Startup Heatmap Europe 2017

Complete Report

Dear reader,

the following pieces of analysis have been published during October 2017 and February 2018 on our blog Startups & Places based on the findings of the Startup Heatmap Europe survey 2017.

The following compilation is a service to those who want to delve deeper in the topic and read the entirety of our analysis, e.g. for research purposes. To find the original articles online, please visit our blog.

We hope you find this compilation helpful and we hope that you are interested to follow our work also in the future.

Thank you,

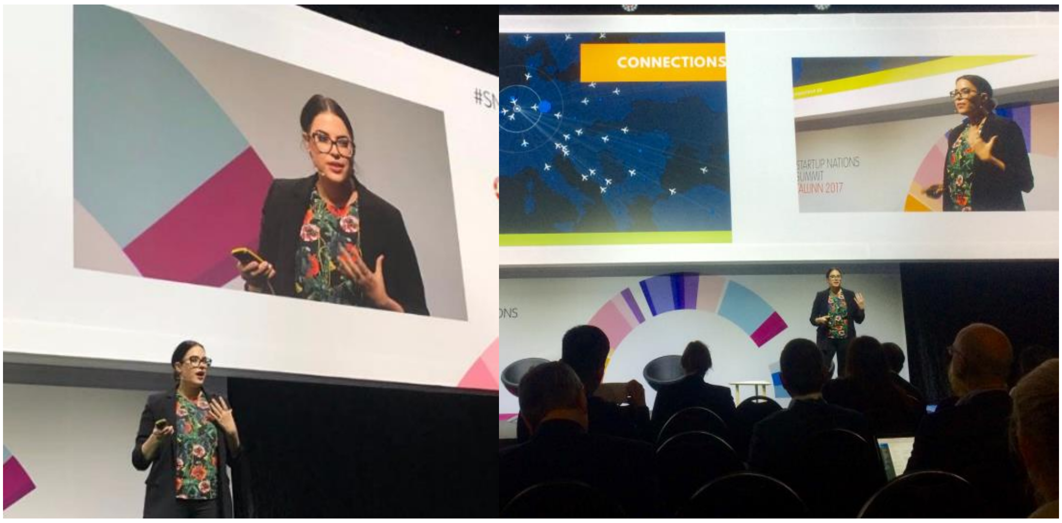
Thomas Koesters

Founder Startup Heatmap Europe

An Opener: Salad Bowl of Melting Pot? The elements of a great startup ecosystem

By Natalie Novick, Research Director Startup Heatmap Europe.

Our research director, Natalie Novick was invited by the Global Entrepreneurship Network to present the results of her research to global decision makers on stage at the Startup Nations Summit in Estonia. Read below the full excerpt of her talk.



The goal of my talk today, is to show that anyone, anywhere—from wherever you sit and whatever resource you have—can work to improve their startup ecosystem. If you are a bureaucrat, a community member, a founder, or just someone interested in startups—there is a role for everyone, and everyone can do something here.

There are many that have spoken about developing strong tech ecosystems, about what they need, about what you need to put into them, about what laws you need to change, what types of talent you need to import, and what kind of money that has to be raised to make it happen.

Often those we listen to who have written previously about startup ecosystems tend to be investors, or those involved in economic development. Ecosystems are vitally important to them because they are looking to get a return from the startup ecosystem. They know that a vibrant startup ecosystem can help sustain and propel profit rich companies. I come to this investigation from another angle, as a sociologist. My research is on startup ecosystems, what they are, who they are comprised of, and what they mean to people. Sociology involves the study of the social bonds people form with one another. Further, it involves the study of how communities develop, the social forces that govern them, and how the environment can shape their activity. This provides a unique perspective to approach the topic of startup ecosystems, as everyone here will know well, that more happens inside them than just business.

It is from this vantage point that I find vibrant startup ecosystems help support much more than economic development—they can help project positive messages about technology and business practice to the wider community, dissolve entrenched inequalities and discriminations in the workplace, and help bring people together in a positive way. These positive externalities of the startup ecosystem are outcomes that communities across the globe are looking to promote more widely. But how can this be achieved?

Don't accept compromised data as truth

When we want to first evaluate our startup ecosystem, the first step usually is to measure it. Measurement is a key step to conduct when you are looking to improve or build on something. I have a background as a data scientist and a survey methodologist, and when I talk with academic audiences, we utilize lots of graphs, numbers, data. Whether you are in academia, government, or business, analytics are important as it shows us what we have, what we don't have, what we need to improve on. Data gives us a baseline for what we can do and where we can see where we are going and what we can do better. Except when it doesn't.

Data is only as good as its inputs. What we see happening, is that even in the age where we have more data than ever before, the types of data we have available is incomplete. Measures are constructed based on data availability, and not informed by theory. The measures that go into many of these startup indexes utilize whatever data availability we have, at whatever level of analysis we have. In addition, rarely does anyone question the data—people accept data that comes from sources that are unknown to them, from questionable sources or from for-profit providers.

Leaning on indices and metrics like these can lead to rash conclusions, and do not allow us to see what is going on within the lines. The data we utilize can mask certain phenomena that is unmeasured under the surface.

The second problem with available data, is the methodology. Methodology involves the construction of how these indices, and how values are put together. Much of the time, they are not theoretically motivated. Partly because, this is a rapidly changing field, and there remains much theory development to be done, but also partly due to their orientation. Often these indices are built by private entities, specialists, and corporations for self-interest. Municipalities pay for their inclusion for fear of being "left out" of a global conversation. And– the construction of these indices seems to imply—that every startup ecosystem needs to be measured the same way, and evaluated according to the same inputs and outputs.

In Academia, we have a pretty healthy conversation about the limitations of data and the problems of methodology. But outside, this does not happen to the same extent. Oftentimes we accept the existing indices and metrics from companies that utilize sources that are untested, where the methodology is unquestioned, utilizing sources they do not understand nor question—because they don't have anything better.

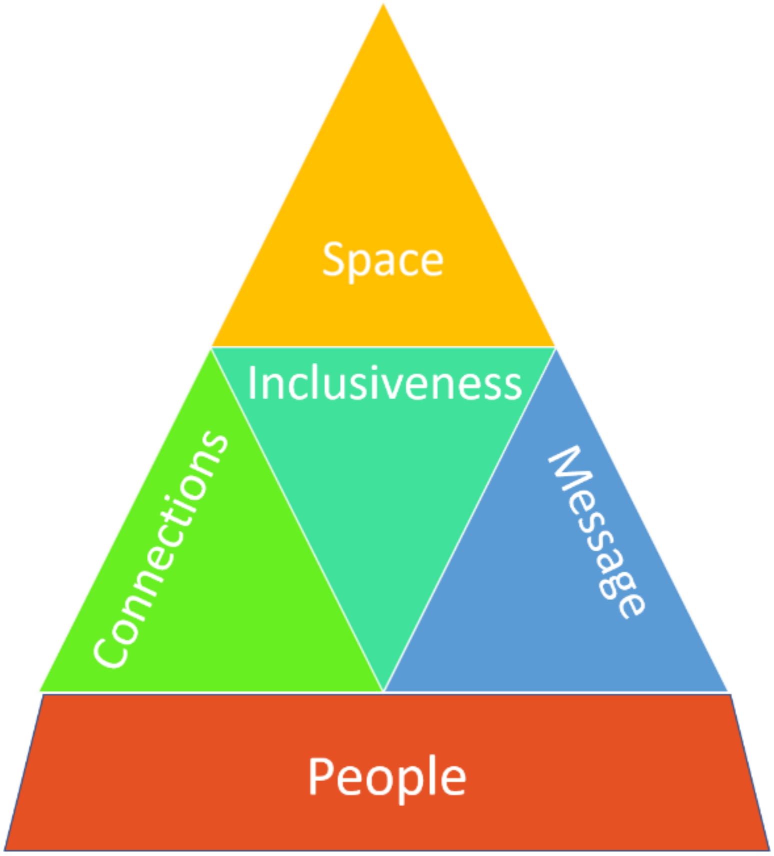
Developing your own metrics

My background is in quantitative analysis and survey methodology. I am a statistical person. But for the last 18 months, I have been engaged in an ethnography of startup ecosystems—approaching the startup scene as an anthropologist — because many of the key elements of a startup ecosystem are not easily quantified. These elements, comprise key facets of our startup ecosystems that indicate how well they sustain the communities they serve. But they don't often show up on many of these rankings because they are not easy to measure. Because they are not easily measurable, it does not mean that they cannot be measured. Once you have engaged in the qualitative discovery process, you will be able to apply metrics to the features of your ecosystem that you find important.

In my research, I have identified a number of facets that are sociologically interesting. I tend to spend several months in an ecosystem discovering them—but you, as ecosystem builders, and community members, you are equipped to do this work.

By discovering the key qualitative aspects of your startup ecosystem, by truly understanding them, you can learn to measure them and utilize them in your efforts to build and improve your ecosystem for everyone.

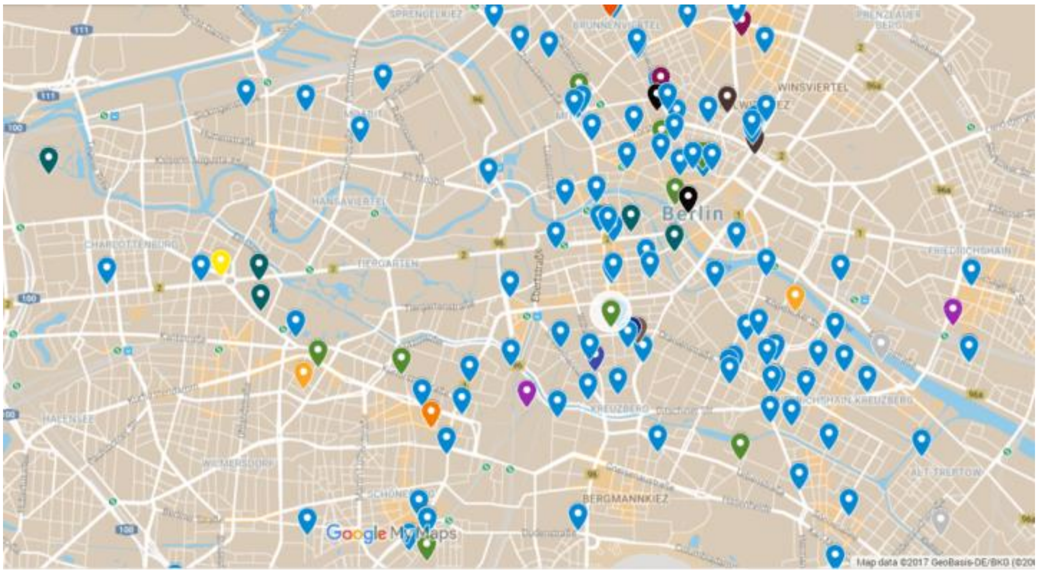
The Startup Ecosystem Food Pyramid



I have arranged some of the key qualitative components that I have found to be particularly important towards sustaining the startup ecosystems I have studied in the above, Startup Ecosystem Food Pyramid. These components are not easily quantifiable, and often do not appear in traditional metrics of startup ecosystems. Each of these constitutes an important component for community building. Don't necessarily look at the size of the segments here—these can differ based on your ecosystem's unique needs—or the orientation, particularly. It is important to keep in mind that these components are not exhaustive—but they identify some of the most important characteristics about your ecosystem—that you as community members and ecosystem builders—need to evaluate.

Space

Space is the protein of the startup ecosystem, and is the element that helps startup ecosystems to grow strong. The early story of Silicon Valley is one that prized the role of garages as workshops that led to the creation of some of the world's most laudable companies—HP, Apple, Google, these were all built in someone's garage. Garages are not so numerous and accessible to everyone around the world, but if you want to build anything, a product, a company, a community, you will need to have a workshop. What is unique about a garage is that it is a place to work, a place to get your hands dirty, and a place that is really accessible to a lot of people, you don't need the right suit to enter. Its not a particularly clean place either. Keep that in mind as you evaluate the startup spaces in your ecosystem.



The above is a sample of a map I made of 161 of Berlin's spaces I visited during 6 months in the startup ecosystem there. They are co-working spaces, assembly areas, special congregation rooms in corporate environments, to coffee houses and convention areas. In Berlin, these spaces and rooms to congregate—hosted about 1200 tech events last year, depending on how you measure the data.

Space is what allows entrepreneurs, and startuppers to engage in the community practices of entrepreneurship that have become key features of the entrepreneurial process. These are places to learn, to share, and to build. But not all of these spaces are created equally. It is not simply counting the number of these spaces—you need to examine how they work. If you want to evaluate them, take some time to visit them. Sit in the back and observe how they are being used. Who is using the spaces, and what are the spaces being used for? Are these more technical talks, or more about key aspects of the company ideation process? Are they positioned more for the startup stage, or the scale up stage? Are there barriers to participating? Are the events well attended? Are people participating, asking questions? Or sitting quietly? What does the life look like in these spaces? Do you get a comfortable feeling, or one that ls less comfortable? Does it seem that people have adequate room to grow, collaborate, and exchange with one another? Are there barriers to participation? Does it feel like a space someone with little technical or practical startup expertise would feel comfortable entering?

The type, amount, quality, and density of the spaces available will significantly impact the type of exchange that happens in them. Room that is freely available, will be a haven for those to work. Spaces that are offered by sponsors or by the community will encourage those who are inclined to host their own events, and build their own communities on top of the startup ecosystem there. Social platforms make it easy to connect likeminded people, but having a venue to meet offline is an important community asset. What is the consistency of the events? Is there a lot of training going on? Is every night a pitch night? Or are people trading skills and building things together? What interaction is happening? Use these questions to orient the discovery process. Once you begin to answer these questions, you can begin to formulate your own questions, and begin to attach metrics to them. You can compare for example, the amount of spaces that are open to hosting technical events, compared to those that are for ideation, and business strategy. You can evaluate the amount of people that are coming into these spaces, and the types of interaction they are having. As you begin to develop metrics that are appropriate for your community, you can compare how these change over time, or with the treatment of certain initiatives. Utilize your own understanding of your community's spaces to identify your unique needs and orient your activities going forward.

Inclusiveness

An inclusive ecosystem is one that is open to everyone, and presents itself that way. It is a place for people from all levels of society, with an entrepreneurial mindset to feel welcome and where they can come together. The benefits of cultivating a diverse ecosystem are well documented. Diversity insulates from groupthink, it makes teams more innovative, it makes products more robust and testable in more markets. More diverse ecosystems can harness the variety of skills brought together from various perspectives. But we know, that not everyone has an equal opportunity to participate. Black software engineers make less than whites do, and minority candidates are less likely to be hired, for not fitting into the culture. Further, the technical tools and skills that help us to build and create in this digital economy are not available to everyone.

A great startup ecosystem is a place where everyone can feel welcome. And no one is excluded. There are a number of great initiatives working to tip the balance here, and the visibility of organizations like these (Opentech School, Czechitas, Refugees on Rails, etc), helps to send a message about your ecosystem's approach to the world.

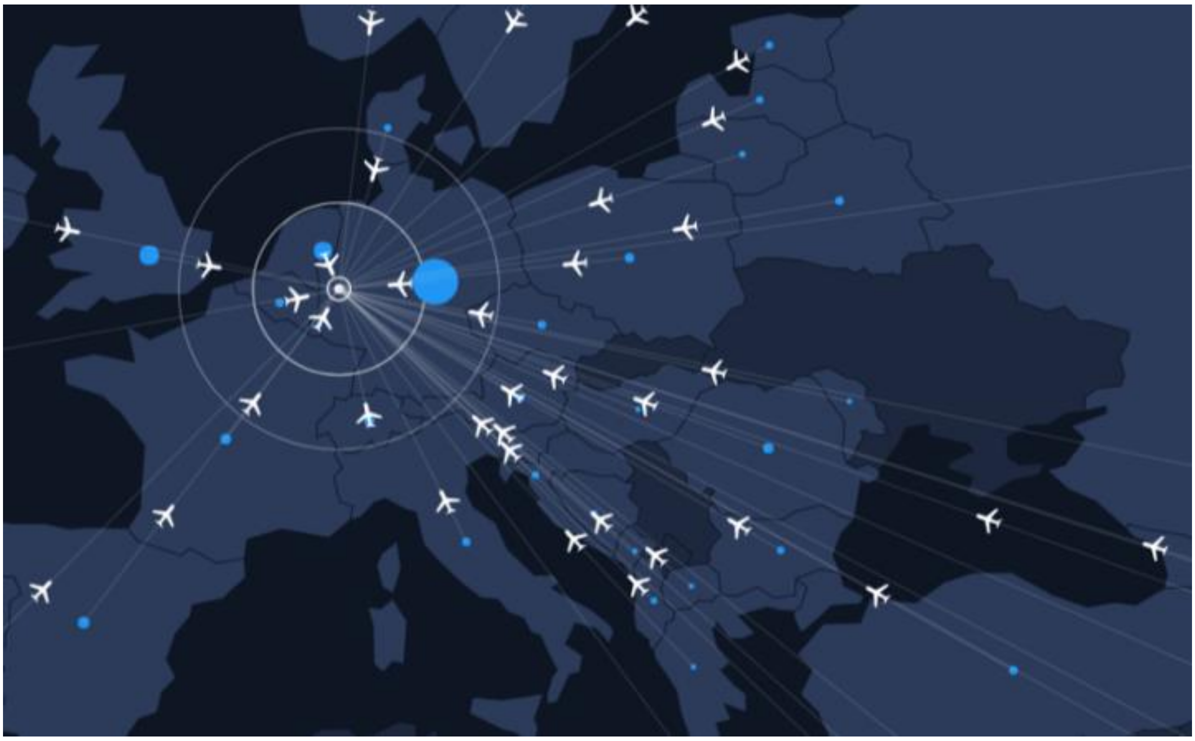
How do you know if you have an inclusive ecosystem? Take the time to ask people. Attend events, and observe. Are there older people participating? Young people? Mostly men? International/non-native people? Listen. It is not about the quantitative metrics of how many female founded companies you have, or how many minority candidates that are hired. Inclusivity is one of the hardest things to promote—but if you have good information, that you constantly update—you can begin to understand where the unique challenges are.

