model with most accelerators and incubators clustered around their respective capitals and other economic hubs. Accelerators and incubators in other countries are more evenly spread across the entire territory. This is the case, for example, in Spain and Sweden. Sweden has 22 accelerators and incubators, but only four can be found in the Stockholm area. Spain has 38 accelerators and incubators in total, with 11 in Madrid and nine in Barcelona.

Another surprising finding is the non-correlation between the number of startup programmes and the general economic development of a country. In particular, the UK and Spain have a high number of programmes relative to their GDP and their European counterparts (see Chart 2 above).

Policy Recommendation 1:

When it comes to pan-European entrepreneurship policies, the one-size fits-all model does not fit. Policymakers must implement different policies for centralised and decentralised ecosystems.

Due to the diversity of the European startup programme landscape, an overly homogeneous cross-European initiative might prove ineffective at best and counter-productive at worst. Top-down European policies should be structured taking into consideration the local needs and the different levels of development of each nation's startup footprint to obtain the desired effects across Europe.

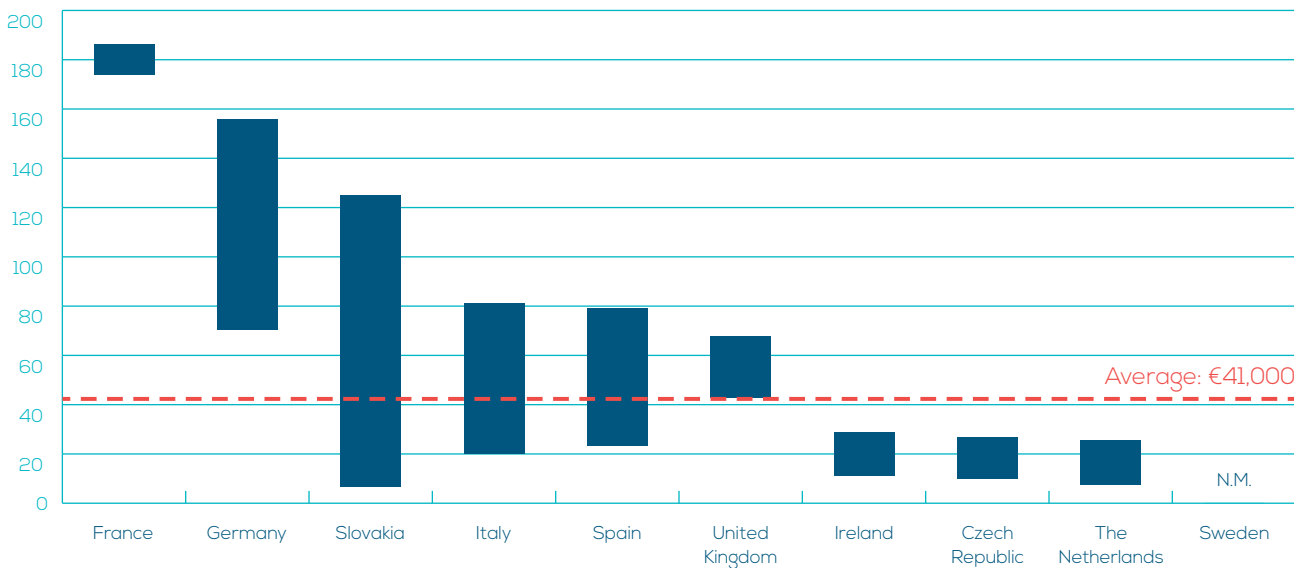
Policy Recommendation 2:

Mind the funding gaps: Different ecosystems have different needs – and different gaps –when it comes to funding. Policymakers in the Czech Republic, Italy, Slovakia and Spain should increase the amount of early seed stage funding available to entrepreneurs. At the same time, all countries surveyed should increase the amount of so-called “Series A” and “Series B” funding available to young companies.

Europe has important gaps in the startup funding lifecycle. However, these gaps are not the same for each country. Some hubs have a very dense seed-stage funding supply while others are in desperate need of early stage money:

- a. In the Czech Republic and Slovakia, the acceleration and incubation scene is still nascent. In Spain and Italy, there are plenty of players but the ecosystem is still very fragile since startups and startup programmes tend to have insufficient funding resources to make an impact. In these countries, Europe should strengthen its early stage programmes to secure a strong seed-funding base.
- b. On the other hand, there are hotspots like Berlin, London and Paris with plenty of seed funding alternatives. In those cases, the funding gap has scaled up to the so-called Series A and Series B rounds. In these cases, policymakers should capitalise better on the healthy seed-stage dynamism and make sure sufficient capital is available to allocate to later, larger rounds. The funding gap for “Series A” and “Series B” rounds is common throughout Europe.

