FIRST EVIDENCE ON CROWD INVESTING IN GERMANY

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ABSTRACT

Crowd investing has recently become an interesting possibility for young entrepreneurs to finance the start-up of new firms. This paper analyses the impact of education and gender of young entrepreneurs who finance their start-ups using a crowd investing platform. We analyse the crowd investing projects financed through the Companisto and Seedmatch platforms, which are the main crowd investing platforms in Germany. The study confirms that the majority of founders of crowd investing start-ups completed a university education. However, we find a surprisingly low-rate of female founders in crowd investing, although the gender structure do not influence the amount of crowd investing. Thus, the crowd investing does not facilitate the access to finance for new groups of entrepreneurs, but it rather facilitates the financing conditions for founders, who could also obtain a credit from the bank.

KEY WORDS

crowdfunding, entrepreneurial nance, donations, venture capital

JEL CODES

G23, G24

1 INTRODUCTION

Start-ups companies have several alternatives how to finance their projects (Hahn, 2014). The access to external finance is crucial due to the fact that a lot of start-up enterprises fail because of undercapitalization (Fueglistaller, Müller, Müller and Volery, 2008). One possibility is the cooperation with the so-called business angels in order to receive sufficient financial resources. Moreover, they also bring know-how in the management of new projects (Kaiser and Busack, 2006). Another opportunity is to attract funding by venture investors but there is only a bare likelihood to receive the needed capital (Warmer and Weber, 2015).

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This type of funding is summarized as private equity (Haasis, Fischer and Simmert, 2007). Finally, capital resources or funds from friends or relatives are another possible method to collect the start-up capital (Stahlmann, 2013).

Contests for founders open a chance to obtain the necessary starting capital stock (Stahlmann, 2013). The most traditional way is to apply for credit from a bank (Hilse, 2010). By contrast, crowd funding provides a new source of capital to finance new innovative projects. In general, crowd funding is available for all types of projects (Orthwein, 2014). Crowd investing represents a form of crowd funding and it provides capital to start-up companies without a future participation in the projects in a direct or indirect way. Selected platforms offer start-ups the chance to present their business projects to potential private investors, who are generally referred to as the crowd. Usually, private persons invest relatively small amounts in different projects, which often attract them by other non-financial reasons (e.g. to support development in areas neglected by standard banks and institutional investors including environmental protection and non-profit activities). The collected capital is available for the company. If the business is successful, the invested money will be paid back with an interest (Waider, 2013). Actually, the mutual investment founding is not the main innovation of crowd funding (Sixt, 2014), it is rather the interactive approach fully integrated into online social networks which represents a major innovation in the context of company funding. Crowd investing is highly interesting for investors, especially in current periods which are characterized by low interest rates offered to households for standard saving forms (Heintze, 2015).

The most important German platforms for possible funding of start-ups are Companisto and Seedmatch. The dominance of these two platforms could be explained by high rates of successfully founded companies (Inci, 2014). Correspondingly, many start-ups are interested in presenting their projects on these platforms in order to increase the probability to receive sufficient funding. However, this creates also a pressure for the operators of the platforms to select the most promising start-ups, which may result in selection bias of presented projects. This can then explain the high percentage of successful funding following the principle "quality will prevail" (Piwinger and Zerfaß, 2007). Moreover, the platforms themselves are also interested in achieving high rates of completed investments because they receive fees from successfully funded projects (Kletzsch, 2013).

While public attention concentrates often on the description of crowd-funded projects, the founders of start-ups receive much less attention in this area. By contrast, the characteristics of traditional entrepreneurs and founders attract the interest of scholars for a long time (Blum and Leibbrand, 2001). Therefore, this paper focuses on the education and gender structure of the founders who present their projects at crowd funding platforms. Actually, female founders are underrepresented in the start-up area (Startups eV, Ripsas and Tröger, 2014). Furthermore, founders of start-up enterprises own a higher degree of education than the average founders (Startups eV, Ripsas and Tröger, 2014). This contribution is investigating whether this holds true also in the field of crowd investing. If one looks at the start-up developments, it strikes to see how few women are active in this area (Kampmann, Keller, Knippelmeyer et al., 2013). Despite of this, we do not confirm any difference in the investment amounts made available for start-up projects for male or female founders. Thus, it seems that either the self-selection by the founders or the selection by the investment platforms may cause low shares for female entrepreneurship.