When examining your ecosystem's events, consider aspects such as language, to see how language can include or exclude people. English language use is important—it gives the opportunity to communicate and express oneself across multiple geographies, but it has pros and cons. For example, English language skills are one of the most important aspects of success for startup founders when they are raising money, and for engineers and developers for getting hired—but an ecosystem exclusively in English, when this is not the native language, can make barriers for some.

Similarly, investigate how well your ecosystem integrates non-native people. International students and founders are important aspects of a startup ecosystem—indeed a large portion of founders in Silicon Valley come from outside the US or were former international students. But this progression from university to business only works if those international students can feel at home in the community. This is not always the case. Look for possible barriers within your community if this is not the case, and identify how bridges can be built to make this group feel more included.

Connections

Just as companies are born global today—similarly, the ecosystem for entrepreneurship is a truly global one. This is the larger story of the Startup Nations Summit, the event that has brought us all together here. Your community must be participating in this global conversation—and as you are all here, that's a great start! Building meaningful connections across cities, across borders and across a region—is the best way to increase the impact of your ecosystem overnight. Work to build meaningful connections by finding a shared point of exchange value. For instance, is there a shared vertical that you can promote? Is there an exceptionally good train or plane connection to this city? You as ecosystem builders need to be in conversation with startup ecosystems that are outside your specific sphere of influence. Work hard at promoting these connections—and you will have the opportunity to make something really special.



This above is part of a map we did at Startup Heatmap Europe for a tech event a little while ago. It depicts the origins of attendees that are coming to attend this specific event. In your ecosystems you may have similar ones. How are you harnessing and utilizing these people? Are these single serving connections? Or are they something more? Interestingly, when we asked many of these international participants at the event about their impressions of the startup ecosystem in this city, they had a limited understanding. The visitors knew the event, but that was it. This is a single serving connection. It showcased an area where the ecosystem could do much more to capitalize on the high volume of international visitors, to create more impact.

Connections across ecosystems come from many things—investments, hometowns, events, talent to suppliers. You can build these connections is by utilizing your existing ones. You will begin to build outwards. Ask questions of your visitors, and look hard at the data you have available to you to see how these connections are being made. Do you have a certain vertical that you are investing in heavily? A special talent, or cluster? You can work to reach out to places that also share these strengths. Are there other connections that might make sense? Do you have a sister city? Or a place that has a great nearby train or plane connection? You can start there. Identify how people connect to your ecosystem.

Finally, you should question how are you utilizing your diaspora. A startup ecosystem, cannot be everything to everyone all of the time. Entrepreneurs are transnational people, they will by their very nature be likely crossing borders, moving cities, maybe many times in their lifetimes. Don’t punish them for going—try to find a way that they can still remain connected to you. They can be your best ambassadors abroad. Look at the incredible impact of the French Tech project, or simply how using a hashtag like the #estonianmafia can unite people together. Similarly—a great Greek startup cluster exists in London, and it has become a magnet for funding, and for newcomer Greek entrepreneurs to the city to find a foothold. Utilize your diaspora and work with them to showcase your strengths, and give them reason to return, to share knowledge and give back.

Message

The last qualitative aspect I am going to talk about today is message. Your message, is how you communicate yourself to the world, and how the world, can see what you have to offer. Your message is one that is descriptive, accurate and continually updated. Your message is one that your community can align under. What is the first association people have with your startup ecosystem?

One way to align your message is using a "Flag". This concept, of a ecosystem hashtag was designed by Tyler Crowley, who started the Stockholm Tech meetup—now today Europe's largest monthly tech events. A big part of the success of this meetup came from its aligned messaging. If everyone in your ecosystem is able to combine their message under multiple platforms, it can be a valuable tool. Another way to take control of your message is through a platform—and here, no one does it like Estonia. The startup Estonia website, tells you everything you need to know about Estonian startup ecosystem, the places, destinations, etc. Take control of your message,

But to know your message—you need to understand how it is perceived. At the Startup Heatmap, we have done a lot of work with founders, asking them about their top destinations to startup in Europe. And what we find, is that founders sometimes, do not know a lot of information. Often, their associations are not detailed. They don't know where to get the information, and sometimes their associations are just plain wrong. I ask people some for their first associations of the startup ecosystem in the places I am researching—and sometimes the replies are, "its small", "its cold". Pressing them further, they cannot name the top companies there, the top companies—they do not know that story. Founders are primarily concerned with the development of their companies. They do not have a lot of time to fish for information. If you want to attract them to your ecosystem—your message, of the value you can offer them, must be as clear and efficient as possible.

Ecosystem builders need to take the lead, and craft the story you want to tell. Make sure it is representative—and one that the ecosystem is on board with. You cannot just grab a hashtag, and run with it and expect people to jump on board. Similarly, with branding efforts—a city, that will remain nameless—is utilizing a branding campaign—that when you ask entrepreneurs about it, they find it embarrassing. They will not get on board. Bring them into the conversation.

People are the foundation of all startup ecosystems

Ultimately, entrepreneurial ecosystems are about people. Startuppers are among the most misunderstood people out there. They are misunderstood by their families, their friends, the industry and also by civil society. The founders we talk to—they are at times have the perception that their local government is unfairly credit claiming from their accomplishments, and worse—their municipalities and governments are openly hostile to them. Localities, they are frustrated when startuppers do not engage with their initiatives. Miscommunication goes both ways.

A great startup ecosystem depends on people to sustain it. Communities are built on trust, and understanding. Foster an environment where both of these qualities thrive. For those of you on the community side—take the time to get to know your startuppers. Find out what motivates them, what their pain points are, why they are entrepreneurs, what their kids names are. The more you get to know your startup scene—the more you begin to uncover what your ecosystem's entrepreneurial identity looks like. The entrepreneurial mindset—is one of the most important qualities of an entrepreneur. But what does this look like in your ecosystem? Are you finding your entrepreneurs risk adverse, and scared to share with one another? Is entrepreneurship an act of desperation, found out of a loss of all other alternatives? Or is entrepreneurship bound out of a daring to try, facilitated by a welcome, and supportive environment?

By getting to know your entrepreneurs and their teams, you, as community builders will learn what they need. You might find that they are risk adverse, or find that they are vulnerable, being taken advantage by corporate VCs. Based on your discovery process, you will know what you will need to invest in your ecosystem. Make a commitment to say that your door is open to hear from them. Do not always expect them to come to you—you need to demonstrate the effort that you are open to hearing from them, and you value what they have to say.

This conversation is not one driven by one partner. Startuppers—know that the city, and the government and your community cannot read your mind. You need to work to communicate your needs better, and consider their perspective. At the end of the day—what is good for you, is good for them. You are on the same team. Use this common ground as a place to build a meaningful relationship.

Knowing your qualitative metrics means knowing what you have to offer

If you only know the quantitative side of your startup ecosystem—you are missing the entire story. And you will be unprepared to make it grow. Investing in building up these qualitative insights is hard work. I heard from a global intergovernmental organization (names withheld to protect the guilty) last week and in their analysis of startup ecosystems—they said they spend one week evaluating the culture in each city. That's not enough time. You cannot expect to get the right insights if you only utilize those from outside experts, or talk to those who are the most visible in your ecosystem. You need to speak with a wide variety of people that are involved, and more importantly, as community builders, you need to participate in it yourselves.

Once you begin to uncover these qualitative insights, you can work to attach quantitative metrics to these qualitative insights. Continue to evaluate and measure how things change. It is only by devoting this attention, you will see where you are going and what you need.

As you begin to uncover your value, and build upon your strengths as an ecosystem, its up to you to share it more widely. You cannot depend solely on media to tell your story for you. Be the architect of your own story, and work hard to communicate your value. You need to share these understandings, share what is unique and special about your ecosystem. Right now, this is not happening nearly enough.

The benefit of an authentic message that communicates your value is immeasurable. Greater visibility about your ecosystem can work to attract those who want to be a part of the things they see happening there. Greater visibility means your startups are more recognizable, and international partners can put greater trust in them, because they can easily find out more about their story. Excellent communication indicates to investors, corporates, and other ecosystems that you are participating in a similar global conversation. Don't count out your qualitative insights in a quantitative world. Every ecosystem has something to offer. It is up to you to identify and evaluate these core qualities, and work to improve and amplify them.

Startup Heatmap 2017 Methodology

The 2017 edition of the Startup Heatmap Europe survey ran from April to July. 321 founders from 30 countries responded to our call. The survey was closed and based on invitation. We worked with the research team of Pitchbook to identify a representative and random sample of for all the European startups registered in their database. This meant quite a far-reaching deviation from last year's method where we had an open survey with over 700 participants coming through many partner accelerators and entrepreneurship groups all around Europe. We decided to follow this new approach to maximize the validity of our findings – especially since it would allow us to compare findings from both sampling methods and fine-tune future data collections.

The European startup ecosystem changes continually. Companies are built, deals are made, and ventures fail everyday. The perception of a specific startup ecosystem is continually changing, based on each founder's individual lens of analysis and scope. Due to the rapidly changing nature of this environment, obtaining a comprehensive selection of the unique individuals who populate this landscape is nearly impossible. Obtaining a sample of this population will in every case be limited. This survey is no different. Importantly, the Startup Heatmap Survey is not a scientific publication and even though we try to abide by the fundamental rules of scientific rigor and validity, we do see ourselves as a journalistic project, which points out tendencies rather than certainties. But despite these limitations, we want to stress the importance of transparency in this work and further research on startup ecosystems moving forward.

To be open about the quality of our data and its limitations, we lay out our methodology in the following paragraphs.

We used the following criteria to determine the total population of European startups included in the Pitchbook database:

1. Headquartered in Europe (based on historical delimitations we selected 45 countries)
2. Date founded: Later than 1/1/2012
3. Ownership status is "privately held"
4. Match one of 84 select innovative industry sectors

From a total population of 7,830 we extracted a representative sample of 1,500 based on regions and sectors. Unfortunately, the response rate on the initial call was low, so we asked partners and multipliers if they had direct contacts with the startups listed. Through this we could increase the response rate slightly to 15%, but had to realize that the data quality was also not as solid as we had hoped for, as the list included many companies that were not startups or not active anymore. Finally, we manually added 96 companies that we identified through Crunchbase to fill the gaps.

Sector/Region	CEE	Benelux	West	Nordics / Baltics	Mediterranea	UK/Ireland	Totals
High-Tech	105	148	503	264	204	519	**1743**
Internet	468	435	1484	869	981	1850	**6087**
	573	**583**	**1987**	**1133**	**1185**	**2369**	**7830**

Total population

The resulting sample of 321 proved to be evenly representative of the two select sectors High-Tech and Internet as well as for the six pre-defined regions. We believe that the survey is a good representation of the total population (4%) as well as for the two sectors defined (5% vs. 4%). The regional representativeness is balanced enough to avoid biases. Therefore, statements that are concerning founders in Europe in general like the rate of mobility or the importance of certain factors for moving are the firmest. Here we have a margin of error of 5% at a confidence level of 95%. The more detailed the analysis gets, for example when examining regional distributions or even country level data, the more caution is necessary. While for the sector related questions the margin of error stays relatively low, for regional categories the margin of error is relatively high.

Sector / Region	CEE	Benelux	West	Nordics / Baltics	Mediterranea	UK / Ireland	Totals	Margin of error
HiTech	6	9	29	19	11	17	91	**10%**
Internet	24	15	57	36	43	55	230	**6%**
Totals	30	24	86	55	54	72	321	**5%**
Margin of error	**17%**	**20%**	**10%**	**13%**	**13%**	**11%**	**5%**	

Sample with margin of error at 95% confidence interval

When comparing the results of 2016 and 2017 we observe wide confirmation for various themes, as for example the percentages in both years of founders who started their company abroad is stable (23% vs. 21%) also the percentage of those who left their broader home region is similar (85% vs. 88%). The comparison of factors for moving is however difficult as 2016 there were only 4 choices and 2017 we added 2 more. Nevertheless, access to talent remains at the top. When looking at the city rankings, it is remarkable that 8 cities appear again in the top 10, showing a strong validity of the survey. Nevertheless, one has to admit that the stronger participation of some countries could have played a role in the positioning of some hubs. London overtaking Berlin as number one can be partly explained by the higher representation of UK founders in the 2017 survey, which is justified by the higher number in the total population. However, for Paris who entered the top 5, even if we subtracted all French voters, we would not see a change in ranking. In general, we must say that the 2017 survey has a higher reliability in terms of representativeness.

To have complete transparency about the participation in the survey and potential effects on the results, we publish here the participation by country:

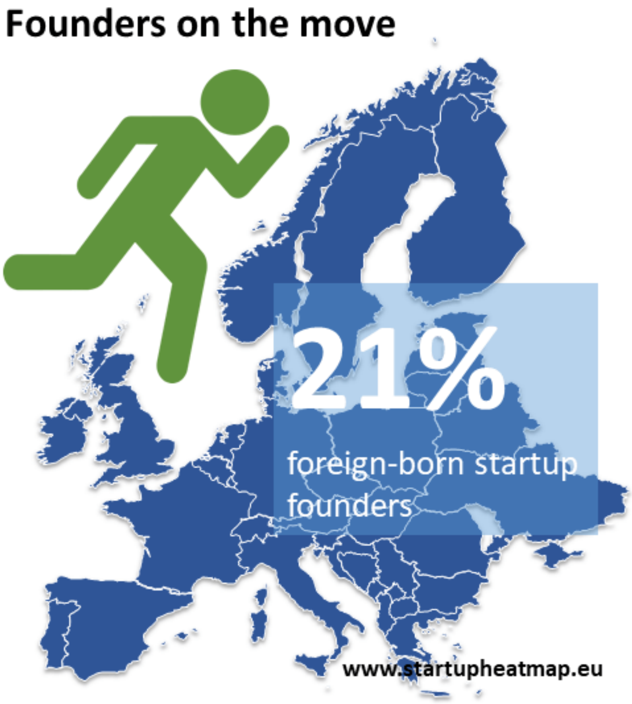
HQ country	# of location	% of total	2016	Comments
United Kingdom	59	18%	5.80%	72% voted for London
France	39	12%	2.10%	64 % voted for Paris
Germany	34	11%	20.20%	61% voted for Berlin
Spain	22	7%	2.80%	
Italy	19	6%	3.60%	73 % voted for Milan
Finland	14	4%	0.70%	
Denmark	13	4%	1.60%	
Ireland	13	4%	2.30%	
Sweden	13	4%	3.10%	
Netherlands	11	3%	5.60%	
Portugal	10	3%	9.30%	
Belgium	10	3%	1.90%	
Austria	9	3%	4.30%	
Hungary	8	2%	0.90%	
Bulgaria	7	2%	6.80%	
Latvia	6	2%	2.70%	
Slovakia	5	2%	0.40%	
Estonia	5	2%	2.10%	
Switzerland	4	1%	2.80%	
Luxembourg	3	1%	1%	
Poland	3	1%	5%	
Czech Republic	3	1%	0.90%	
Norway	2	1%	0.60%	
Ukraine	2	1%	0%	
Cyprus	1	0%	0.10%	
Malta	1	0%	1.10%	
Greece	1	0%	0.30%	
Romania	1	0%	2.10%	
Slovenia	1	0%	2.10%	
Lithuania	1	0%	0.30%	

Participation in Startup Heatmap 2017 by country

We believe in transparency of methodology, as it is the only way to have an honest debate about how to measure the development of this unique ecosystem. The Startup Heatmap is continually iterating. The team is continually working to improve the design and ensure the results become stronger. Importantly, despite the significant change in survey design from the previous year, we see a number of trends continuing to stay robust. While the leverage these individual results can give is limited, their durability indicates this work is moving in the right direction. Working together with the community, our ultimate goal is to develop continuous monitoring instruments to capture how the interconnectivity of the European startup ecosystem is evolving. We hope this edition of the [Startup Heatmap Europe] is a step in the right direction.