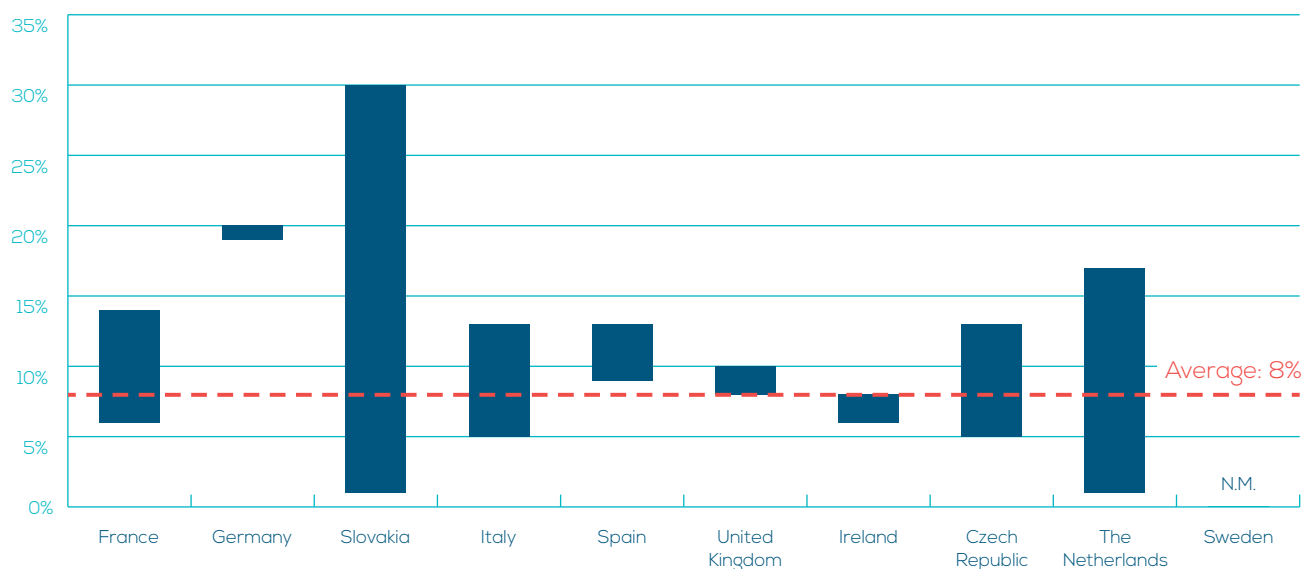
Chart 3 Average maximum-minimum ticket size across startup programmes (‘000, euros)



Data has been obtained calculating the average of minimum and the average of maximum equity tickets, where available. Therefore, the ranges shown are not absolute and one might find individual programmes outside of the range in each country.

Source: Telefónica Global Affairs and New Ventures, 2013

Chart 4 Average maximum-minimum equity share across startup programmes (in percent)



Data has been obtained calculating the average of minimum and the average of maximum equity percentages taken, where available. Therefore, the ranges shown are not absolute and one might find individual programmes outside of the range in each country.

Source: Telefónica Global Affairs and New Ventures, 2013

If we take a closer look at accelerator programmes (i.e. programmes that invest in “accelerated” companies), there is great disparity between countries when it comes to the average amount of the equity ticket offered.⁹ France and Germany tend to give larger tickets in their accelerator programmes. Italy, Spain and United Kingdom have a similar ticket size, with equity tickets averaging around €20,000 to €60,000. The average accelerator ticket in Europe is around €41,000.

On the amount of equity taken, most countries move around 5% to 15%. The average equity stake taken by European accelerators in our sample is 8%. Investors and accelerator managers in Germany appear to ask for an average 20% stake. This is explained by the large number of company builders in Germany that tend to have a majority stake in their companies and so create a bias on the country data.¹⁰ This points to dispersion in value extracted from startups. In other words, the equity cost to attend accelerator programmes varies greatly across and within countries (see Charts 3 and 4 on page 7 and above).

Painting the Startup Programme Landscape: A Taxonomy

In some European countries, stakeholders in the entrepreneurial ecosystem do not differentiate between an incubator and an accelerator. In other countries, they are more precise in their definitions. We found three main types of startup growth programmes in Europe:

- 1 **Incubator:** These are usually physical spaces attached to a knowledge centre (university, research institute, business school, etc.) to help commercialise its own spinouts and foster business ideas from its network in exchange for a monthly rental fee. This model is found frequently in Ireland and Sweden. Its main characteristics are the provision of physical office space, mentorship network, informal event programmes, consulting services, investor exposure and public funding links.
- 2 **Accelerator:** This model, which became globally famous with Y-Combinator in the US, has spread to many European hubs. Its main characteristics

are that it involves an application process open to all, and there tends to be a provision of pre-seed investment in exchange for a minority stake in the startup. Support is time-limited and comprises events and intensive mentoring and the programme itself tends to be organised in batches of startups beginning at the same time.

- 3 **Company Builder:** The main difference with other startup support models is that new business opportunities are sourced from within, usually stemming from the company builder founder's expertise in an area or sector. This model is particularly extended in Berlin. Main characteristics: work through market validation before putting a team together, almost full ownership of the startup and bootstrapping during initial phases using the founder's resources.

