Introduction

Startups are the Mittelstand of the future. Innovative entrepreneurs are one of the largest creators of jobs and stand as catalysts for innovation and the enterprises of tomorrow. These entrepreneurs start companies because they see opportunities. They develop both new technologies and innovative business models and thus create new jobs.

So far there has been little profound data on the startup phenomenon. Most statistics relied on very small samples or estimations or included all foundations of businesses without specifically focusing on startups through qualitative aspects such as innovation and growth.

To fill this gap the European Startup Monitor (ESM) was started. It defines startups:

- To be no older than 10 years
- To have an innovative / disruptive business model or technology and
- To aim at a significant growth in revenue and number of employees

Within this context, startups need to fulfill the first and at least one of the other two aspects and thereby differing from general small and medium enterprises.
The 2015 results of the ESM for Germany help to better understand this special type of companies. Expanding from the work of the German Startup Monitor, the ESM aims at creating a research network that provides political and educational decision makers with a profound set of data about innovative and job creating startups. In addition to analytical research, the project aims at creating further excitement for entrepreneurship within the European society.

**Main Findings of the European Startup Monitor 2015 for Germany in Brief**

The study of the German startup ecosystem within the ESM brought about a number of insights with the main findings being:

- The geographical hubs (*regions*) for startups in Germany are Berlin (31.1%), Munich (11.5%), the Rhine-Ruhr Metropolitan Region (10.3%), Hamburg (8.3%) and the Stuttgart Metropolitan Region and the city of Karlsruhe (in the following Stuttgart/Karlsruhe; 7.9%)
- German *founders* are 87% male and prefer to start their companies in *teams* (average team size: 2.4)
- In Germany the average *age* of founders is 34.9 years, whereas startups are 2.8 years old on average.
- 45% of the entrepreneurs have previously started at least one company and approx. 33% had experienced failure.
- Around half of the examined startups are part of the *digital industry*
- The examined startups create an average of 17.6 *jobs* (founders included)
- Almost half of the startups had an annual *turnover* of 250,000 EUR or more
- Considering internationality: 10% of the founders and 22% of the employees in German startups are non-nationals. Around 75% of the startups have customers outside Germany.
Regions

- With 1,061 data records evaluated, the questionnaire covered most of Germany’s startup ecosystem. Congested urban areas play a central role for startups, with good conditions for high-tech and knowledge-based / research intense industries. An excellent infrastructure, social and cultural aspects as well as a large availability of skilled employees and professional services are the ingredients of the German startup ecosystems.

- Based on the 2015 data, five regions were identified as hubs for startups. Located in the north, east, west, southeast and southwest of Germany, with three cities and two metropolitan areas are the following: Hamburg, Berlin, the Rhine-Ruhr region, Munich and Stuttgart-Karlsruhe.

Founders:

- Women in startups are under-represented. Only 13% of the German startup founders are female. This quota differs significantly to the overall quota of female founders that is 43% (see: definition of startups). At the same time, women that found a startup tend to do it by themselves more often than men: 34.8% of the female founders in the study are single-entrepreneurs, whereas only 21.3% of the male founders started their company by themselves.

- The founders surveyed are on average 34.9 years old (men 34.9 years, women 35.1 years old). Subtracting the average age of startups from the average age of the founders, we can see that by the time of founding the startup they are on average 32.1 years old. 14% of all founders are 45 years or older.

- Over 90% of the founders in Germany have German citizenship, 6.2% are from another European country and 2.8% have a non-European citizenship. Generally, more female founders have a foreign citizenship than male founders do.

- Almost half of the founders (45.5%) in the survey specified that they had previously founded at least one startup, 21.2% had even founded two or more companies before.
Being asked what happened to their former startups, 36.1% answered it still exists and they are still holding shares. Nearly as many (30.1%) said that business operations were discontinued voluntarily and 15% completely sold their company. 14.2% left the company with no shares remaining while business operations continue. Only 3.4% left their previous startup due to insolvency.

- If the founders’ current startups were to fail, the vast majority (80.5%) would continue to be self-employed. About two thirds (68.5%) would found another startup, 8.4% could imagine working as freelancers and 3.6% would engage in entrepreneurship as business angels or investors. While 18.3% would want to work as employees, 1.2% would prefer to not work anymore at all.