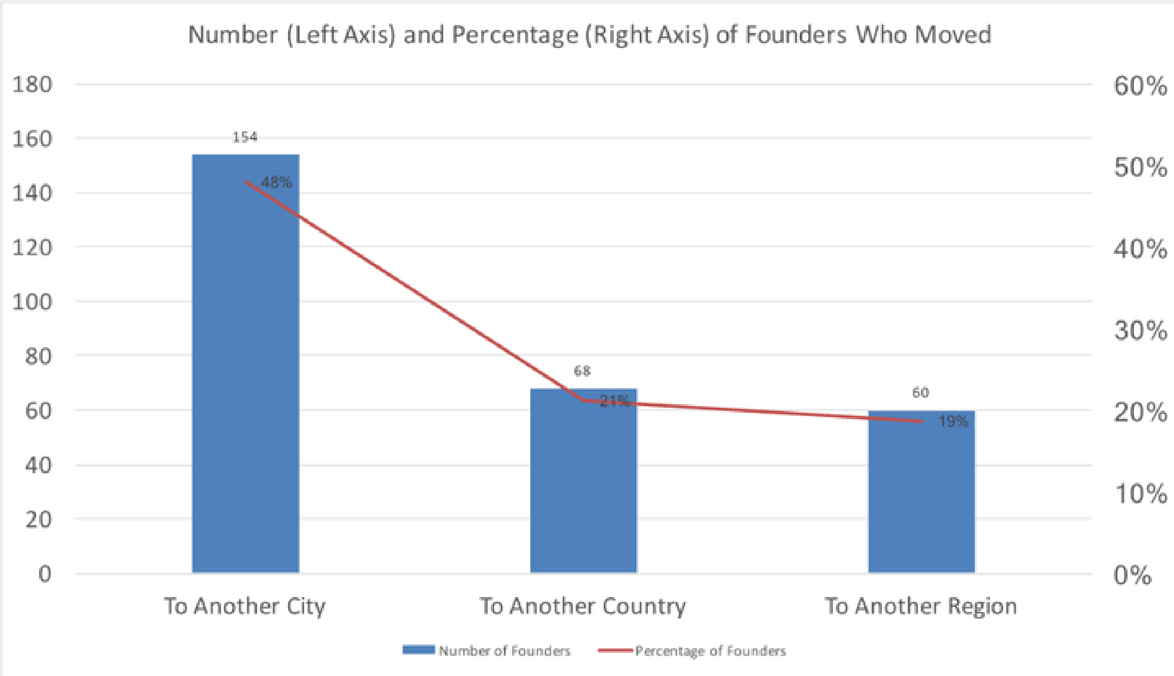
Where are EU founders moving to?

By Arunabh Singh

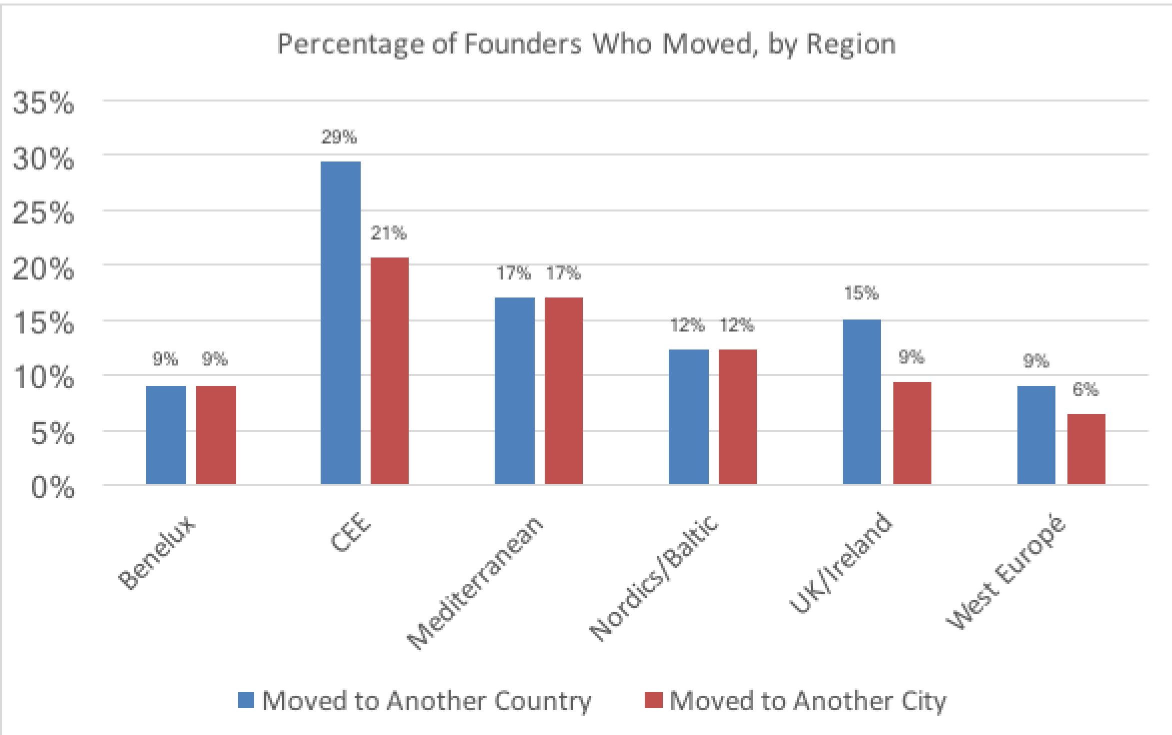


Overall, the key reasons for founders to move somewhere to establish a business are access to talent (a score of 4.20 out of 5), followed by ease of doing business (3.85) and access to capital (3.69).

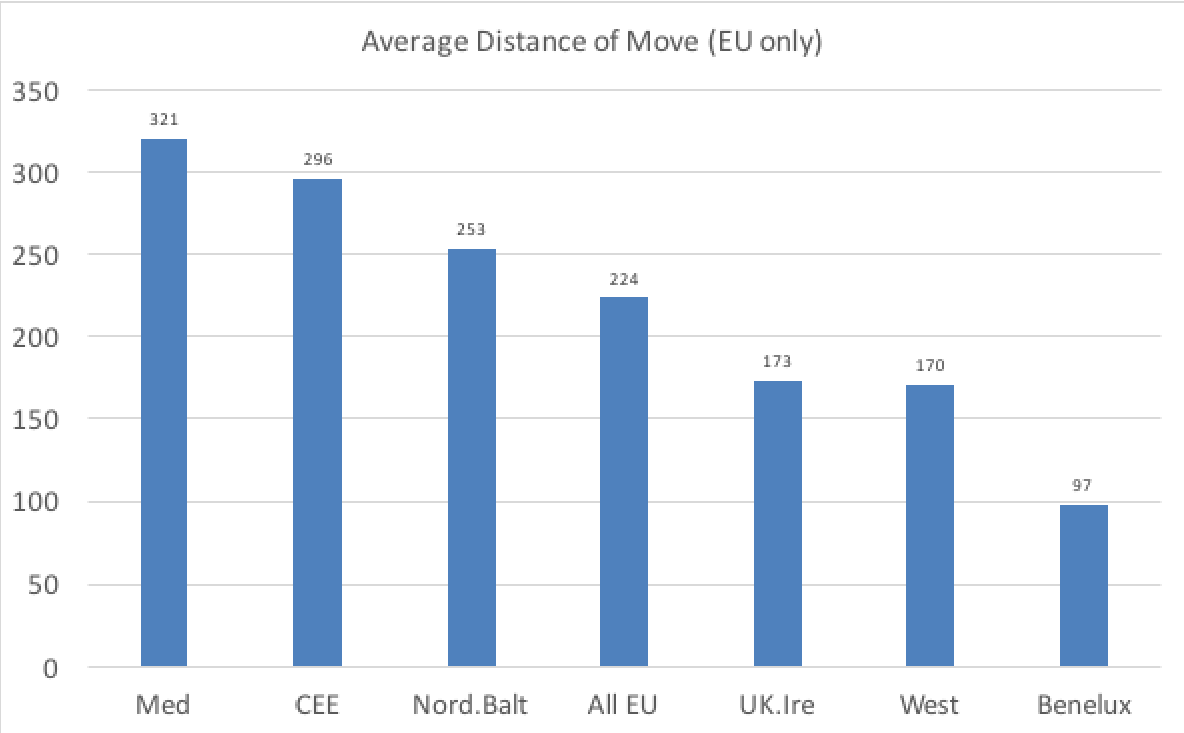
Overall, roughly half (48%) of founders moved to another city to start a business, with 21% moving to a different country, and 19% to a different region altogether. Overall, however, given the ease of labor mobility within the EU in particular (although not within all the countries surveyed), this fraction is lower than what one might expect. Perhaps this indicates that most founders are quite satisfied with the level of opportunity available within their own country or region (although maybe not their own city), and this bodes well for overall dispersion and distribution of startups around Europe. In other words, not everyone simply packs up and moves to London, Berlin or Stockholm to start an enterprise.



Breaking the above data down regionally, we can observe that the two regions where most of the international exodus happened are Central and Eastern Europe (CEE) and the Mediterranean. In the former, 29% of founders moved to another country, whereas 21% moved to a different region altogether. In the Mediterranean, 17% of founders each moved countries and regions. On the other hand, in Western Europe, only 9% of founders changed countries, and another 6% changed their regions. One reasonable hypothesis is that founders in the CEE and Mediterranean are relatively dissatisfied with access to talent, capital and the wider ecosystem in their regions compared to their Western European peers.



Looking at the distances of the move, the greatest distances of move from their place of origin is also for the Mediterranean and CEE founders (321 km and 296 km respectively), which ties in with the above data. They are just more likely to go further (and change regions, not just country) to start new enterprises. The smallest distances are for Benelux founders (97 km) and Western European founders (170 km). The overall EU average is 224 km. For non-EU founders, the average distance of move is 7596 km, however this mostly reflects the geography and the countries surveyed (the distance from, say, Tel Aviv to London or Stockholm is quite large), and hence it skews the average if included. Therefore, the chart below only includes data for the moves of EU founders.



Top 5 cities to startup in Europe according to founders

By Victor Umeh

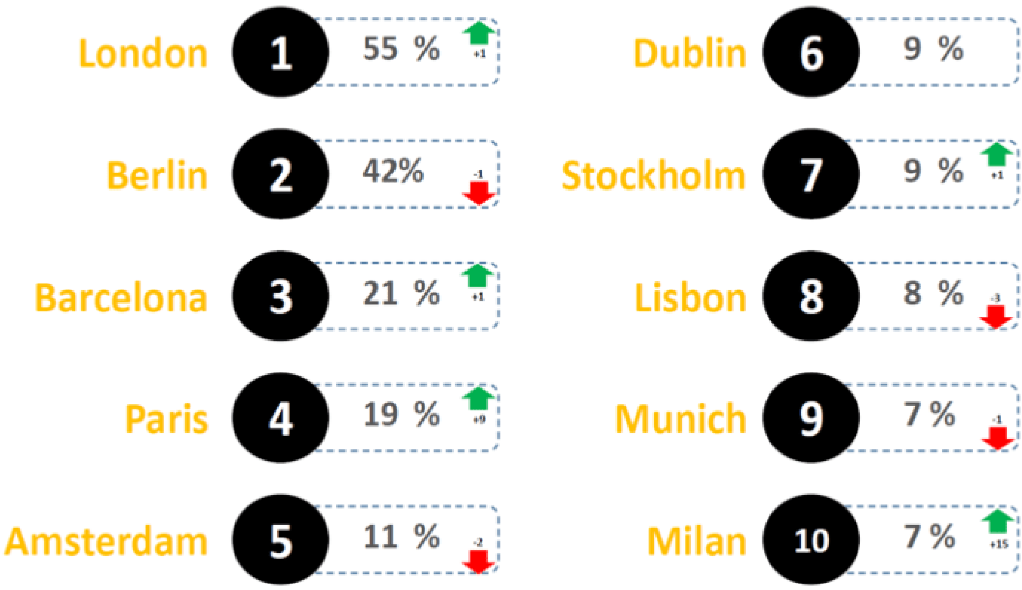
That location of a startup is crucial to its success is no longer news – just think of the tech titans of Silicon Valley. While local governments and cities aggressively parade their merits to attract startups, the perception of founders on which hub holds more opportunities for them will prevail on their choices.

Startup Heatmap Europe, the benchmark report on founder mobility in Europe asked founders, *"Where would you startup if you were to start all over again?"* Considering location factors: access to capital, talent, costs, personal network, proximity to target market and quality of ecosystem, entrepreneurs were asked to rate various European startup hubs. Unsurprisingly, London takes the lead, followed by Berlin. Barcelona and Paris are runners-up and Amsterdam is in the fifth position.

Founders' Favourite Five

Interestingly, the top five startup cities received 50% of all votes in our study. London and Berlin attract more than 80% of founders' votes – an unequivocal demonstration of their placement at the zenith of startup founders' wish lists.

While London maintains its grip as the place-to-be for capital-intensive startups (87% of votes for access to capital), Berlin excels in quality of ecosystem (support, mentors, accelerators, etc.) as it attracts 88% of votes for this location factor. Barcelona, in third position is particularly appreciated abroad: 90% of its endorsements come from outside Spain. It is very popular with Western Europeans, where 1 in 4 founders would choose it as their next destination. However, with a potential *Catalexit*¸ its international appeal might be affected. Nevertheless, Barcelona stands out for ease and low costs of doing business (45%), a thriving ecosystem (51%) and access to talent (51%).

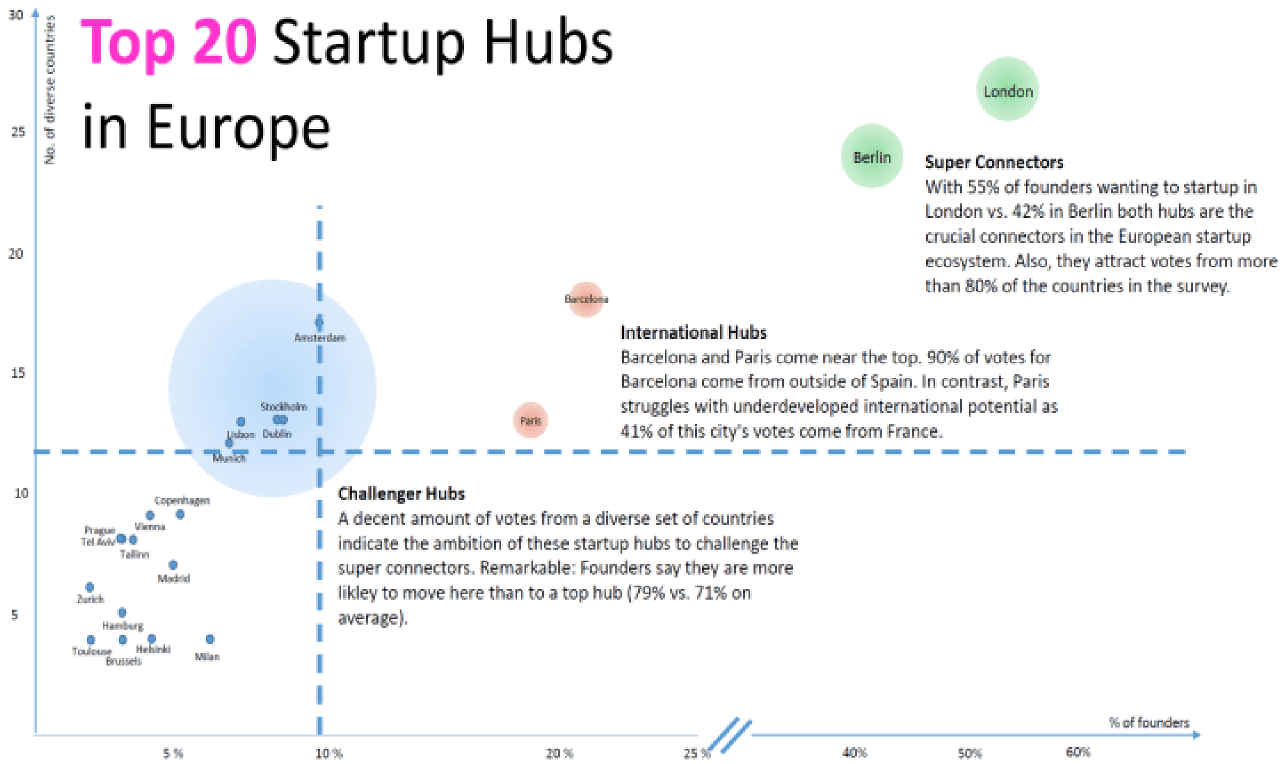


Founders could allocate 5 votes. Percentages indicate how many founders would like to startup in each respective city.