Table 2 Main features across different startup growth programmes

Types	Batches/ Cohorts	Equity Taken	Idea Sourcing	Physical Space	Mentorship	Investor Meetings	Funding	Time Limit	Average Stay	Geo- graphical Footprint	Total Identified in 10 Countries
Incubator	No	No	External	Yes	Yes	Sometimes	No	No	1-2 years	All over Europe	136
Accelerator	Yes	Minority Stake	External	Sometimes	Yes	Yes	Yes	Yes	3-12 months	Main city hubs	111
Company Builder	No	Majority Stake	Internal	Yes	Yes	Yes	Yes	No	2-3 years	Berlin, Dublin, London	13

Source: Telefónica Global Affairs and New Ventures 2013

There are many other initiatives that foster entrepreneurship, but most are either focused on broader areas of incidence or on a particular aspect of entrepreneurship.¹¹ Because of this, we have considered these types of startup support programmes to be outside the scope of this survey.

There is a general trend within the business acceleration and incubation sector towards greater specialisation. This can take many forms, such as a sector, lifecycle or value proposition focus. In London and Berlin, for example, we found a host of accelerator and incubator programmes specialised in different business sectors such as financial technology, e-health, gaming and social enterprise.

Another level of specialisation is on the startup business model, such as software-as-a-service business models.

Other programmes focus on value proposition as a differentiating factor. For example, there are accelerators focused on providing the first large brand customer for advertising, creative and media startups. Other programmes focus on a niche (i.e., cloud technology) and help modify a startup's initial prototype to capture the maximum value from the technology.

Policy Recommendation 3:

Policymakers should boost sector-specialised programmes by ensuring that they receive at least 50% of available European funding resources. An effort should be made to create a balance between specialised and generalist programmes of roughly 50-50.

It is too early to dictate the success or failure of specialised startup programme models since most efforts up to now have been focused on generalist programmes. However, there is a case to be made on the potential benefits coming from sector specialisation across different European hubs.

Europe should help countries to balance between generalist and specialised programmes that build on regional knowledge by fostering the latter. The European Commission is planning to allocate €100 million to 20 startup accelerator programmes across Europe.¹² We propose that the European Commission earmarks 10 grants for generalist accelerators

and another 10 for specialised accelerators. This will stimulate a diverse pan-European accelerator offering with specialisations in gaming, cloud and any other sector considered a priority from a European standpoint.

Specialisation could prove useful due to the following characteristics. It would:

- Facilitate knowledge sharing between industry experts.
- Encourage technical build-up to reduce the learning curve.
- Focus global attention on a reduced number of hotspots per sector.
- Move from a model of national champions to European hub leaders.
- Build on economies of scale.

A practical example would be utilising specialised programmes to explore new areas outside traditional ICT, such as re-industrialisation. Startups could fuel an innovation wave to disrupt traditional sectors across Europe currently disconnected from today's technological capabilities.

In terms of how to determine regional focus, comparative advantage will help to decide which sectors to encourage and where. This can also help balance business density across Europe and contribute to the development of the single market.

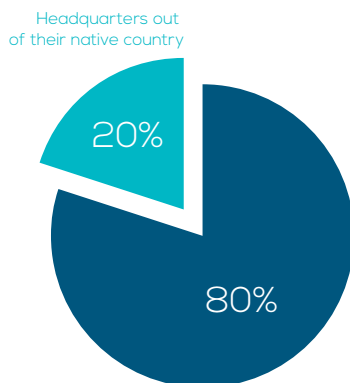
Local v. Europe

'Nobody would think of creating a product only for California, so why would someone create a product only for Germany?' (Spanish entrepreneur in Palo Alto)

Europe is more than a single country; it is more than one particular vantage point. Whoever interacts in this ecosystem should be able to think of Europe as only one market. Every European startup should see the European market as a conglomerate of 507 million Europeans. However, today only 20% of startups have headquarters outside of their country of origin, according to data gathered in our e-survey. The limited international scope of European startups is not totally surprising since we are dealing with companies in their early stages of development. Nevertheless, the stark polarisation in the numbers points to additional causes beyond situational factors.

For starters, a pan-European programme should promote more internationalisation of European startups. This could also be strengthened by boosting the internationalisation of talent and startup programmes themselves.

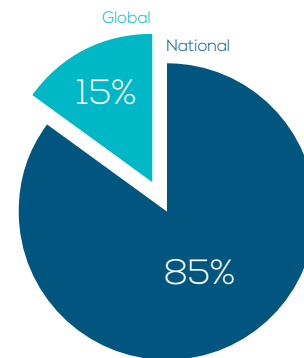
Chart 5 'European' startups: a lack of internationalisation



Source: Telefónica Global Affairs and New Ventures, 2013. N = 125.

Furthermore, fewer than 30% of startups have an international approach in their early stage. The top five countries for startups with an international approach are France, Ireland, Sweden, Slovakia and the Czech Republic.¹³ This rank could probably be explained by their relatively small size which pushes companies to look beyond their local markets from early on. In the case of France, the reason might be related to the heavy tax schemes.

Chart 6 Accelerators / incubators footprint



Source: Telefónica Global Affairs and New Ventures, 2013. N = 260.

This factor is not limited to startups because we can observe the same pattern amongst accelerators and incubators; only 15% have an international (i.e. European) footprint (i.e. located in a different country).