Our paper is structured as follows. The next section describes our unique data sets, which was collected manually from the crowd investing platforms between 2013 and 2015. We describe the structure of projects in Section 3 and complete this description by a statistical analysis in Section 4. The last section concludes and presents policy discussion.

2 DATA DESCRIPTION

We collect data about crowd investing companies from two main platforms, Seedmatch and Companisto. These two platforms were selected because they are the biggest in Germany, thus most of the crowd investing companies were founded with their assistance (Carstens and Schramm, 2014). All firms funded by these platforms were collected as a part of this project. The research gives a closer look on the gender of founders and the educational background. In addition, the companies were analysed in order to understand which roles female founders played in these enterprises, and which responsibilities they had while in the group of founders. It is also interesting to take a closer look into their educational background. In addition, the website "Xing" is used to collect information which were not provided from the crowd investing websites. Further research categories are the branch, the product of the enterprise, the needed capital and the collected capital. This is relevant because more criterions could clarify the founding behaviour of women; especially the branch of the company. Altogether, 101 enterprises were investigated. This serves the purpose of supporting the results statistically to improve the quality of the research which should provide a general view on the status quo of crowd investing in Germany.

3 STRUCTURE OF FIRM FOUNDERS IN CROWD INVESTING

According to our data set of 101 start-ups with altogether 218 founders, only 18 female founders are represented in 13 founding teams. Thus, the share of start-ups with female founders is surprisingly low: 8.3% of all founders and of 12.8% of start-ups. Interestingly, the percentage of female founders is lower than the percentage of start-ups with female founders in their team (13.0%). It shows that female founders are strongly concentrated in few projects. Actually, Tab. 1 confirms that the share of female founders is above a half in the average for those projects with female participation. It is also interesting to note (see Tab. 1) that an average size of a founder with female participation is slightly larger (2.5 persons, and 2.6 persons in start-ups dealing with female topics) than the number of founders on average (2.3 persons).

Moreover, some start-ups – especially dealing with women specific topics – are nearly founded by women. Thus, eight enterprises were funded solely by women and four out of them deal with themes connected to women:

- Erdbeerlounge: `http://www.deutsche-startups.de/verzeichnisse/startups-a-z/erdbeerlounge/`;
- Tampons for U: `https://www.seedmatch.de/startups/tampons-for-you`;
- Sugarshape: `https://www.seedmatch.de/startups/sugarshape`;
- Edition F: `https://www.companisto.com/de/startups/edition-f-startup-39/overview`.

Without these start-ups the percentage of women in the crowd investing scene would be much lower.

The low share is not an uncommon figure for this scene. Earlier studies1 often document about a share of around 13%. Despite the difference of the figures the weak founding activities of females were reconfirmed with the empirical data.

Previous literature identifies several factors. Women are often less encouraged by their environment, resulting that they do not start new risky business projects. Moreover, women are less integrated into networks with other founders who could help them build their own company. Women rarely hold an executive position early in their career. This could result from the fact that women often work in the communication section of a start-up rather than in the technical fields. Furthermore, the arrangement of family and work duties is still difficult (Warda, 2007). The sectors where women found their companies are problem-oriented this means that with their enterprise want to solve a specific issue. Also female founders integrate a company in a field where they have particular expertise. Correspondingly, it is not surprising that female founders are focusing on female-specific areas and health and food.

4 STATISTICAL ANALYSIS

In the next step we examine the statistical characteristics of the start-up funding in crowd investing-platforms. We take the following factors into account. The size of the funding team (number of founders), the education level (share of team members with higher education), their expertise and the participation of female founders. Finally, we analyse the investment value collected by the crowd, which is selected as the most important indicator.

Tab. 2 presents the tests whether start-ups with particular characteristics receive more or less funding from the crow. In particular, we define sub-samples e.g. for small and big founding teams, with and without female member in the crowding team, or teams with members without university education. Then we perform the t-test of mean invested amount for the sub-samples.

On average the start-ups include two founding members. Only a few teams are constituted of four members and two teams consist of five members. The most interesting exception from this is a group of students from the University of Berlin, who collectively funded a start-up company offering printouts of passport photos. In this single case, the exact number of founders is not reported. Therefore, we exclude this company from further statistical analysis. Smaller teams get more money than bigger teams but the difference is not statistically significant.