Top 10 Startup Hubs as chosen by founders

The Parisian ecosystem, known for artificial intelligence, is gracefully appreciated by entrepreneurs who hail from France (41% of votes) and 30% of Western Europeans. While the French metropolis can do more to increase its international reach, it is worth noting that Paris jumps +19 ranks with respect to our last year's survey. Perhaps the instability caused by the Bataclan shooting shortly before previous survey was carried out, negatively influenced founders' opinions.

Ranked in the fifth position overall, Amsterdam leads the ranking of "Challenger hubs" in our study and is highly rated for abundance of quality talent (by 63% of founders), its ecosystem (57%) and access to capital (54%). "Challenger hubs" are hotspots that received a decent amount of votes from a diverse countries indicating their potential to fiercely contest London and Berlin, the "Super connectors", who receive the most appreciation from majority of EU entrepreneurs.



Top 20 Startup Hubs according to founders

Zeroing down to type of startup, founders' perceptions of best cities to startup in Europe do not vary much.

For internet startups (eCommerce, mobile applications, SaaS solutions), London, Berlin, Barcelona and Paris remain the top four most desired startup cities. In the fifth position, Dublin displaces Amsterdam which follows closely at rank number 7, after Stockholm.

Likewise, high tech startups (big data, hardware, IoT, biotech) rank their best startup hubs in the same order of the overall ranking. London disproportionately beats Berlin in this subgroup as 1 in 2 high tech company owners in our study would move there compared to 35% for the German capital. Again, this is directly related to access to capital – one of London's biggest strengths. Remarkably, the UK-based investors participated in more venture capital deals than any European country in the last three years.

Perceptions Today, Reality Tomorrow

As aspiring entrepreneurs seek to build their companies and first timers become serial founders, it is very clear that the tendency is to gravitate towards booming startup hubs with established track records and success stories. However, this is only one side of the coin! Many startup cities are walking the road of **specialization** as our report reveals: Lausanne, for example, is ranked 55 overall but enters the list of top ten cities for high tech startups. We will expound on this in future blog posts. In the meanwhile, it is sufficient to say that while rankings are not absolute, founders' views on the best cities to startup in Europe give a clearer picture on the startup landscape across the continent.

Specialization of startup hubs: Which second-tier hubs perform better than we might expect?

by Elena Scolaro

When we look at overall preferences, 38% of the 320 founders in the sample chose a smaller hub over a bigger one. What unique qualities do these smaller hubs have to offer, and why might a founder choose a smaller hub?

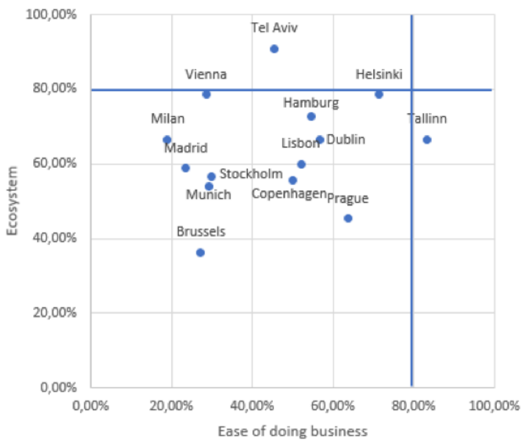
In the 2017 version of the Startup Heatmap Europe, London and Berlin again found themselves on top of the most attractive startup destinations in Europe. But they were not the only hubs considered by the startup founders in our survey. Importantly, for many startup hubs around Europe, it is not always true that the best performing hubs are the biggest. We find that founders sometimes prefer smaller hubs.

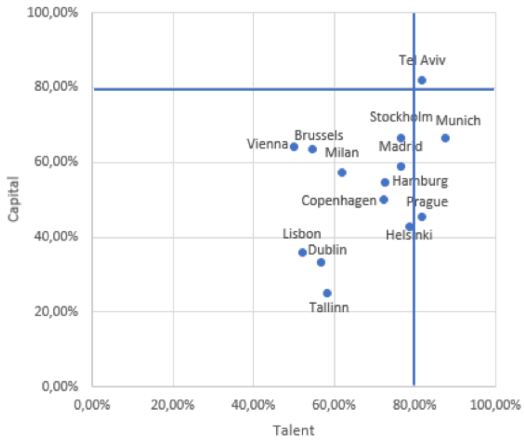
When asked, "If you could begin all over again, where would you like to start up?" 38% of founders interviewed do not mention the top 5 hubs at all.

Specialization in terms of features

Startup Heatmap Europe assesses each hub using four different variables: access to talent, access to capital, entrepreneurial ecosystem culture and ease of doing business. The ratings are based on the opinions of those founders who are attracted to this hub and therefore should tend in theory a bit to the positive side. We consider hubs with outstanding results as the ones that received at least 80% of votes of 8 stars (out of 10) or above in a category.

Looking first at the initial two qualities, talent, and capital, we find, that Tel Aviv more than exceeds both of these founders' needs. Tel Aviv is also the only hub reaching at least 80% for access to capital. This can represent the bottleneck for not choosing these hubs, as the access to financial resources is very important to 58% of founders when choosing a location. We also find founders have positive associations of the quality of the local labor market in many hubs beyond Tel Aviv,
including Munich, Prague, Helsinki, Stockholm, and Madrid.





Next, to the access to capital and talent, the quality of the ecosystem and ease and cost of doing business are decisive factors for founders to choose a startup location. Considering the ease of doing business, startups' perceptions do not reward many municipalities. In fact, only Tallinn is perceived as truly favoring the ease of establishing and running of a new business.

Looking at our next variable, the quality and culture of the entrepreneurial ecosystem, our founder sample rates Tel Aviv, Vienna and Helsinki very highly. These municipalities offer well-connected ecosystems brimming with strong connections among industry stakeholders, allowing founders to access to resources including accelerators, incubators, and high-quality mentors.

Looking at both pairs of comparisons we find that few hubs are excellent in all dimensions, however, specialization can pay off and smaller hubs can meet founders' needs very well. Based on the type of variable used to measure the satisfaction of the founders, some cities emerge because of their excellent results:

The most praised hubs per category:

Access to Talent	Access to Capital	Ease of doing business	Entrepreneurial Ecosystem
Munich 88%	Tel Aviv 82%	Tallinn 83%	Tel Aviv 91%
Prague 82%	Munich 67%	Helsinki 71%	Helsinki 79%
Tal Aviv 82%	Stockholm 67%	Prague 64%	Vienna 79%

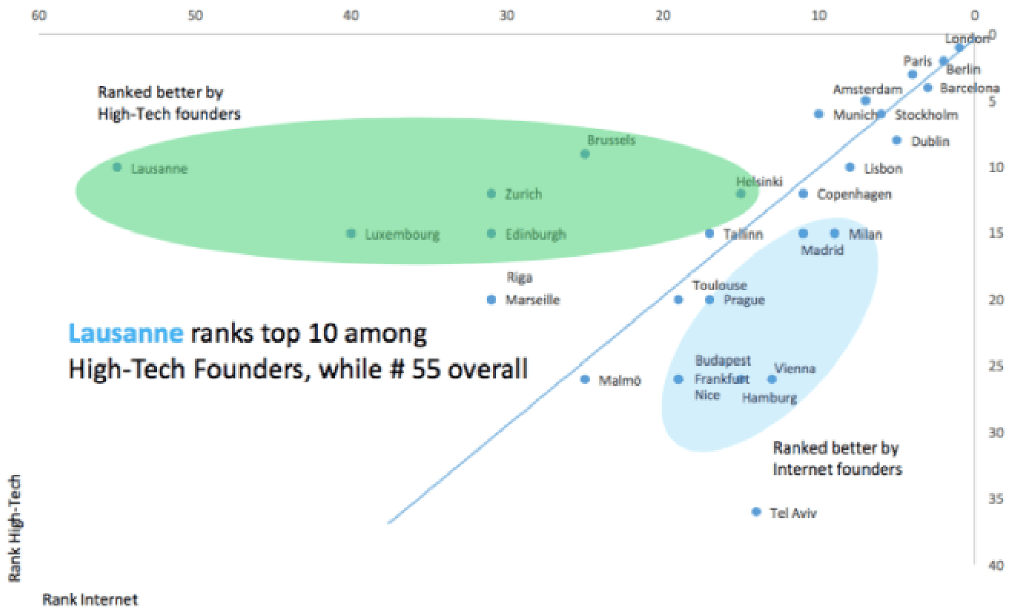
Industry specialization

Importantly, startup companies have individual needs that may also influence their choice of location. Here we consider how preferences might change according to the business sector. We distinguish between High-Tech (Hardware, IoT, VR, Big Data, FinTech, Health, and BioTech) and Internet (eCommerce, mobile applications, SaaS solutions). We might expect that preferences between High Tech and Internet startups preferences may differ according to how well each hub matches founders' needs.

The ranking below shows the preferred destinations of founders. Founders were asked to identify the municipalities where they would choose to move if they could begin again. Their preferences below are ordered based on the number of mentions for each city. We find there is almost no change in the first 5 hubs, further confirming pull of these cities at the top of the preference order. In this ranking Paris overtakes Barcelona. In the lower half of the ranking, we see considerable changes in the preference formation. Notably, the High-Tech sector experiences large shifts in attractiveness: Dublin drops 2 positions, and Lisbon and Milan leave the ranking entirely. Munich ascends to 7th place, and Brussels and Lausanne emerge, climbing the ranking and reaching the top 10.

	General Ranking	**Internet**	**High Tech**
1	London	London	London
2	Berlin	Berlin	Berlin
3	Barcelona	Barcelona	Paris (+1)
4	Paris	Paris	Barcelona (-1)
5	Amsterdam	Dublin (+1)	Amsterdam
6	Dublin	Stockholm (+1)	Stockholm (+1)
7	Stockholm	Amsterdam (-2)	Munich (+2)
8	Lisbon	Lisbon	Dublin (-2)
9	Munich	Milan (+1)	Brussels (+7)
10	Milan	Munich (-1)	Lausanne (+13)

An alternative way to show these results is the graph below, which organizes the municipalities based on their rankings in the High-Tech and Internet sectors. We see that some cities are equally strong in both sectors, these are the cities that cluster along the line pictured. Alternatively, other cities differentiate themselves by specializing in just one of the two sectors, as captured in the cloud orientations to the right and left of the line From the graph we see that founders find Lausanne, Brussels, Helsinki and Zurich to be wealthy and exceptionally high-quality High-Tech.



In conclusion, we find that even smaller hubs can offer outstanding opportunities for startups. While considerations of talent availability, funding, ease of business and the quality of the entrepreneurial ecosystem are very important for startups, founders value these features differently. Depending on these individual preferences, hubs can uniquely offer a perfect fit, according to their strengths.

In addition, we find there is room for cities to specialize when considering how they can attract certain types of high growth businesses. Industry sectors and specializations have different needs of their startup cities. Municipalities should continue to work towards understanding how startup preferences change according to the type of business. Those hubs which are already specializing in certain fields should continue in that direction as there is an acknowledgment of their strengths in the startup community.

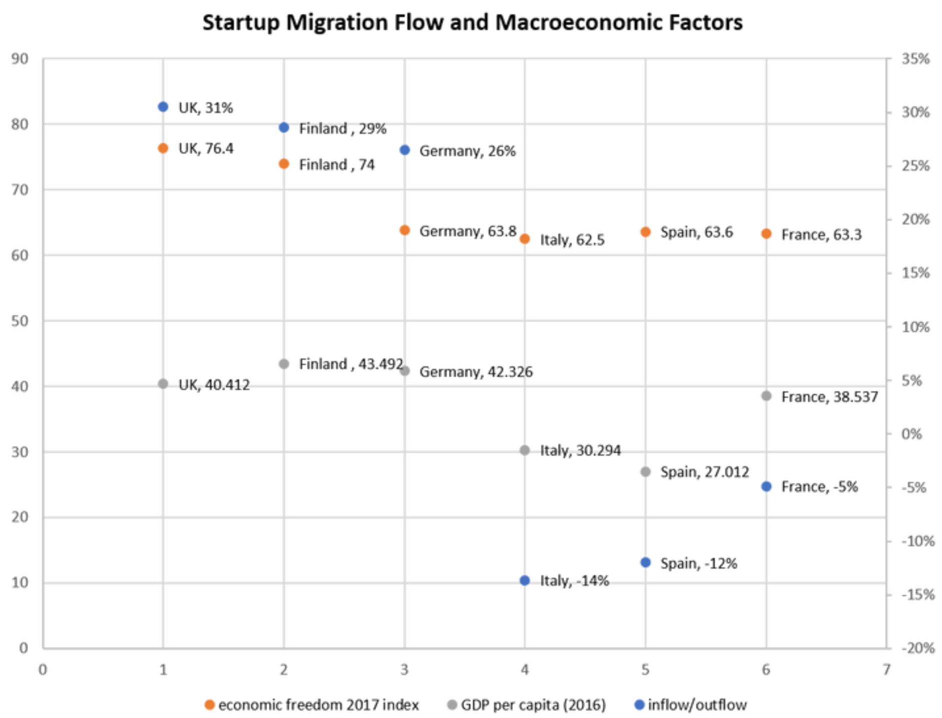
Can macroeconomic factors influence the performance of a startup hub?

By Elisabetta Vitello

In our 2017 survey, we asked 320 startups CEOs why they decided to set up their businesses in a certain location and what are their preferred ingredients for a successful startup city. Here, I analyze their results alongside additional macroeconomic factors, to examine if they may play a role in the location choice. **Is there a correlation between GDP, unemployment rate, economic freedom in a country and how attractive these locations are for startups?**

In order to answer to this question, we looked at the net migration flows between countries, the difference between the amount of startups that moved to a country from abroad and those that have left. In some countries such as the UK, Finland, Germany, Portugal, and Denmark, this figure is positive: the number of startups that have decided to move there is greater than those that have left. In other countries, including, Belgium, the Netherlands and Sweden the two flows balance one another, so we do not observe a net surplus or a deficit. Alternatively, in our survey we find France, Italy and Spain experiencing negative net flows. In these cases, more startups have left these countries than have been replenished.

In the graph below, we visualize the correlation between the net flows and two important economic drivers: economic freedom and GDP per capita. The first measure, economic freedom, is comprised of an index based on 12 quantitative and qualitative factors grouped in four broad categories: rule of law, government size, regulatory efficiency and open markets (click here for more information on this index). The GDP data refer to 2016 (Eurostat).



As we can observe, there is a correlation between the attractiveness of these countries for startups and the economic freedom index and a weaker, but still consistent, correlation with GDP per capita. For example the UK, that has experienced the highest surplus with a 31% net inflow, ranks also first in

Economic Freedom (76.4) and it has one of the highest GDP per capita (40,412€). Alternatively, Italy, that in 2017 has witnessed the lowest negative flow among the countries selected (-14%), has also the lowest economic freedom score (62.5) and one of the lowest GDP per capita (30,294€), only higher than Spain. While these correlations have limited explanatory power, they indicate a relationship between the country's economic strength and openness and its attraction for startups.

Other macroeconomic factors analyzed were the 2017 unemployment rate and the GDP growth rate calculated over the time span 2006 — 2016 (source: Eurostat). The net flows and these variables experience a weaker correlation, in comparison to the previous measures tested. For example, Finland, has a quite high unemployment rate of 8.8% (higher than the EU-28 average of 7.7%) and a low GDP growth of 0.1, even lower than the 0.3 of Spain. However, it has been able to sustain a 29% inflow of startups, second only to the UK. These relationships indicate that multiple economic factors may contribute towards how founders evaluate opportunities to startup around Europe.

Does this mean that European CEOs look at the economic freedom index or GDP per capita data before choosing their startup location? Not likely, however these correlations present an interesting finding and suggest avenues for further investigation.

The five startup hubs most likely to profit from Brexit

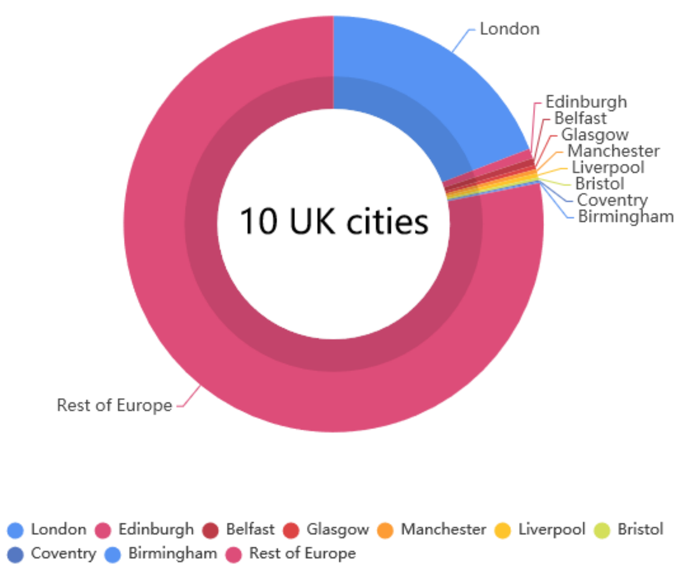
By Harald Eisenhauer

Deal or no deal, the UK will leave the EU on 29 March 2019. Who stands to benefit? We identified 5 top startup hubs that are likely to become the greatest Brexit profiteers.