European entrepreneurs should be able to capitalise on forming part of a larger European marketplace. European startups should acquire a holistic vision to compete at the same level with its Silicon Valley counterparts. There is not one startup in Silicon Valley that would limit their scope to the barriers of their state. Intra-borders should not limit the vision and potential of startups and regulatory bodies should eliminate frictions to facilitate a pan-European rollout for all high-growth businesses.

Policy Recommendation 4:

European leaders should take decisive steps to make country borders meaningless for entrepreneurs. The full single market – 28 countries, 507 million people, €12 trillion of annual gross domestic product – should be as accessible for every startup as their home-country market is.

Policy Recommendation 5:

Simplify and unite: Policymakers should reduce bureaucracy and facilitate startup rollouts across Europe.

These recommendations could be implemented with the following initiatives:

- Facilitate a multi-country simultaneous roll out (reducing bureaucracy).
- Take advantage of the reduced number of currencies.
- Create and facilitate a specialised network of experienced counsellors to retro-feed the startup community.
- “Europeanise” entrepreneurs through conferences and other meet-ups. Create a Startup Europe tour: set up road shows as business schools do; promoting around Europe and the world its startup advantages.
- Incentivise globalisation of accelerators and incubators by helping to fund their internationalisation.



Solve the Information Gap

In addition to a funding gap, there is an information gap surrounding the entrepreneurial ecosystem in Europe. Europe does not have an association that conglomerates all available programmes and other key information. This creates asymmetries in the information flow, causing problems for:

- **Entrepreneurs:** They have to invest a lot of time researching individual programmes since there is no central benchmark.
- **Investors (private and public):** With increased information transparency, investors gain better tools to make informed decisions of where and how to deploy their money.

Policy Recommendation 6:

Policymakers should increase transparency by making comparable data in key areas more widely available.

Policy Recommendation 7:

Policymakers should create incentives to encourage competition and innovation amongst euro-entrepreneurs. Entrepreneurs should be the new “rockstars.”

By creating an association, entrepreneurs would benefit from a single point of contact to find all key information of the different players in the ecosystem (accelerators, incubators, technological parks, business angels, venture capital, etc.). The information would become transparent and available to everybody, including key data on the amount of seed funding available, the size of equity taken in return or the number of successful startups that have graduated from each programme. The objective should be to boost and give structure to an ever-growing network.

Once homogeneous information is available, it is possible to promote the top players in each category. Another benefit would be the possibility to identify potential partners and facilitate information sharing among entrepreneurs, allowing the entrepreneurial ecosystem to have an official communication channel. This channel could broadcast upcoming challenges and competitions, share best practices, benchmark initiatives, monitor venture capital activities and public funding programmes, etc. Additionally, with a single source of reliable information it is easy to update and contrast data (there is two-way communication).

Another way to broadcast entrepreneurial activity could be through the creation of Euro-Entrepreneur, a pan-European competition where entrepreneurs and startup programmes compete to win prizes. This could be organised from a supra-national European startup association or directly from the European Commission. This contest could be reinforced with a Startup Europe Tour, a promotional road show to help divulge Europe's advantages for startups.



Swedish Transparency: A European Role Model on Accountability

Incubators in Sweden are numerous and spread throughout the country. The vast majority operate in cooperation with science parks. Most incubators are publicly funded and do not take equity in companies, so the incubators can be impartial when assessing and mentoring them. To help fund projects, incubators channel grants from public institutions to support local startups. Most of this money is free or offered at very competitive terms, which explains why there are limited Swedish equity-based startup programmes. One of the prerequisites for giving money to incubators in Sweden is to receive data in return.

All publicly funded incubators are required, on a bi-annual basis, to submit a detailed account of all the activity happening in its startups to ALMI Företagspartner (formerly Innovationsbron), an organization that pools the information on a country basis.¹⁴ Data collected goes beyond employees and revenues to include new employment demography and academic preparation, third party subcontracting services, taxes paid, new funding received, etc. In this way, the government has an updated record of its impact through grants and is able to calculate a rough return on investment of each incubator funded.



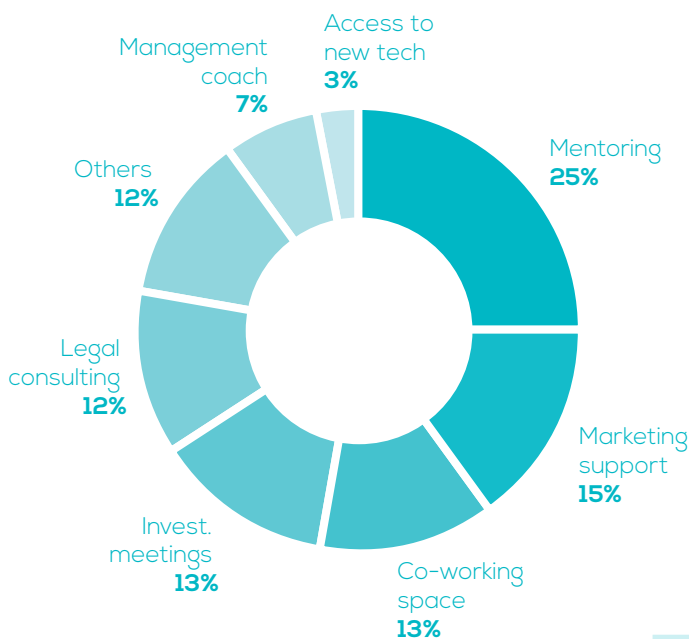
Business Schools and Venture Labs

Mentoring, marketing expertise, contact with investors and legal advice are among the topics any business school will include in their syllabus. Coincidentally, these are the kind of issues any startup will have to deal with at any moment of its life cycle. That is why these also tend to coincide with the services provided by any accelerator or incubator.