- Most German ESM founders (87.2%) find it at least rather likely to remain in their startup. At the same time two thirds (67%) of the founders could imagine a change in ownership by (partially) selling their company.

- An IPO isn’t for everybody: only 8.2% find that option to be very likely for their startup.

Digital Industry and Innovation

- The digital industry turns out to be the most important area for German startups: more than half of them are associated with the categories software as a service (15.3%), e-commerce (10.1%), IT/Software-development (8.6%) or online related services and applications (combined 18.6%).

- Nearly 50% of the German ESM startups claim to offer an innovation on a global scale. Another 14.2% (19.8%) claim to offer a European (German) innovation. Only 18.1% see no innovation in their product or service.
Jobs / Employees

- Startups are job engines. German startups represented in the ESM create on average 17.6 jobs including the founders after an average of 2.8 years (without founders: 15.2).
- There is a surprising difference in job creation by startup regions: while Berlin startups provide for the most jobs with an average of 25.2, followed by Hamburg with 19.7, the participants in Munich create 15.1 and in the Rhine-Ruhr area 12.3 jobs. The least are created in the metropolital region Stuttgart/Karlsruhe with an average of 9.1 jobs per startup.
- The employment effects are even more striking, when considering the startups’ current phases: While the young enterprises in the early stages already create some jobs (seed-stage: 2.5, startup-stage 5.6) these numbers increase significantly in the growth-stage (33.2) and then even more in the later-stage with an average of 125.5 jobs. Even during the steady-stage there are 10.2 employees in German startups.
- About a quarter (22%) of the startups’ employees in the survey have no German citizenship. Out of these, 13.3% are from an EU country, 8.7% from a non-EU country. Comparing regional ecosystems, the greatest share of international employees can be found in Berlin (33.7%), the smallest portion of foreign staff is in Hamburg startups with 11.7%.
- Nearly all startups in the German questionnaire (93.9%) want to continue hiring employees in the next 12 months. The average number of planned new staff is 8.3, with Berlin expecting the biggest gain in numbers (11.9) followed by Hamburg and Munich with 10.1 each. Startups in the Rhine-Ruhr area (7.3) and in Stuttgart/Karlsruhe (4.9) plan to hire below the national average.
- German startups employ on average 3.0 student workers or interns.
Turnover, Financial Situation and Business Climate

- In May 2015, when the German ESM data were gathered, almost 90% of the startups that took part in the survey found their current business situation to be satisfying (49.8%) or good (39.6%), leaving one in ten to find the current situation poor. For the next 6 months, three quarters (76.1%) expect a rather favorable future, 22.3% expect it to be consistent and only 1.6% found their situation to be rather unfavorable.

- Nearly half of the German startups (44.3%) that already completed a full fiscal year, had an annual turnover of 250,000 EUR or more, 21.4% reached a million EUR and 8.4% even made more than 5 million EUR per year.

- The most important source of capital for the startups is founders’ savings (79.9%), followed by friends and family (32%), business angels (29.7%), public funds (29.4%) and venture capital (20%). Bank loans and incubators stand for 11.9% and 10.4%.

- One third of the German startups (35.6%) has never raised external capital.

- One in five founders uses venture capital for financing his or her startup. The biggest share of VC-financed startups can be found in Berlin (30.3%) followed by Munich (20.5%), the Rhine-Ruhr Metropolitan Region (17.4%), Hamburg (13.6%) and Stuttgart/Karlsruhe (8.3%).
Conclusion

The ESM for Germany reveals that startups indeed are job engines. When it comes to male and female founders, there is a striking gap between the sexes with women being drastically underrepresented. Further research needs to be conducted to find the reasons for this asymmetry.

Even though there is sufficient initial financing for startups in Germany and business angel investments are on the rise, startups face difficulties in accessing growth capital (series B and C round).

Another result of the ESM 2015 is that founding a startup indeed is a clear career choice. Many startup entrepreneurs do not consider a job position as an employee in a traditional company as a viable alternative.

So despite limits in growth and being underrepresented in political and legal frameworks, startups in Germany are significantly contributing to job creation and generate substantial revenues for the German economy. Therefore more attention should be given to the economic and socio-economic benefits of startups.