Brexit and the impact on UK Startup Hubs

The United Kingdom has a very good reputation among European startup founders. While London remains Europe's number one startup mecca – a remarkable ten British cities are "hot" on our 2017 Startup Heatmap Europe. London and Edinburgh are both found in the top 30 list of European Startup hubs, with cities like Glasgow, Belfast, Liverpool and Manchester not far behind. Altogether, the UK attracts almost a quarter of all votes in our 2017 survey among European startup hubs:

Attractiveness of UK startup hubs

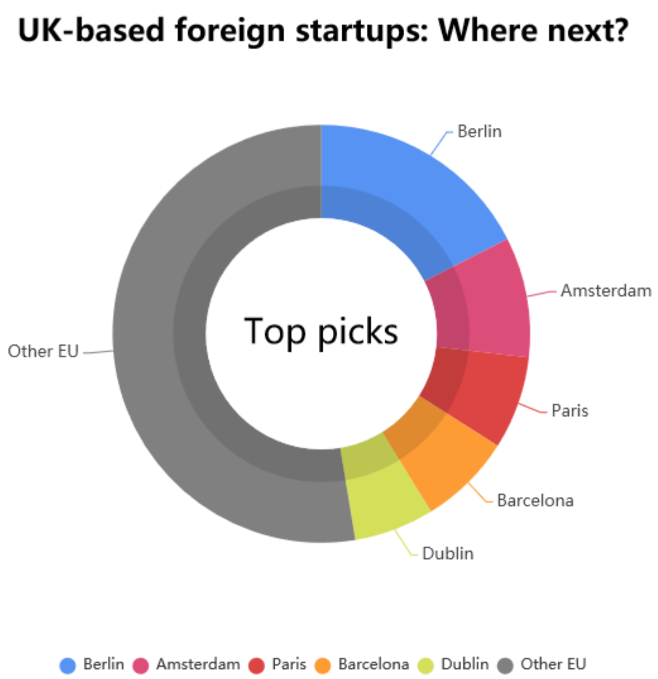


When the UK officially announced its intent to leave the European Union on 29 March 2017, it triggered a two-year negotiation period foreseen in Article 50 of the EU Treaty. The negotiations between both sides have been tense, and the eventual terms and procedures of the UK's exit from the EU remain uncertain. No matter what, "deal or no deal", the UK will leave the EU on 29 March 2019. Across Europe, this prospect fails to generate excitement – to put it mildly.

European startup founders are skeptical, as the Startup Heatmap Europe survey reveals. We find that European startup founders are overwhelmingly against Brexit. When asked their opinion, 85% would have voted against Brexit. Moreover, a mere two percent of British startup entrepreneurs were found to have voted in favor of Brexit. Not surprisingly, many founders both within the UK and across Europe fear negative consequences. We find that one in three European founders say that London is now less attractive due to Brexit.

Despite its unpopularity, Brexit remains an eventuality. However, some startup hubs are positioned to gain from the UK's loss in popularity. To learn more about how founders might respond, we asked: Which European cities are most likely benefit from Brexit?

First, we scrutinized our data and had a close look at those startups that are most likely to be affected by Brexit: UK based companies led by non-British origin founders. Once Britain leaves the EU, their uncertain legal status may lead them to reconsider the UK as their home base. Based on the preferences of this select group of startup founders, we identified the following 5 top cities that stand to win thanks to the consequences of Brexit: Dublin, Barcelona, Paris, Amsterdam, and Berlin. Together, these 5 places are likely to profit as much from Brexit as the rest of Europe combined:



Who stands to benefit from Brexit?

5: Dublin

6% of UK-based startups with non-British founders voted for Dublin as the ideal place to startup, putting the Irish capital 5th on our list of the greatest Brexit profiteers. On the European level, Dublin, stands to gain even more popularity among startup founders: it ranks 6th overall on the Startup Heatmap, defending this position in 2017.

The Irish digital economy is calculating to win over UK founders and companies that wish to remain in the EU´s marketplace. Marina Donohoe, director for UK and Northern Europe at Enterprise Ireland, sums it up: "Assuming a UK exit, Ireland will be the only English-speaking country in the EU and with advantages of talent, a well-developed ecosystem, the presence of large tech companies and leading-edge research centers. It's a great location for startups." Russ Shaw, founder of Global Tech Advocates, points out the precarious loss of talent that post-Brexit London is likely to endure: He expects Dublin to become an important bridge, where more and more British companies open up subsidiary offices, which will allow especially London´s startup ecosystem to stay connected to the much-desired European talent pool.

Dubliners seem to be gearing up to profit from Brexit. Niamh Bushnell, as Dublin's startup commissioner until 2016 tasked with boosting startups, coined the rallying cry: "With Brexit comes opportunity. Let's not waste it."

4: Barcelona

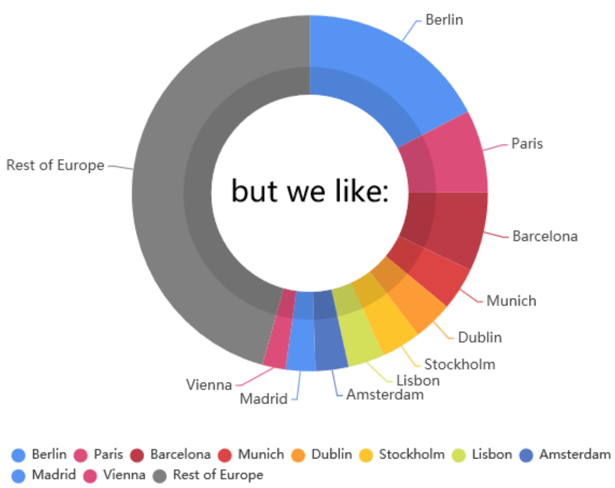
In the past few months, Barcelona has not produced many positive headlines, due to Catalonia´s move for independence. Observers point out the conflict surrounding Catalonia´s independence is the greatest risk for Barcelona´s future as a major business and startup hub. Apparently, this may have botched Barcelona´s bid to become the new home of the European Medicines Agency, which is leaving London ahead of Brexit. Access to capital, in particular, seems to be threatened by Catalonian uncertainty.

The data from Startup Heatmap Europe, even though dating to before the Catalonian referendum, suggests that not all is bad in Barcelona. On the contrary: European startup founders, rank Barcelona 4th among the greatest Brexit profiteers: Despite questions of capital and Catalonian succession, Barcelona is among the most attractive locations for startups in Europe, ranking 3rd on the Startup Heatmap. In the opinion of UK-based startups with foreign founders, Barcelona is the third most popular place to startup (sharing the rank with Paris). Among those startup founders who believe that London is less attractive after Brexit, 7.2% name Barcelona as a great place to startup. Ultimately, unless the Catalonian independence crisis prevents it, Barcelona's positive esteem with founders makes it a top candidate to profit from Brexit.

3: Paris

Paris does very well on our Startup Heatmap: The French capital is among the top ten most attractive European startup hubs, ranking 4th among startup entrepreneurs across Europe. When looking more closely at our select group of UK-based non-British startup founders, we see that Paris can maintain this popularity: 7% of them vote for Paris as an attractive place to startup, which puts it on the shared third rank (together with Barcelona). In addition, 7.5% of those founders who think that London is becoming less attractive as a startup location because of Brexit name Paris as an attractive alternative. This is the second highest percentage after Berlin (see graph below).

Founders: Brexit makes London less attractive...



Paris recently won the race to become the new home of the European Banking Authority, which is leaving London ahead of Brexit. While startups usually have quite different preferences as compared to major EU institutions, this move may fuel the growing fintech startup scene in Paris. Parisians spread optimism and highlight the burgeoning attractiveness of their startup ecosystem. The French government under president Emmanuel Macron is working hard to promote the narrative of French entrepreneurial success, speaking loftily of becoming a "country of unicorns". According to what startup founders told us, Brexit might indeed make that a bit more likely.

2: Amsterdam

Amsterdam has already profited from Brexit, as it has been announced as the new home of the European Medicines Agency. Bas Beekman, as director of StartupAmsterdam in charge of promoting the city´s appeal to international startups, highlights its strategic position, the wide use of the English language, and its strong ecosystem. Amsterdam may not be the loudest contender, but it is on top position to benefit from Brexit – especially as one of the best places to startup.

On our Startup Heatmap, Amsterdam is ranked 3rd (2016) and 5th (2017) among the top ten most attractive European startup hubs. Moreover, we identified Amsterdam as the leading "Challenger Hub", attracting a relatively high share of votes from a great variety of countries. Amsterdam is popular among British startups, especially those with non-British founders: 9% of them name the Dutch city as an attractive place to startup. That is why we are placing Amsterdam on the 2nd rank of the greatest profiteers from Brexit, right after Berlin.

1: Berlin

Berlin is the city that is most likely to profit from Brexit. It remains London's most important competitor in terms of attractiveness for startup founders. In the 2016 edition of the Startup Heatmap, Berlin bested London to first place, while the 2017 edition sees London ahead of Berlin:

Berlin is also working hard to bring British startups to their city. A 2016 marketing stunt by the German liberal party FDP prominently called upon London's startups: "Dear startups, keep calm and move to Berlin". Even if this may have "sent ripples of laughter" rather than fear in London's startup scene – these efforts highlight a strong desire to encourage companies to consider moving. Last year, Berlin's city government sent a letter to hundreds of businesses based in London to persuade them to come to Berlin. At the time, Cornelia Yzer, then Berlin's senator for the economy, technology and development, said, "We want to make sure that British startups and international talent feel welcome here […] Brits already love Berlin – we see that from the number of people who travel here every weekend. We will continue to receive them with open arms."

Berlin's politicians are certainly not alone in highlighting the city´s startup appeal. The German capital has firmly established itself in the European startup scene, with low costs, a dynamic ecosystem, high quality of living, and, most importantly, an immense supply of international, highly educated talent – and this is no secret among startups in the UK.

Conclusion

Ahead of Brexit, our data reveals two key findings: First, **non-British founders who have moved to the United Kingdom to startup regard Berlin as the top post-Brexit destination for startups**. 18% vote for Berlin as the place where they would like to go if they could start over again – that's twice as much as for second-ranked Amsterdam (a city that, by the way, is probably not everyone´s list yet). While this result represents attractiveness, rather than certainty, it can be regarded as a strong indicator on where the wind is blowing.

The second key finding is that among startup founders who expect London`s attractiveness to suffer due to Brexit, **1 in 6 vote for Berlin as a top destination to startup**. That is by far the best performance among all other European startup hubs. Based on these findings, we have no doubt that Berlin is set to be the greatest profiteer from Brexit. The only question remaining is whether Berlin is prepared to capitalize on this appeal and encourage founders to actually make the move.

The competition for talent and startup founders, however, is no zero-sum game. Brexit or not, the UK probably remains a powerhouse in the European startup ecosystem, and the lights certainly won´t just turn off on 29 March 2019. Yet our list of the five greatest Brexit profiteers proves that Europe´s top startup hubs are eagerly positioning themselves to benefit from the changes that Brexit will undoubtedly bring.

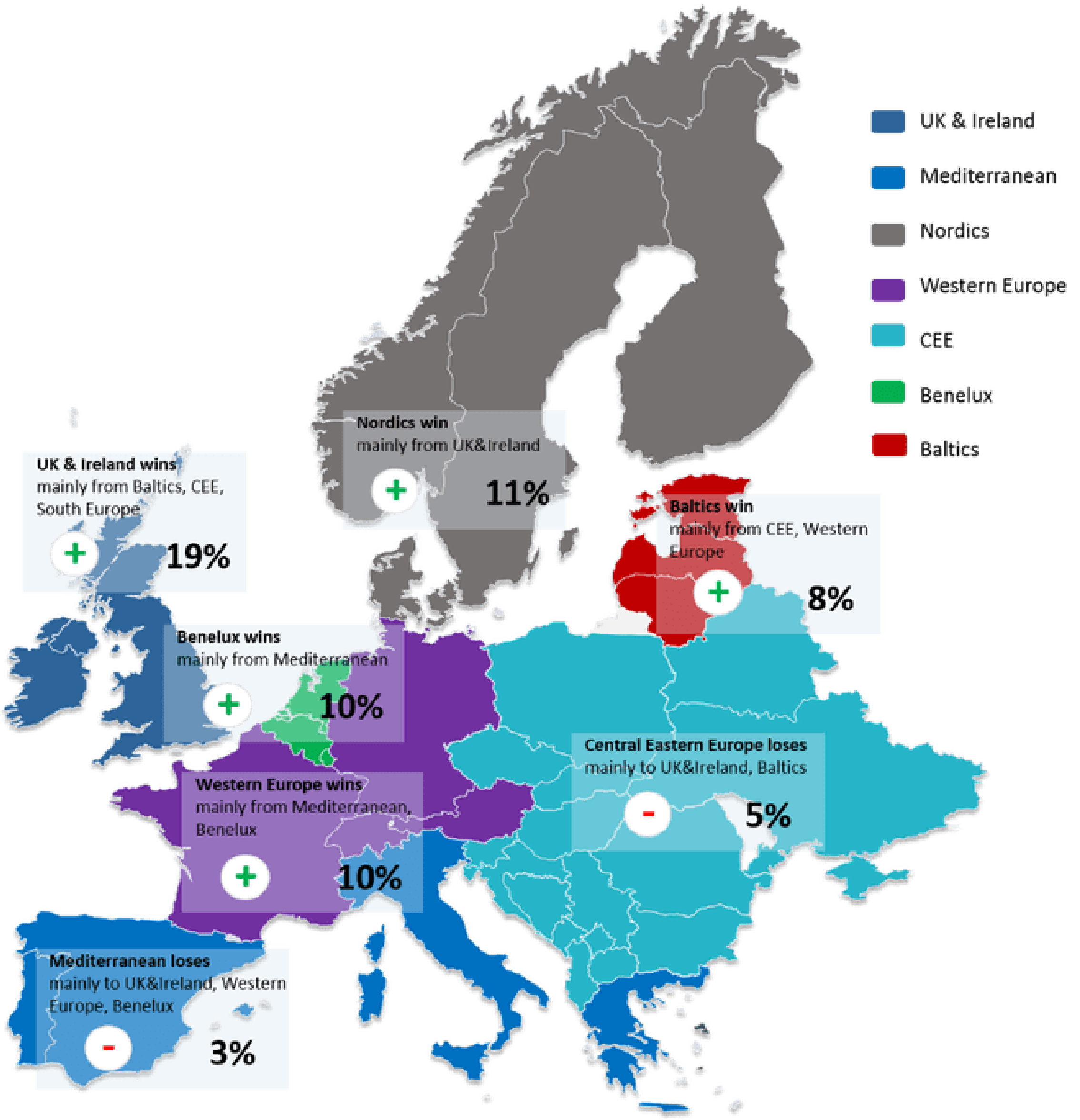
In the end, no one city will "win this race" and become the only place to startup. Rather, and as foreseen by Atomico's head of research Tom Wehmeier, there is a growing number of places across Europe that, by building on their various outstanding qualities, will be able to get their fair share. The likely (and welcome) result of this development will be an overall stronger European startup ecosystem.

Startup hubs that outshine their regional competitors

By Harald Eisenhauer

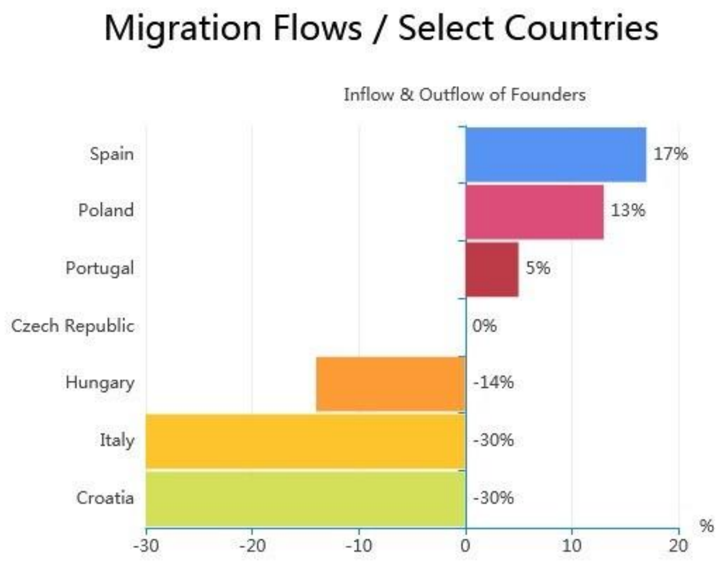
Any type of movement – inbound or outbound – can be good for startup hubs. To name just a few benefits: inbound founders bring talent, creativity, diversity, economic impact, and jobs. Founders who decide to leave their home turf, on the other hand, stay in touch with the place they left, and share knowledge and experience from abroad. Their mobility can help build new connections, opening new channels for the exchange of ideas, capital, and people. We find that mobility is a two-way-street, and every founder "lost" can be a connection gained.