European business schools and universities appear among the top global educational rankings. In the Financial Times Top 50 Global MBA Ranking for 2013, 32% were European institutions. Only the US held a higher percentage (48%). All of the European top 10 business schools have entrepreneurship programmes and almost all of them have some kind of startup programme (a venture lab, incubator or accelerator).¹⁵ In addition, they usually have official and listed investors' networks, contributing to knowledge accumulation and transfer and early-stage funding.

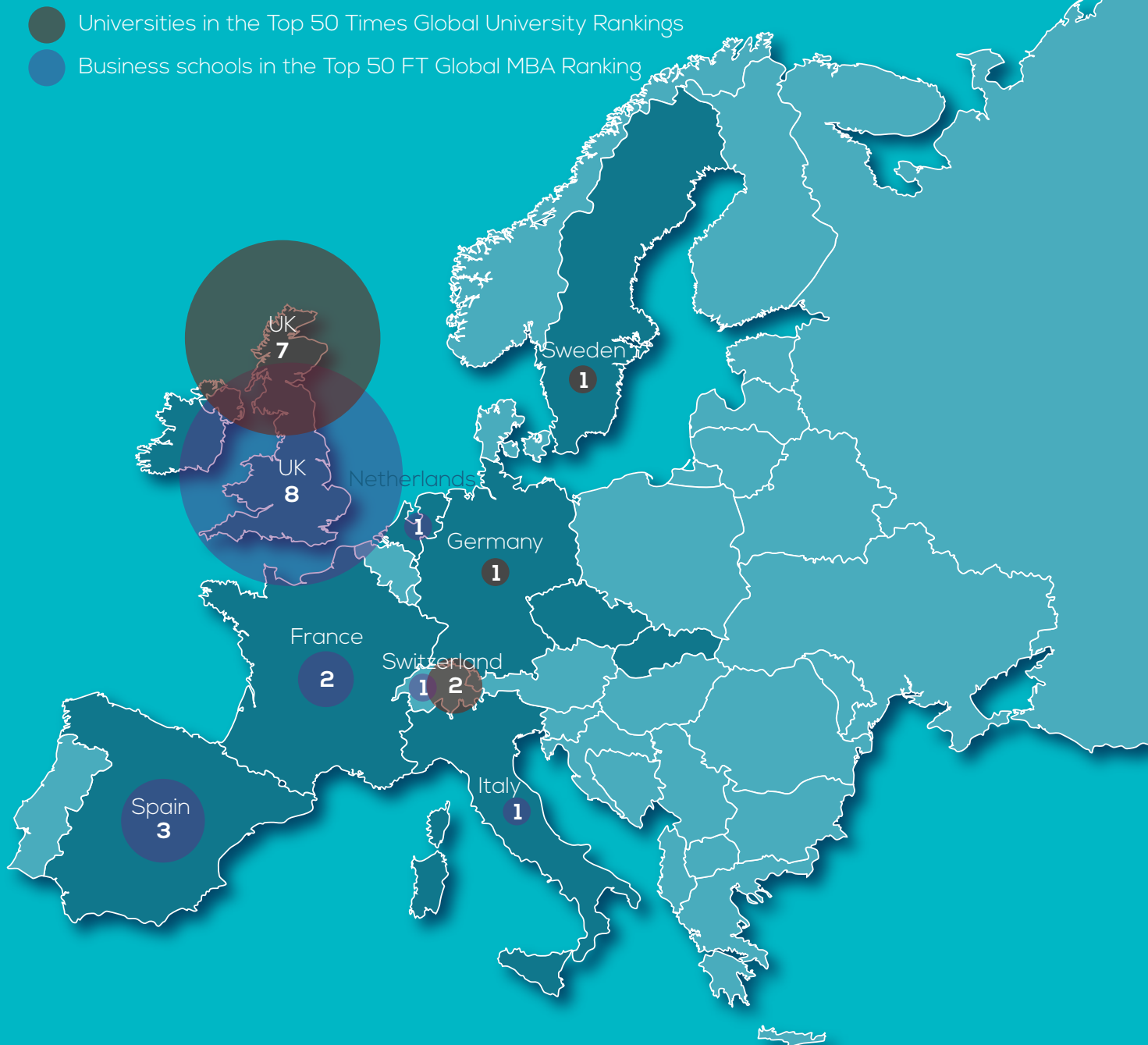
Chart 7 Ranking of startup needs

Question: 'Aside from money, what is the single most important necessity for a startup?'