Keeping that in mind, let's have a closer look at a few outstanding examples for the mobility of founders. Overall, 21% of European founders in our 2017 survey moved across borders to startup their businesses. To better visualize this, we tracked the net inflow and outflow of founders across several European regions:



Migration flows within Europe - Startup Heatmap Europe 2017

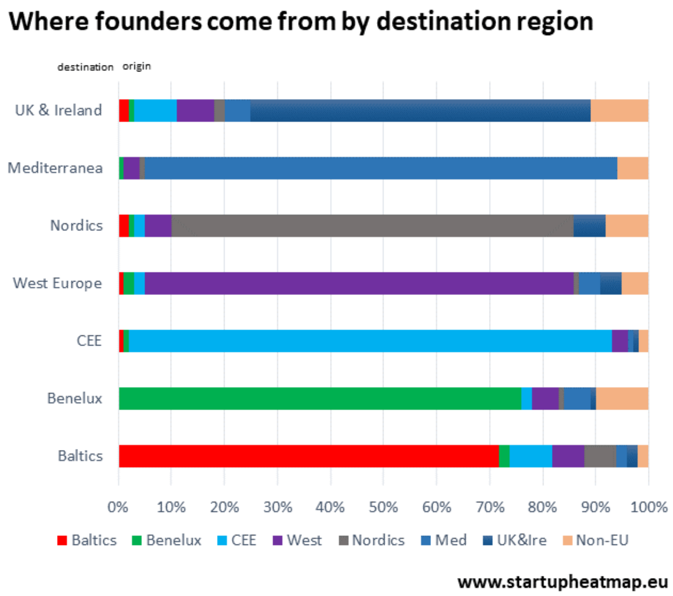
We found that two regions have a net outflow of founders: The Mediterranean with -3% and Central and Eastern Europe (CEE) with -5%. Other regions have net inflows ranging from +8% (Baltics) to +19% (UK & Ireland). A closer look at select Mediterranean and CEE countries reveals the following trends:



Spain and Portugal with 17% and 5% net inflows of founders perform better than the trend in the Mediterranean region might suggest. Italy on the other hand, with a net outflow of -30%, is largely responsible for the overall negative trend in that region.

The Czech Republic, which has an even balance sheet in its founder migration, and Poland, with +13% net inflow, perform better than the CEE region on average. Meanwhile, Hungary and Croatia are prime examples of "founder-exporting countries".

Are these results the definitive benchmark for the attractiveness of startup hubs? We don't think that's necessarily true. In fact, what our migration data shows mostly refers to the status quo: At some point of their lives, our founders have made their very own decision on whether to move or stay. So, we simply asked them where they are originally from and where they are currently based. This resulted in the current diversity of startup founders in the European regions:



It is therefore interesting to look at implications for future trends. As cross border movement is common amongst a large proportion of startup founders, the perceived attractiveness of certain locations can be pivotal towards inducing movement. To learn more, we asked: If you could begin all over again, where would you like to startup?

We also asked our startup founders to do a reality check on their preferred startup location: Founders had the choice to rate their preference based on how much they would consider moving there, rating from 1 (not likely at all) to 10 points (extremely likely). With these answers, we are able to identify the attractiveness of some of Europe's startup hubs – from the perspective of startup founders.

Looking at the Mediterranean and CEE region, six cities from those regions make it to our top 20. Here is how they perform:

City	European rank	Rank within home region	"If I move, I would likely go there"
Barcelona	3	3	100%
Lisbon	8	7	88%
Milan	10	4	88%
Madrid	12	6	69%
Prague	15	3	67%
Budapest	19	4	64%

These six startup hubs outshine their regional competitors. They are attractive on the European level (especially Barcelona, Lisbon, and Milan), and importantly, are attractive to startup founders within their home regions. Italy and Hungary may experience an exodus of startup founders more generally, but regional champions Milan and Budapest retain a strong appeal. Even though the Mediterranean and CEE regions may lose talent overall, cities like Barcelona, Lisbon, Milan, Madrid, Prague, and Budapest function as beacons that are likely to attract even more startup founders in the future.

How satisfied are European entrepreneurs with their startup locations?

By [Natalie Novick]

The Startup Heatmap survey aims to identify some of the most desirable startup locations across Europe. What the survey most clearly indicates, is that each entrepreneur weighs the importance of these considerations differently. For European entrepreneurs, there are many factors that go into the perfect startup location, from access to talent, ease of finding capital, and quality of life. Berlin and London, this year's top locations, score high on many of these metrics.

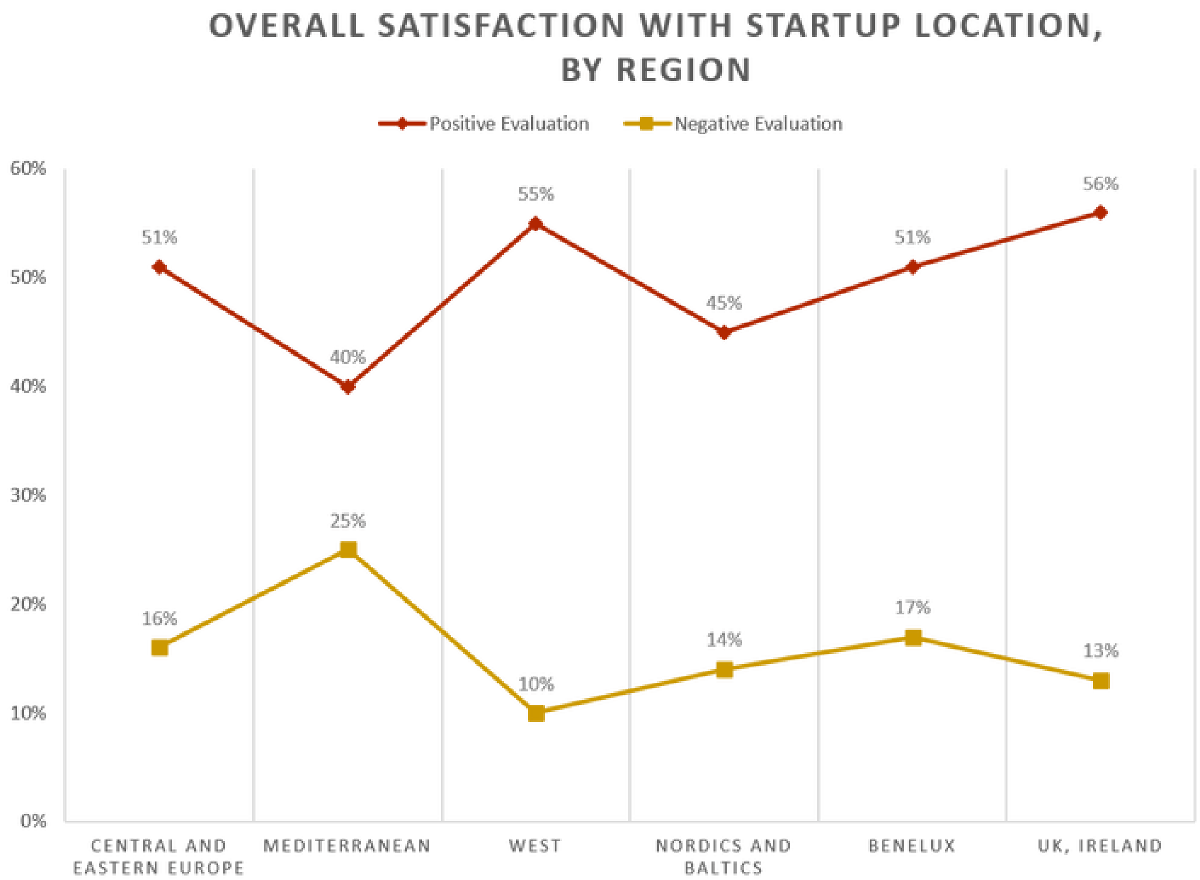
While these cities might be some of the most desirable startup locations in Europe, not all entrepreneurs are looking to move. Some are quite happy where they are. Great companies are built all over Europe, in many locations that never appear on the top of indexes and media mentions. We can learn a lot about what makes a great startup location when we look at how entrepreneurs evaluate they are currently.

In our survey, we ask entrepreneurs to evaluate their satisfaction with several characteristics of their current startup location. They are asked to rate, positively, negatively or neutral:

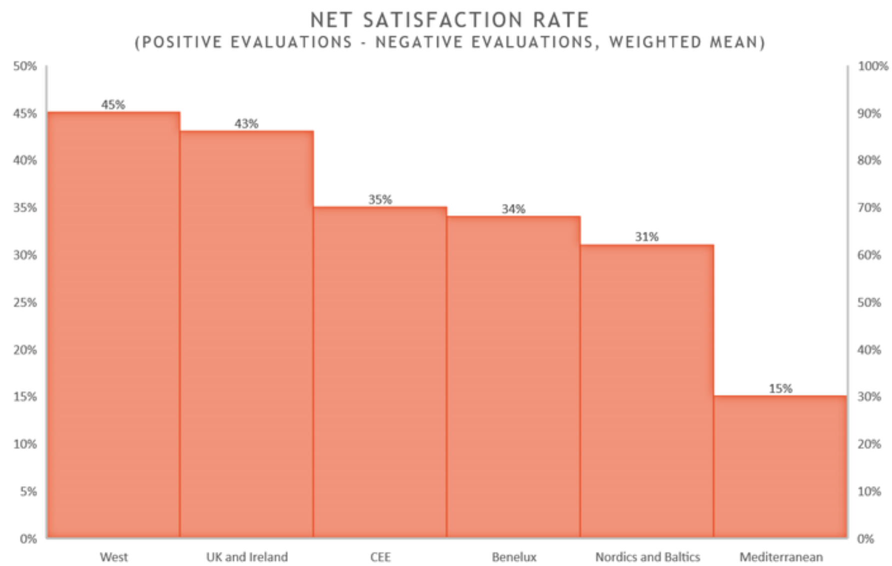
- Access to talent and quality of local labor market, specifically the availability of graduates and experienced talent
- Access to capital, in terms of noteworthy venture capital and public funding
- Ease and cost of doing business, bureaucracy, taxation and living costs
- Entrepreneurial ecosystem and culture, including mentors, incubators, accelerators, events.

Regional Comparisons

Across our entire sample population, just over 50% were generally satisfied with their startup locations, with the remainder, a bit more critical. These results varied somewhat according to where our entrepreneurs were located. Entrepreneurs that were headquartered in the UK and Ireland were the happiest in our survey, with 56% expressing satisfaction with their startup locations. The Western region, comprising of Germany, Austria, France and Switzerland was not far behind, with 55% expressing approval with their startup locations. The Western region also expressed the lowest "disapproval" rate in their startup location, with only 10% of respondents from the Western region indicating an average disapproval. In contrast, Entrepreneurs based in the Mediterranean (Spain, Greece, Italy, Portugal, Malta and Cyprus) expressed the lowest rates of approval in their startup locations, with only 40% expressing positive feelings about their location. A further 35% of entrepreneurs surveyed from the Mediterranean expressed a more neutral result, suggesting neither approval nor disapproval over their startup location.



When looking at the graph above, take a look at the space between the two trend lines. This gulf represents the distance of those that consider their startup location to offer neutral opportunity—neither positive nor negative. It can be difficult to evaluate this space, especially considering the amount of data, and the associations that respondents can attribute to a neutral opportunity. At first glance, we do see some regional variation in this data. For example, we can see respondents from the Mediterranean region choose a neutral result fewer than all other regions, and respondents from the UK and Ireland express a neutral result most often.



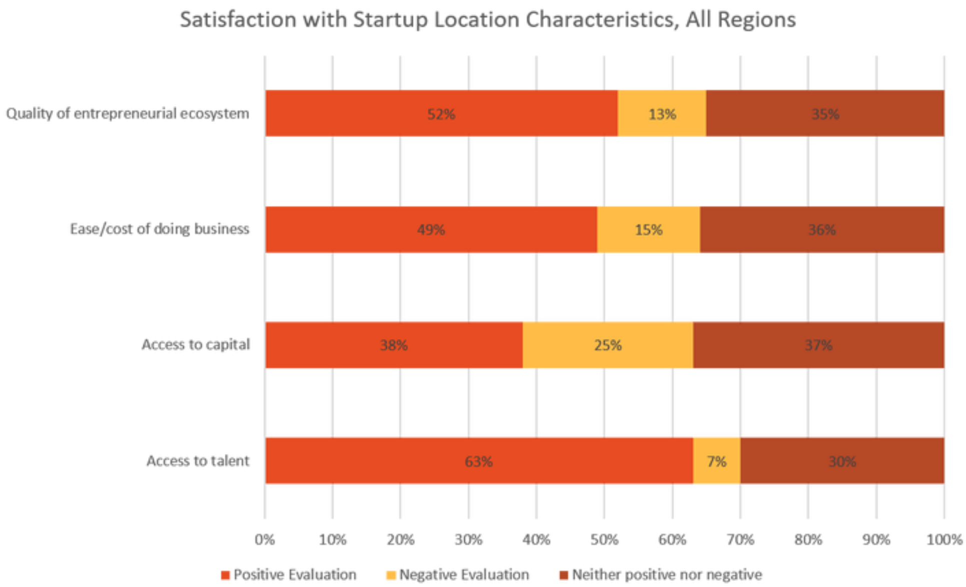
When we combine the results together to develop the net satisfaction rate, a different picture emerges. The net satisfaction rate combines the standardized values of those that rank their locations positively as compared to those who rank their locations negatively. Neutral results are removed. Here, we see a much more drastic result, especially for the Mediterranean respondents, due to the high number of respondents expressing dissatisfaction compared to those expressing an alternative view.

What do entrepreneurs like best about their startup locations?

Overall evaluations can only tell part of the story, as an entrepreneur's evaluation of their startup location can vary significantly according the amenities in their specific location. When we look closer at some of the components of a startup location, we see quite a lot of variation exists between how entrepreneurs evaluate specific components about their startup location.

- Access to talent and quality of local labor market, specifically the availability of graduates and experienced talent
- Access to capital, in terms of noteworthy venture capital and public funding
- Ease and cost of doing business, bureaucracy, taxation and living costs
- Entrepreneurial ecosystem and culture, including mentors, incubators, accelerators, events.

From these results, we find that our selection of entrepreneurs approve of their access to talent the most, and are least happy with their access to capital.



How do regions differ in their location evaluations?

When we develop the net evaluations, some surprising results emerge between regions. All regions expressed a relatively healthy approval in their access to talent, with an average approval rate across all regions as 63%. The UK and Ireland and the West region countries expressed levels above the mean, with both regions expressing 67% satisfaction with their access to talent. The Nordic and Baltic countries indicated the highest amount of disapproval with their access to talent in comparison to the other regions, with a 13% disapproval rate.

As we might expect, Mediterranean respondents cited the highest disapproval ratings for a majority of the factors, displaying the highest rates of disapproval for Access to capital (35%), ease of doing business (28%)

and the quality of the entrepreneurial ecosystem (26% disapprove). In contrast, the CEE (Central and Eastern European Countries expressed the highest levels of approval with their access to capital (50%) and the ease of doing business (60% approve). The Western region expressed the highest satisfaction with their entrepreneurial ecosystem, at 64%, a considerable difference compared to the mean value of 52%.

The graph below shows the differences between net satisfaction of location characteristics, by region. The landscape visually represents the magnitude of regional differences, but also some surprising similarities. For example, while the Nordic/Baltic region and the Mediterranean region show many differences, they both have a negative association for Capital availability, with a majority of entrepreneurs surveyed from each region report that capital availability is more negative than it is positive. The magnitude of these negative results overcomes that of the fewer number of positive results.

Next steps and further analysis

The complexity of graph above is illustrated of the multifaceted ways that startup locations can be evaluated. It is one way to representation of the magnitude of difference between each of the regions surveyed, but much can be lost within these regional categories. While just over 50% of our sample expressed satisfaction with their current location, this visualization and the graphs above indicate a more nuanced examination is necessary to further develop and understand the disparity between regions to garner a more complete picture.

Importantly, these figures indicate a great diversity of satisfaction scores across regions. A few specific trends emerge for further study. First, we see that Mediterranean respondents were more likely to express dissatisfaction with their startup locations across nearly all indicators when compared to other regions. While the data cannot tell us with certainty, this finding may suggest a higher likelihood that Mediterranean founders may be considering new locations for their startups. In other instances, we find a few surprises. Some regions, express sentiments far outside overall mean values—for example, 50% of Central and Eastern European respondents report being satisfied with the availability of capital in location, as compared to only 38% of respondents overall. This result helps to encourage greater introspection to understand some of the factors that contribute to this alternative assessment of the capital climate.

While these regional associations can help to point to some interesting trends, it is important not to overstate the weight and magnitude of this data. Each of these individual survey responses helps to relay an individual, valuable opinion, from a unique and personal perspective. It is imperative that we do not ascribe any association to the data beyond what it can.

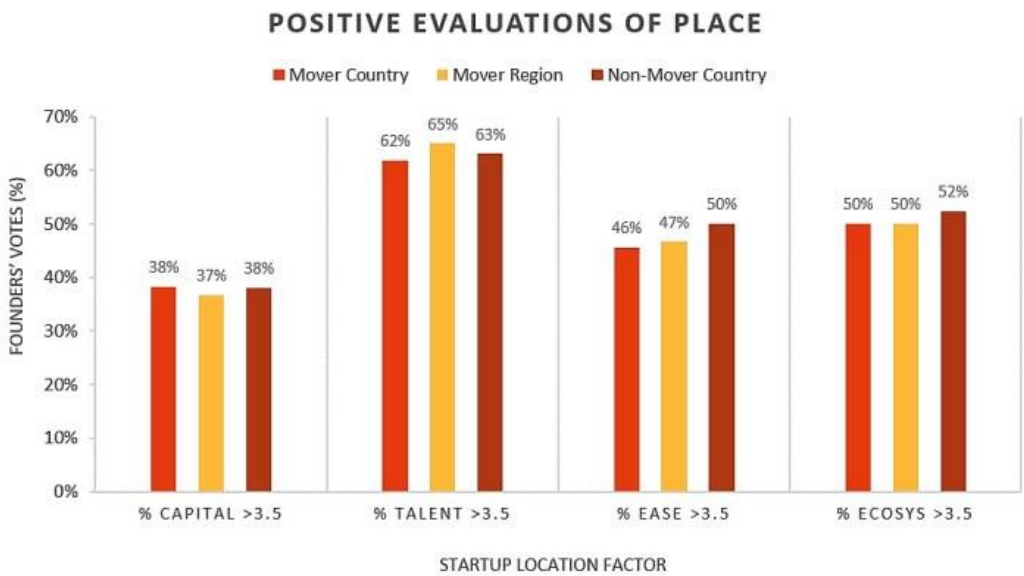
Further work is necessary to help untangle some of the unique currents that run through these survey responses. For instance, how do these results change when we compare results according to city, or local level data? How do industry or sector trends change entrepreneur's location evaluations? What happens when we control for certain effects, such as GDP, economic growth, or business development, alongside? It is important to realize the limitations of the data and to identify key areas where it can help to shed light. Stay tuned to further work from the Startup Heatmap team as we continue to examine and analyze how our respondents evaluate the best locations to startup in Europe.

Is the grass always greener on the other side?

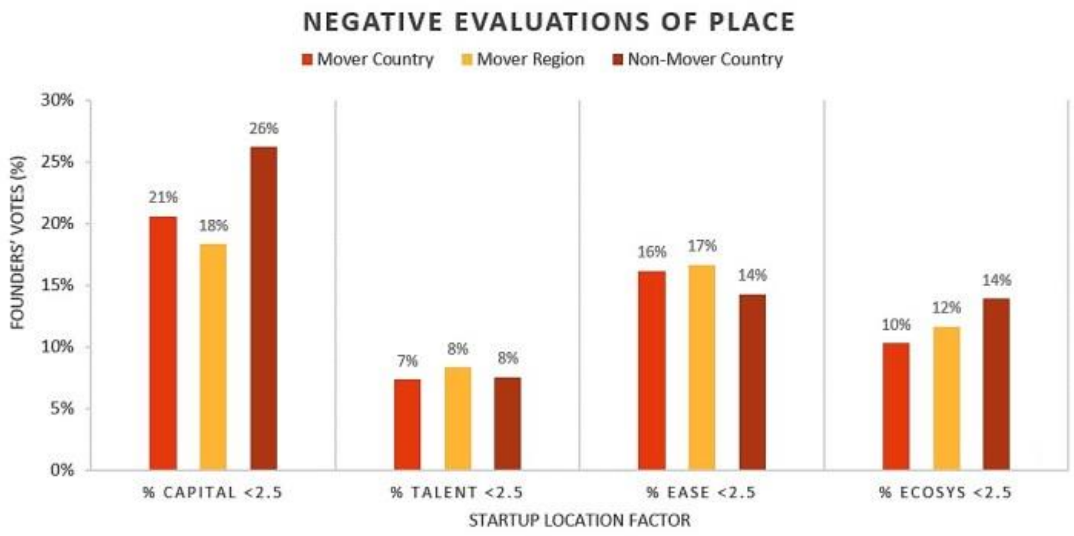
By Elisabetta Vitello

When we first think about the words “startup hub”, our initial thought is probably the image of the space between San Francisco and Oakland populated by the thousands of startup companies that comprise Silicon Valley. Europe lacks a similar density of startups, however, many European entrepreneurs choose to move away from their cities, countries or regions of origin to establish their businesses in more favorable environments. In our sample of 320 startup CEOs surveyed, 24% changed cities to startup, 21% founded their company in another country and 88% of these left their broader home region. To download your free copy of the survey report, please click the button below.

Founder mobility is observed especially in the CEE countries, with 21% of the founders leaving their region. In our analysis, we wanted to understand if this displacement paid off. In other words: is the grass really greener outside? Are movers happier with their new locations, as compared to those that did not leave? We asked entrepreneurs to rate their current locations in terms of access to talent and quality of labor market, access to capital, ease of doing business and entrepreneurial ecosystem on a scale of 1 to 5. We considered a score higher than 3.5 as a measure of satisfaction and a score lower than 2.5 as a measure of dissatisfaction. Interestingly, we find that movers and non- movers rate conditions very similarly, as we can see from the graphs below.

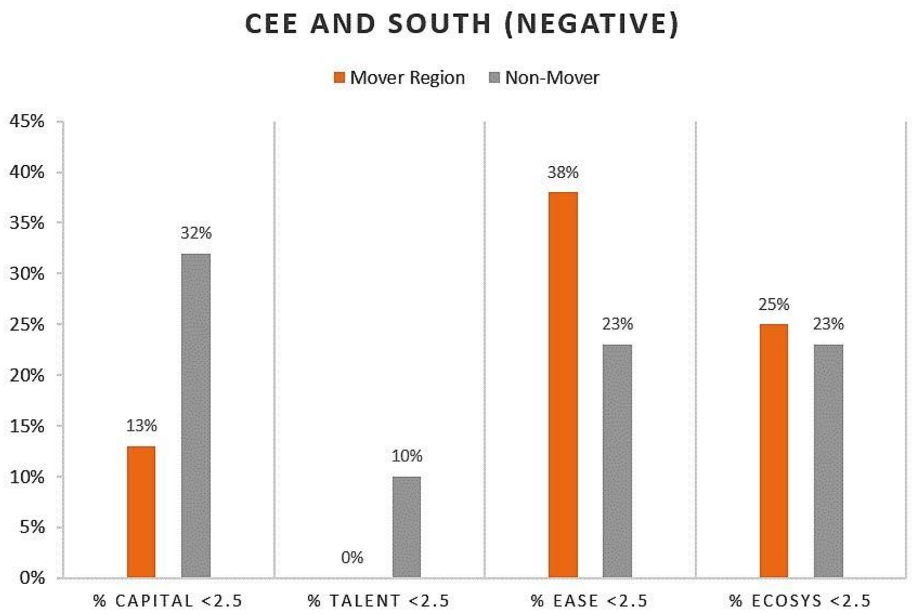


CEOs that have moved do not seem to be particularly happier than those that had not, except for one factor: 26% of non-movers are dissatisfied with access to capital. This figure is noticeably higher than the 21% of those who left their home region and the 18% of those who moved to another city to startup.

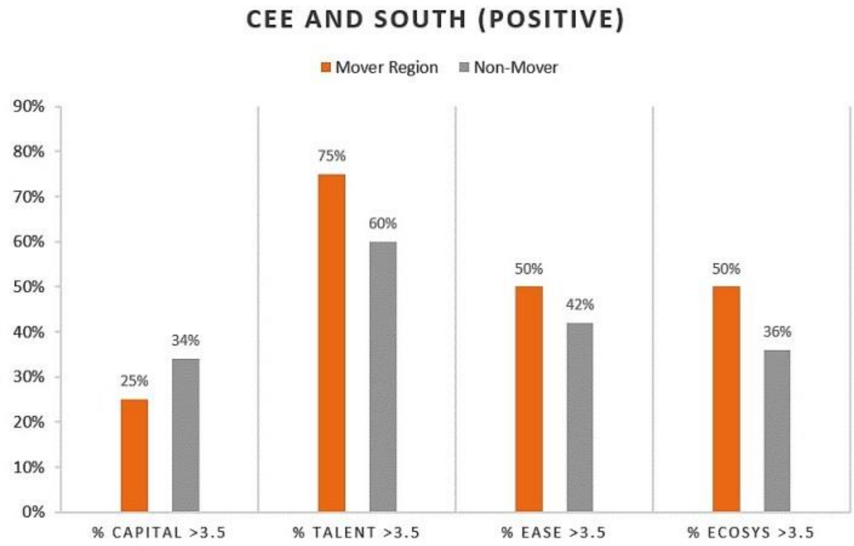


As we found previously, great disparities in satisfaction exist between the regions we surveyed. Overall, the regions that display the greatest overall approval rate are UK/Ireland and the Western Region[2], with respectively 56% and 55% of the founders indicating satisfaction and only 13% and 10% rates of disapproval. The Mediterranean region[3], depicts the highest rates of global dissatisfaction (25%) and the lowest rates of approval (40%).

With this in mind, we find it worthwhile to take a look at the satisfaction of movers who left the Mediterranean and the CEE region, areas that both suffer from a net outflow of founders. Comparing regional movers and non-movers, we discover that dissatisfaction is relatively high among non-movers in these regions, as 32% declare they are unhappy with access to capital and 23% decry the quality of the ecosystem as well as relative difficulty in doing business and high costs. Costs still represent an issue for those who leave these regions, as 38% of movers complain about this factor.



On the positive side, movers and non-movers from these two regions do have similar values compared to the overall survey results. Only access to capital seems to be less available to what founders would have expected after moving, with only 25% declaring they are happy with this factor in their new location. On the contrary, access to talent is ranked remarkably higher by founders who emigrated from the CEE and Mediterranean regions.



In conclusion, we find that founders who change regions or cities to startup do not necessarily hold more positive evaluations of their startup locations as compared to those who do not. However, when zooming in on the origins of CEOs, we can obtain some explanations on why founders leave certain regions. As movers are not particularly more satisfied than non-movers, we could take into consideration other factors in order to explain the migratory patterns of startups in Europe. Other drivers, for example, could be macroeconomic indicators of the country/region such as unemployment, GDP per capita and economic freedom.

Startups and the City: A look into how city characteristics may impact startup location satisfaction

by Natalie Novick

In this year's Startup Heatmap Europe, we found considerable regional differences in how entrepreneurs evaluated their startup locations. While regional differences can provide an interesting picture about the overall satisfaction of entrepreneurs across Europe, much day to day startup activity happens in the city, or local level. We can learn even more about how these evaluations are constructed when we evaluate location satisfaction on a more local, and granular level.

How might these individual locations impact our respondent's satisfaction levels? There are many qualities that make European startup cities unique. Here, we highlight a few relationships between our respondent's satisfaction with their startup location and their city. These examinations aim to give us an introductory look at how these variables may correspond to one another.

How might city size impact startup location satisfaction?

The first association we can evaluate here is average overall location satisfaction with city population size. The graph below plots respondent's evaluations according to the population size of the European city or town where their startups are located. Due to the quantity of data, not all points appear on this graph, yet we can see that satisfied entrepreneurs can be found in European cities and towns of all sizes. A line is fit to illustrate the association between the two variables in our dataset. Here, we see a generally positive trend indicating that entrepreneurs tend to express more satisfaction with their startup location the larger the city their headquarters is in.

There are a few reasons why the size of a startup's location city can have a big impact for entrepreneurs and their companies. First, larger cities may have advantages in their access to talent, simply for the fact that more people live there. In places where talent is more numerous, hiring can be cheaper and employees can be onboarded faster. Companies also have greater options in the hiring process and can field a wider variety of candidates for the jobs they are looking to fill, ensuring a greater chance of finding just the right candidate. Larger cities are also more likely to be home to universities, other specialized companies, accelerators and incubators. Each of these institutions helps to contribute to the talent pipeline for companies looking to recruit the best. Larger cities also offer additional infrastructure and opportunities for non-local tech talent, which can work as a recruitment tool for talent from outside the surrounding area. Outside of talent concerns, living in a larger city can bring with it social benefits, of increased diversity and opportunity.

However, just because a city is more populous doesn't necessarily mean that the type of talent that startups need can easily be found. Often, the talent required by startup entrepreneurs tends to be specialized, and can be unevenly distributed geographically. Similarly, in larger cities this scarce talent may be under high demand by other city employers, creating competition for workers and increasing costs for founders looking to hire. The solution for some founders is to work with a distributed team, but this might not be a solution for everyone. As we have seen in this year's Startup Heatmap Europe, talent availability remains one of the most important characteristics founders consider when choosing a startup location.

Talent considerations are just a few that can be impacted by city size. When looking at the plot above, we can see the distribution of respondents can be found clustered toward the right-hand side of the graph. It is not surprising that most respondents in our survey tend to be happy with the startup locations they have chosen for themselves. What is interesting is the amount of plot points to be found underneath the trend line. These results correspond to respondents who express satisfaction with their startup locations, despite their startup cities being smaller than we might expect, given the overall trend. The above graph indicates that European entrepreneurs can find satisfaction with a number of startup locations, no matter the size. While this graph is interesting, there is still much to learn about how population size impacts entrepreneurial satisfaction. Can we find an ideal size of a European Startup City? What can we learn from the outliers in this dataset? There is much more analysis on this to come. Look forward to these answers in a future post, where we drill down some of the specifics of how size can influence entrepreneurial satisfaction.

Capital Cities

Alongside size, another question is if their startup location can be found in a city capital. Capital cities may offer a number of benefits for entrepreneurs, as Europe's capital cities tend to have the greatest concentration of startup resources, whether they be talent, financing, or a business community. European capitals may be more efficient for conducting business, as many state institutions can be found there. Other characteristics can make them logistically easier, such as proximity to an international airport, and infrastructure for international employees, such as embassies and consulates. European capital cities also tend to have a concentration of cultural infrastructure, helping to support a high quality of life. It is important to keep in mind that these benefits are not always exclusive to capital cities. In addition, there are some significant costs to doing business in the capital. These cities often tend to be the most expensive, rising business costs and creating pressures on finding a location space. Finding accommodation for employees, consultants and visitors can be made more expensive by tourism taxes. Berlin, Germany's capital, is very far east and north of much of the country's economic engine that occurs in the country's southwest. Other European country capitals, such as Rome, are similarly disembedded from their country's strongest economic engines. When choosing a startup location, entrepreneurs must carefully weigh the benefits of each place alongside their individual needs.

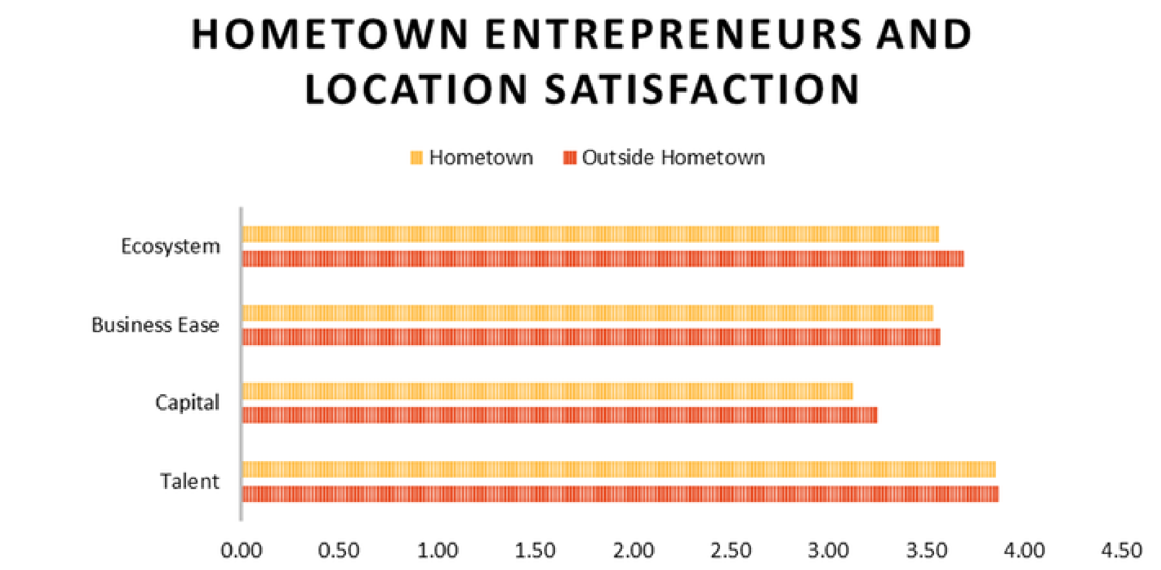
	Talent	Capital	Business Ease	Ecosystem
Capital City	3.94	3.39	3.67	3.83
Non-Capital	3.77	2.96	3.42	3.39

When entrepreneurs were asked in our survey about their satisfaction with different aspects of their startup locations, we find only modest differences between entrepreneurs based in a capital city, and those outside. While all values for capital city residents were on average higher, the greatest differences were found between access to capital and ecosystem effects. These might be expected, as VCs and accelerators are most frequently found in capital cities. The similarity between the values illustrates that the benefits held by capital cities are by no means exclusive, promising for cities outside our European capitals. These results lay a compelling path for further discovery, and stay tuned for further analysis disentangling capital city effects from others such as population, regional difference and quality of life measures.