Source: e-survey Telefónica Global Affairs and New Ventures, 2013

Top 10 European Business Schools and Universities



Sources: Telefónica Global Affairs and New Ventures; Financial Times Top 50 Global MBA Ranking; The Economist MBA and Business Week Rankings and Times Higher Education Index, 2013

The link between universities and the private sector remains relatively weak in Europe. Business schools and universities usually have their own venture labs, but are rarely open to entrepreneurs outside their community. Although joint activities are held within the entrepreneur community, there are high hurdles for outsiders to join these labs.

The situation across Europe differs from country to country. Sweden would be a perfect example of how a university incubator helps to boost entrepreneurship: Ericsson was incubated in the Technological Park of Lund University.

Table 3 Top 10 European business schools by alphabetical order

Business School	Venture Lab / Accelerator	Investor Network	Seed fund
ESADE	✓	✓	✗
HEC	✓	✓	✗
IE	✓	✓	✗
IESE	✓	✓	✓
IMD	✗	✓	✗
INSEAD	✓	✓	✗
LBS	✓	✓	✓
Mannheim Business School	✓	✓	✗
University of Cambridge: Judge	✓	✓	✗
University of Oxford: Said	✓	✓	✓

Source: Telefónica Global Affairs and New Ventures Computed from FT Global MBA, The Economist and Business Week rankings, 2013

Policy Recommendation 8:

Close the loop: Policymakers should facilitate connections between university hubs, research institutes and business schools. They should allocate around 50% of the beneficiaries of pan-European funding in these types of institutions.

Incubators and accelerators create value in the entrepreneurial field and profit from each other's activities. However, there is still room for greater information flow and knowledge transfer. This could be achieved by transforming universities and business schools into business hubs. Europe has a unique endowment that could be used more efficiently. A pan-European initiative aiming to boost accelerators and incubators should consider allocating around 50% of funds to support programmes promoted by these types of institutions.

The Massachusetts Institute of Technology (MIT) set an interesting precedent in the US by creating close links between its business school students and its technical students to spark new projects. The value added of MIT's incubated startups is almost equal to France's total GDP in 2011, according to one study.¹⁶ Additionally, institutions like MIT attract some of the sharpest minds in the world. It is not coincidental that the Boston area is one of the most thriving entrepreneurial hubs in the US.

Universities, Startup Labs and Open Innovation: The Keys to Success

StartX (Stanford University, California US), launched in 2009, is a great example of the connection between startups, universities, business schools and society. The StartX model is based on three pillars: Knowledge and expertise within the university, wide business spectrum and open innovation. By September 2012, 1,000 startups had applied for the programme; 60 had already graduated and 85% had fundraised an average of \$1.5 million (€1.1 million) per company.

MIT 100K (MIT, Cambridge US) launched in 1989, is a pioneer programme in boosting entrepreneurship. For more than 20 years, this contest has created a structured startup competition consisting of three parts: the Pitch contest, the Accelerate contest and the Launch contest. The winner of the launch contest takes home \$100,000 (€75,500).

Imperial Innovations (London, UK) launched its entrepreneurship programme in 2006. Based on a network of the top four British universities (Cambridge, Oxford, London College and Imperial), it focuses on technological and health sector companies. Since 2006, Imperial's Innovations fund is on the London Stock Exchange, has invested £121 million (around €145 million), and the startups in the portfolio have raised £408 million (around €490 million). Since 2011, it raised £140 million (around €168 million) to invest in businesses built around IP developed within the network schools.

Policy Recommendation 9:

Policy should activate technical talent to get involved in entrepreneurial ventures. One way of doing so would be to create an “Erasmus” programme for programmers, designers and engineers with rotations across different European countries, using startup programmes as coordinating agents.

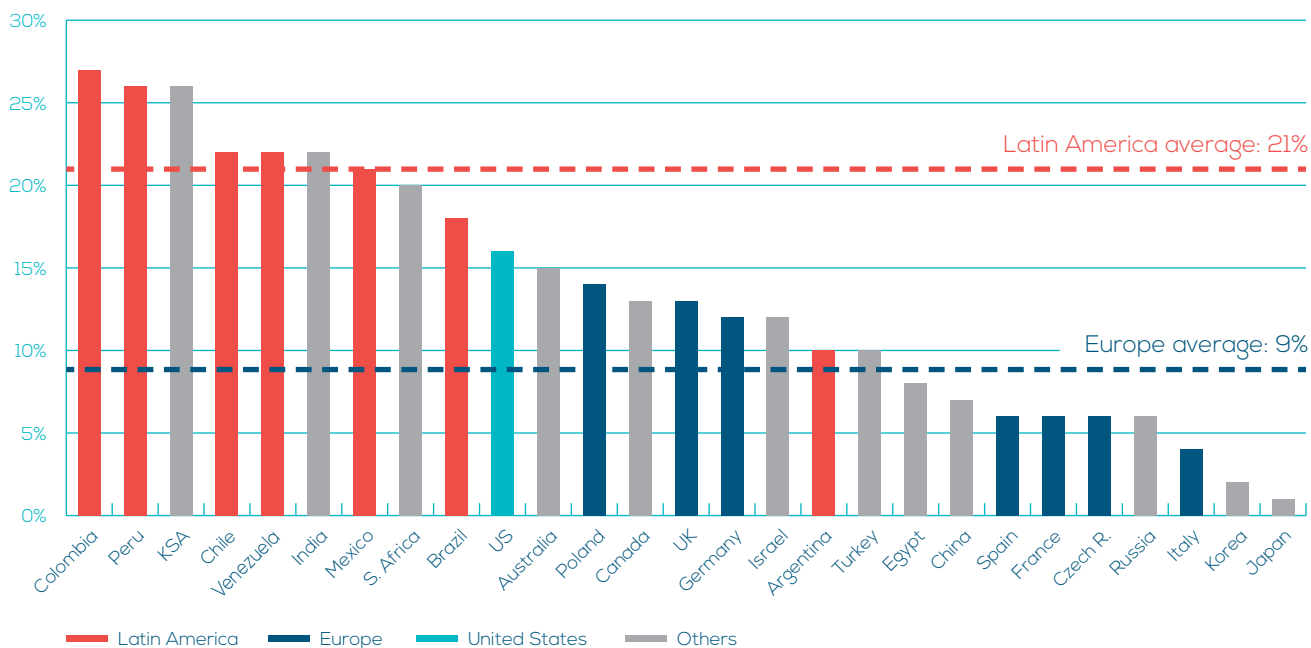
In general, accelerators and incubators in Europe have a limited scope of knowledge-based services transferred to entrepreneurs. One way to increase their value proposition towards incubated companies would be to strengthen their offering portfolio.