Hometown advantage? How local entrepreneurs evaluate their startup locations

The final quality we will address in this spotlight looks at how considerations of hometown advantage may impact entrepreneur evaluations of their startup locations. Rather than a city characteristic itself, this association allows us to examine how an entrepreneur's satisfaction with their city may change based on their association with it. The benefits of hometown entrepreneurs have garnered considerable attention in business studies. Scholars Michael Dahl of Aarhus University and Yale's Olav Sorenson have found that entrepreneurs may prefer to remain near friends and family, where they can trade on their close local network ties and depend on their social support. Others have found that local entrepreneurs can benefit from their deeper network ties and regional-specific expertise. Alternatively, staying at home can put entrepreneurs at a disadvantage, when it comes to addressing new markets or attracting outside investment. Entrepreneurship in startups may also conflict with alternative classifications of entrepreneurship that may be more reliant on local ties and familiarity. Considerable further evidence, both in support and against hometown entrepreneurship exists, and is worthy of greater attention.

In our survey, entrepreneurs were asked where they grew up/consider ‘home’ and where their current startup location is. Here, we see little variation in the satisfaction rates between entrepreneurs starting up at home, as compared to those who are starting outside their self-identified home locations. Across all categories, the differences are minimal. Does hometown entrepreneurship matter for startup entrepreneurs? While it is possible that hometown associations do not tie a role, further analysis is necessary to examine how this might vary across industry, region and the distance between an entrepreneur’s hometown and their HQ.



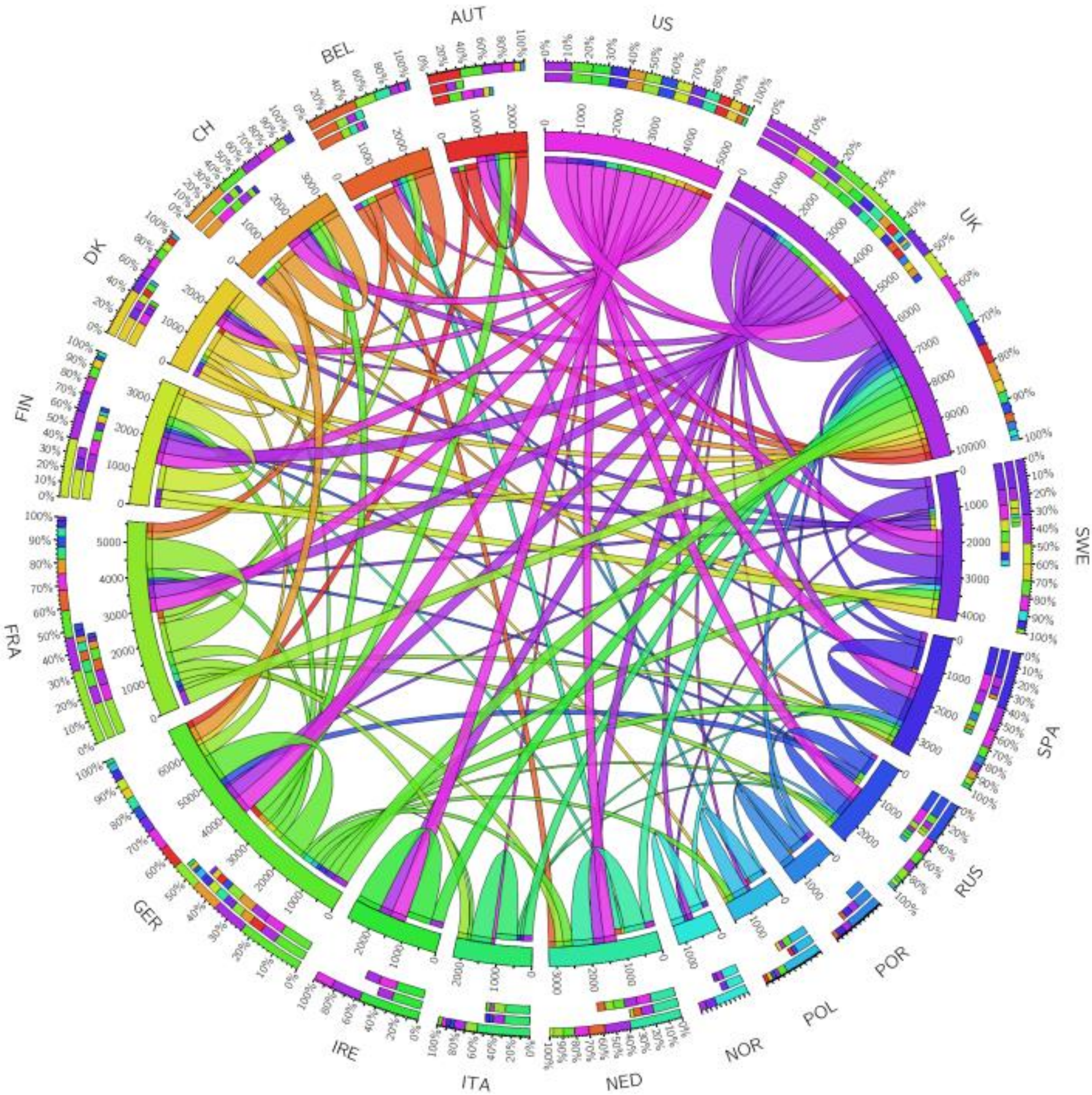
	Talent	Capital	Business Ease	Ecosystem
Hometown	3.85	3.13	3.53	3.56
Outside Hometown	3.87	3.25	3.58	3.70

Developing grounds for further analysis

These graphs illustrate a number of interesting associations between an entrepreneur’s satisfaction with their startup location and the qualities of their cities. They each point to several compelling avenues for further research, and importantly illustrate the multifaceted qualities that may contribute to how entrepreneurs evaluate their startup locations. As with any data analysis, it is important to recognize the limitations of your data. These graphs indicate that the qualities that go into a great startup location cannot be easily collapsed into simple correlation, as each entrepreneur weighs their considerations differently. While none of these surface associations (population size, capital city, or hometown familiarity) can give us a definitive answer in isolation, it is possible to look greater inside the data to identify how these characteristics work alongside and interact with one another. It is important to put these associations in context and evaluate them with the consideration of their larger landscape. Stay tuned for deeper analysis into each of these variables, and how we can begin to identify startup locations that offer entrepreneurs the greatest opportunity for success.

Where are startup investments in the EU coming from?

By [Thomas Kösters]



Which role does location play for a startup to get funded? Is capital truly mobile and do investors invest in all locations equally? These are the questions that kept us – as creators of the Startup Heatmap Europe – awake at night.

Well, we thought, why not start having a look! Armed with access to the massive Pitchbook investment database, we built a list of all venture capital investment deals between 100k € and 5mn € made in Europe within the last 3 years. We got a list of 4,180 deals showing both the location of each investor involved in a deal and the locations of the startups they invested in.

The dataset of course is massive and that makes it hard to visualize – in fact, putting it on the Startup Heatmap itself will be a lot of work and will take some time. However, in the meantime, we do not want to hide the results from you! Inspired by a presentation given by EIT Digital on how they connect startups with corporates from all over Europe, we decided to use the same tool they used: Circos Table Viewer, an impressive means to turn relational data in something between a cake diagram and a mandala.

The crazy diagram above shows country codes arranged around a circle and ribbons connecting them. The color of each ribbon corresponds with its origin. So, red ribbons leaving from AUT are investments coming from Austria – ending up in other countries or back in Austria. It definitely is a fun way to explore connections between countries – even though to limit the complexity to a bearable amount, we only included 18 countries.

Now, we had a few questions to ask the data and want to share the results with you:

Where do most investments in Europe come from?

Sticking to the data provided by Pitchbook, UK-based investors take the lead in number of investments, accounting for 1124 deals of which 86% were within their borders. In total, UK investors took part in a whopping 27 % of all deals made in Europe! This could either mean that Pitchbook's data strongly favors English-speaking deal announcements or an unparalleled dominance of UK investment firms in the EU market. Probably both factors contribute to the result. In the ranking, France follows with 666 (601 at home), Germany 403 (317), the US 313 and Ireland 204 (188).

The US therefore plays a (surprisingly) smaller role in the European investment scene with roughly 7.7% of all investment deals originating here, which is comparable to the combined impact of Finland and Sweden. However, this does not include the investment sums, that could be higher as later stage US investors might do fewer deals but with higher sums in Europe.

Apparently not relevant were investors from China and Hongkong, who together make up for only 15 investments in European ventures.

How willing are investors to invest outside their home market?

Not so much. As the data shows, 73% of all investments come from domestic investors. When deducting the impact of non-European investors, we found that on average the European investors make roughly 17% of their deals in other European countries.

Is this a high or a low number? We cannot judge, but we can examine a bit further. For example, we see that smaller countries like the Czech Republic and Austria tend to invest much more abroad (73 % and 67%). Luxembourg as a popular fund location leads the ranking with 94 % of deals made abroad. However, the larger chunk of non-domestic deals come from the US and the UK, with the latter's investors sourcing at least 13 % of their deals abroad.

Interesting is also the difference between German and French investors as the Germans invest significantly more abroad (21 %) and the French like to stay home (10 %). This difference even persists when deducting investments in same-language markets, like the DACH region for Germany (16% vs. 9 %).

If they go abroad, where do they like to invest?

Geographic proximity is often the main argument when investors are asked about location choices – however, once they go abroad, they do not limit themselves to the neighboring countries.

Here are the top 5 destination countries for investors from select origins with the absolute number of investments in brackets:

- Germany: UK (20), Austria (11), Switzerland (8), Sweden, Netherlands, France (7)
- France: UK (21), Germany (15), Italy (8), Netherlands, Belgium (5)
- UK: Finland (22), Germany (19), Sweden (17), France (16), Ireland (12)
- US: UK (110), Germany (36), Ireland (24), Spain (22), Switzerland

Which countries receive the most foreign investments?

Seeing the scarcity of foreign startup investments, it is exciting to see which countries are most attractive to outside investors and also who is most dependent on these (maybe due to a lack of domestic players).

In total numbers of foreign investments coming in the country the usual suspects lead:

- UK: 304 (24%)
- Germany: 131 (29%)
- France: 94 (14 %)
- Spain: 73 (36 %)
- Finland: 72 (32 %)

Indeed this seems to prove some earlier observations of a rather closed shop situation in France with few investments going out and coming in and a more international play in Germany and the UK. Interestingly, Spain and Finland show both high absolute numbers and percentages – indicating that here foreign investments play a crucial role in keeping the ecosystem running. Not surprisingly, we can mostly see UK and US investors being active here.

The highest percentage of foreign investments are again seen in small countries with Estonia (78%) and Austria (67%) as well as Czech Republic (67%) leading the pack. Also, Russia seems to be more dependent on outside investments with 53 % of all deals being done by foreign investors.

So where do people get their money from? From the UK!

Let's put it this way: it doesn't look like that there are strong investment flows between European countries and so most startups from small scale countries will need to keep looking onto home investors. Investments to other countries (except the UK) seem to be singular and spread among various destinations which seem to follow a rather random distribution. For European policy makers, this of course can be a challenging observation – why is it so unattractive to invest across borders? Especially after the Brexit decision, what is Europe's plan for the future?

Capital follows Capital – not Talent: Europe's Spatial Mismatch of Talent and Capital

By Thomas Kösters

To make a startup successful a mix of ingredients is necessary. Two of the most important components are talent and capital. In contrast to Silicon Valley, where both largely concentrate in the same place, Europe has to wonder if it can bring both together in one location.

With the Startup Heatmap Europe Survey we have shown some of the hotbeds of entrepreneurial activity around Europe. While the high mobility of Europe's founders shows a number of personal connections between these hubs are building, it does not necessarily mean that capital follows this trend (just yet).

To look closer at these trends, we worked with Pitchbook to analyze the cross-border activities of venture capital investors in Europe. We found that 73% of all investments came from domestic investors. When deducting the impact of non-European investors, on average, European investors make roughly 17% of their deals in other European countries.

To compare the spatial distribution of investor activities and startup mobility, we went on to examine two main questions:

1. **Are founders moving where there is the highest investor activity?**
   - What do founders say about how important capital is for their location choice?
   - Compare ranking of founders and investment activities

2. **Is foreign capital following talent flows?**
   - Are the big players investing in regional champions?
   - Are investors from the periphery investing in big hubs?

To understand if founders follow capital, we first of all asked them: Strikingly, only 58% consider access to capital a *very important* factor when deciding where to startup. In our sample, we find that 14% of founders say they access to capital is not important at all (www.startupheatmap.eu/download-report). This places Access to Capital in third position behind Access to Talent (77%) and Ease/Cost of Doing Business (62%).

With this ambiguity, we need to go a step further and compare whether founders are actually more likely to choose locations with higher investor activities. Therefore, we ranked the 10 cities that have the most investment deals within the last 3 years according to Pitchbook and compare those to founders' choices:

Interestingly, the top 10 cities with the greatest investor activity looks fairly different from the top 10 cities chosen by founders. From the investor data, it is clear that Helsinki is a top hub for investments, but founders still do not vote it into the top 10. On the contrary, Barcelona is strong on talent, but less favored by investors. Most strikingly, cities like Cambridge, Edinburgh and Moscow do not figure on the radar of founders at all in our survey. There may be a diverse set of reasons for this, but it shows that the presence of capital does not necessarily bring talent. Additionally, when looking at the perception of founders on the availability of capital in each of the respective cities differs can differ drastically from the impression we have from the actual investments. This suggests that founders either do not know the actual situation well, or they know more than this ranking implies.

The second question we examined was whether capital is following talent flows to capture the most promising startups all around Europe. For this, we look at a select group of emerging regional champions in the battle for startup talent and check what extent their startups are able to attract foreign investment. We also examine the cross border total investments, and check to see how big of a share these cities capture this "mobile" capital.

Select Cities	% of foreign investors in deals	Share of international investment deals in Europe	Share of founders
Stockholm, Sweden	45%	5%	9%
Tallinn, Estonia	76%	1%	4%
Munich, Germany	30%	1%	7%
Prague, Czech Republic	100%	0%	3%
Barcelona, Spain	41%	4%	21%
Milan, Italy	18%	1%	7%

According to our survey results, in the Nordics and Baltics Stockholm captures 22% of regional founders' attention and Tallinn grabs 15%. Western Europe finds Munich with 17% of the regional cohort and in the CEE, Prague garners 23%. In the South, Barcelona reaches 35%, and Milan follows with 30%.

What we can see is that foreign capital plays an important role in all ecosystems (importantly – more than a third of London deals are foreign), but hubs with high regional concentrations of founders do not capture international capital to an extent as the popularity with founders would suggest. Barcelona shows the largest discrepancy with 21% of founders imagining to startup there, but only 4% of international investment deals happening there.
Stockholm attracts 9% of founders, but only 5 % of international investments.

When looking at which cities benefit the most from international capital flows, we sort the list by the magnitude of international investments found in each city.

City	# deals	# foreign investor deals	% foreign investor deals	% all int'l deals
London	672	215	32%	21%
Berlin	241	83	34%	8%
Helsinki	140	52	37%	5%
Stockholm	114	51	45%	5%
Paris	311	46	15%	4%
Barcelona	104	42	40%	4%
Amsterdam	62	33	53%	3%
Moscow	67	33	49%	3%
Dublin	160	33	21%	3%

This list indicates that capital follows capital, and not talent. The US, the UK and Germany are responsible for over 50% of all international investments in Europe and they mostly stay within existing high capital markets. Investors from the periphery also tend to follow these trends: The countries that export the most of their capital are Luxembourg (94%), Czech Republic (73%), Austria (67%), Estonia (56%). The majority of these countries do most of their foreign deals in the UK.

While some might argue that concentration is necessary and if capital availability is limited to few hubs, competition for it will increase and only the best startups will receive it. However, our findings suggest otherwise: Entrepreneurial talent is not moving to where the capital is, but is dispersed around the continent for a number of reasons. But early stage venture capital remains largely local or at least within its comfort zone. By not sourcing on a large scale, European venture capital firms miss out on opportunities and create an unnecessary shortage of supply of promising startups for themselves. While, in Europe's periphery founders are turning away from VCs, betting on organic but slow growth paths. Overall this boils down to a simple conclusion: Europe has less unicorns than it could have.