In addition, there is a mismatch of technological talent in Europe. In Berlin, for example, there is high demand for programmers and in Spain there is highly qualified supply. Europe should help student and programmers' mobility in technological areas across Europe to

reduce internal European skills mismatching. This can be achieved through incubator and accelerator programmes, acting as switchboards, and allocating technical talent willing to jump into entrepreneurial ventures. This could take the form of an “Erasmus” for programmers that would include rotations between accelerated/incubated startups across Europe while studying.

A programme like this would have three major impacts: 1) it would activate untapped technological talent for entrepreneurial ventures, 2) it would help startups by providing them access to a strong talent pool, and 3) it would strengthen the accelerator and incubator ecosystem by expanding their offering portfolio to its incubated companies. Ultimately, the programme would bring job opportunities to European programmers and foster young technological excellence. This is of high importance if we consider also that Europe is now lagging behind not only the US but also behind emerging countries in terms of “millennials” who could be tomorrow's technological leaders.¹⁷

Chart 8 Where are the Millennial Leaders?



Source: Telefónica Global Millennial Survey: Global Results, 2013

There is More than Meets the Eye: Employment is Not the Only Key Benefit that Startups Create

Table 4 Employee requirements for a startup visa

Business School	USA	United Kingdom	New Zealand
Number of employees required to employ for the entrepreneur to get a "startup" visa	5	2	3

Source: Telefónica Global Affairs and New Ventures based on migrationinformation.org, 2013

Plenty of recent research links early stage companies to employment creation. However, a key characteristic of today's innovative companies, including large technological corporations, is their limited headcount. While Apple boasted 2012 revenue of \$156 billion (€118 billion), it only has a worldwide employment base of 76,000 professionals. At the same time, General Motors boasted \$150 billion (€113.4 billion) and employed 284,000 professionals, 3.5 times as many.¹⁸ Therefore, purely from an employment perspective, investing in startups does not seem to be the most efficient alternative for governments to boost employment.

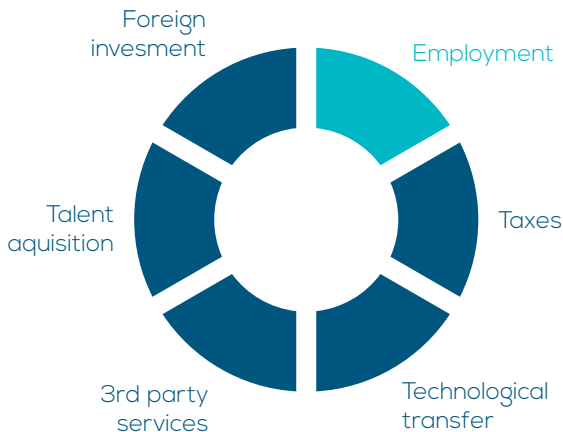
However, startups create wealth and encourage job creation indirectly. Governments should look beyond employment creation to understand the broader impact of startups in today's society. The impact of startups reaches innovation and technology transfer, third-party services, talent acquisition, taxes and foreign direct investment, among many other areas. All of these points are just as important for a country's wealth creation as employment.

That is why, when evaluating entrepreneurship policies, these additional features should be taken into consideration. Equally, this should be tracked and monitored by public institutions to understand how wealth is created and to get a rough estimation of return on investments on startup policies, as Sweden does (see the box on page 14 about the Swedish way of tracking startup progress).

Policy Recommendation 10:

Measure all aspects of the socio-economic impact that startups are causing to provide greater transparency and to increase awareness of the vital role startups play in creating and sustaining prosperity.

Chart 9 Startup contributions to economy



References

- 1 For the purpose of this research, “startup programmes” includes accelerators, incubators, company builders as well as academic and scientific hubs (science/technological hubs, universities and business schools) that have business incubation facilities.
- 2 The 10 countries we studied are the Czech Republic, France, Germany, Ireland, Italy, the Netherlands, Slovakia, Spain, Sweden and the United Kingdom. Seven of them – France, Germany, Italy, Netherlands, Spain, Sweden and the UK – represent the seven largest European economies as measured by GDP. The other three – the Czech Republic, Ireland and Slovakia – were chosen to reflect two nascent entrepreneurial ecosystems (the Czech Republic and Slovakia) and a small tight-knit community that is living the second wave of entrepreneurs after the late 90s.
- 3 The findings in this study are based on three inputs:
1) more than 150 meetings in 10 countries with the heads of startup accelerators, incubators and other industry actors,
2) indirect data gathered through open information sources, and
3) an e-survey answered by 125 leading entrepreneurs.
- 4 The estimate is derived from the following sources: seed-db.com, findthebest.com and TechCocktail Report 2012. The estimate includes accelerators, incubators and company builders. Since we included business schools with venture labs in our European sampling, we also included the top 50 US business schools with incubator services in the US sample.
- 5 Typically, a fast-growing company will go through several “rounds” of funding on its way to succeed. The usual progression is first seed, then angel, then the so-called “rounds,” labelled as alphabetical letters, where A is the first round.
- 6 For further information on startup ecosystems in Europe, please refer to the Startup Ecosystem Report 2012, compiled and presented by Telefónica (<http://blog.digitaltelefonica.com/tag/startupecosystem>). Full report available at http://multisite-blog.digitaltelefonica.com.s3.amazonaws.com/wp-content/uploads/2013/01/Startup-Eco_14012013.pdf.
- 7 The estimate is derived from the following sources: seed-db.com, findthebest.com and TechCocktail Report 2012. The estimate includes accelerators, incubators and company builders. Since we included business schools with venture labs in our European sampling, we also included the top 50 US business schools with incubator services in the US sample.
- 8 The compound annual growth rate is calculated by taking the n th root of the total percentage growth rate where n is the number of years in the period being considered.
- 9 An equity ticket is the denomination given to the amount of funding that an accelerator, incubator or any other investor gives to a startup in exchange for equity or any other form of ownership in the company.
- 10 If we exclude company builders, the average equity stake size for Germany is around 12%-13%, still on the high end when compared to other countries.
- 11 Examples include science parks, enterprise centres and co-working spaces.
- 12 For more information about Future Internet Public Private Partnership initiative, a European Commission programme, please visit http://ec.europa.eu/information_society/newsroom/cf/dae/itemdetail.cfm?item_id=11513.
- 13 Global Entrepreneurship Monitor 2012 Database. International Orientation early-stage Entrepreneurial Activity is defined as the percentage of Total Entrepreneurial Activity; indicating that at least 25% of their customers come from other countries.
- 14 For further details visit www.almi.se.
- 15 In a business school context, the name given to startup programmes is usually “venture lab.”
- 16 See Edward B. Roberts and Charles Eesley, *Entrepreneurial Impact: the Role of MIT* (Cambridge: Kauffman Foundation, 2009).
- 17 Based on 12,171 online quantitative interviews among Millennials, aged 18-30, across 27 countries between January and February 2013. Millennial leaders are defined as those that responded “Strongly Agree” I am on the cutting-edge of technology; “I believe I can make a local difference” and “Strongly / Somewhat Agree” I have opportunities in my country to become an entrepreneur or develop and bring an idea to market. The full report can be found at <http://survey.telefonica.com/globalreports/assets/Telefonica%20-%20Global%20Millennial%20Survey.pdf>.
- 18 Source: http://en.wikipedia.org/wiki/List_of_companies_by_revenue.
- 19 More information can be found about Talentum Startups at <https://talentum.telefonica.com/>.

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Talentum Startups: A (Potential) Pan-European 'Erasmus' for Programmers

In 2012, Telefónica pilot-tested its latest social innovation programme, Talentum Startups. The aim of the programme is to encourage talented programmers to create startup ventures and consider entrepreneurship as a potential career path. The targeted profiles are undergraduates with technological degrees such as software engineering. The programme has two tracks: a six-month long track of paid part-time internship in a startup combined with workshops and mentorship support; and a three-month full time short-track for those already willing to start giving shape to an entrepreneurial project. All is done in partnership with an accelerator and incubator network that provided access to startup projects and coordinated students. Nearly 7,000 applications nationwide were received for 250 spaces available.

The selection process was run by "hackers" who cherry-picked the best talent; most of the 15 accelerators involved were external (only two were affiliated with Telefónica); fifteen Spain-based universities were also involved. All in all, more than 250 startups benefitted from the programme and 90% of the participants are now looking to lead their own entrepreneurial project.

In 2013, the project opened to other interested companies. Ericsson, the Swedish technology company, joined the programme, and others are expected to do so shortly. By promoting more spots in Spain and in Sweden, this growing initiative could create the embryo for a pan-European initiative. Talentum Startups could become an "Erasmus" for programmers and facilitate high-talent mobility across entrepreneurial ecosystems in Europe. The research in this study is also intended to help the potential implementation of the programme in seven European countries in the short term.¹⁹





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