Education level plays an important role in the field of crowd investing. Only seven start-ups have founders without a university degree. These start-ups consist of small teams with only one or two founders. They are mainly located in the field of online shopping. On average, 85% of founders own a university degree. Surprisingly, the statistical analysis shows that start-ups with a lower education level receive more capital, and this gap is even statistically significant. The difference in the collected capital is due to two very big start-ups with exceptionally high investments (a hotel and an IT-company). If we remove the two start-ups, the founded capital – as it was expected – will be higher for highly-educated founders. However, the discrepancy is not statistically significant.

As an extension of the classical statistical analysis we estimate a multivariate regression which includes all main factors and some control variables. The results for the presented variables remain unchanged. These outcomes confirm the earlier results (Barasinska and Schäfer, 2014), which concluded that the low participation of female founders in the field of crowd investing cannot be explained by gender-based discrimination.

Tab. 1: Gender Structure of Start-Ups Financed by Crowd Investing

	Number of start-ups	Total number of founders	Average number of founders	Total number of female founders	Aver. number of female founders	Share of female founders
Female topics & children	5	13	2.60	10	2.00	76.92
Health & food	5	11	2.20	5	1.00	45.45
Other	3	8	2.67	3	1.00	37.50
Total of start-ups with fem	13	32	2.46	18	1.38	56.25
All start-ups	101	218	2.33	18	1.33	8.26

Tab. 2: Descriptive Statistics for Crowd Funding Volume

Variable and tested threshold	Less than the threshold	More than the threshold	t-test
Number of member (more than 2)	433,284.7	338,521.9	0.5334
University education (above 85%)	657,191.7	313,636.1	1.8472**
University education (above 85%), outliers excluded	266,124.4	313,636.1	−0.6895
Female participation (above 1 person)	423,419.5	266,043.1	0.6391

5 CONCLUSIONS

The internet and especially crowd investing fuelled expectations that the technological revolution will create a virtual world where race, religion and gender are no longer important for business success. Yet, the experience of the first decade demonstrates that a lot of human behaviour follows the same behavioural pattern also in this virtual world in the internet. The female participation in start-ups remains low. In the area of crowd investing women only represent 13% of the founders. Moreover, the share of companies with female founders is even lower because female founders are concentrated in only few areas and start-up projects. By contrast, a statistical analysis does not prove any differences in the behaviour of the investors meaning that self-selection or selection of presented platforms by the dominating internet platforms might be important.

Beyond that, other factors like education have a minimal impact for the decision of the crowd. This can provide an interesting hint on the quality of the crowd-based decisions. In particular, it seems that the crowd-investors act more or less blind and perhaps the crowd-intelligence has been overemphasized so far. Crowd investing improves the situation for young well-educated men, who also have a good access to bank loans.

In other words, the data collected as a part of this research show an interesting pattern. Often women do not have the confidence to prevail in a men-dominated area like start-ups. This could be also related with the missing role models for female founders and the fact that they are not sufficiently integrated into expertise networks (Voigt, 2013). This issue can be observed in the acquisition of loan capital.

Female founders are mainly located in areas like public relations, marketing and personal department. Hence, they do not gain the experience of leading a company. As a consequence, they do not gain the confidence to build up their own company in a new and risky area. High risk aversion plays an important as well as the skills in communication areas (Kampmann et al., 2013). Moreover the arrangement of career and family is still fraught with problems. This could ensure that women restrain from leading positions in a company. The low percentage of women in executive positions can be also observed in the board of the DAX companies (Peters and von Garrel, 2013). The fact that women are seldom represented in the top management could also be associated with the

competitive situation for such jobs because women avoid such competition more than men (Bierach, 2011).

The hypotheses that women found mainly companies in specific areas can be confirmed also by our data. We show that firms with female founders often solve problems and in the field of their expertise. Examples like Sugarshape or Tampons for U verify this because they deal with female-specific issues.

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7 REFERENCES

Barasinska, N. and Schäfer, D. 2014. Is Crowdfunding Different? Evidence on the Relation between Gender and Funding Success from a German Peer-to-Peer Lending Platform. *German Economic Review*, 15, 436–452.

Bierach, B. 2011. *Das dämliche Geschlecht: Warum es noch immer kaum Frauen im Management gibt*. John Wiley & Sons.

Blum, U. and Leibbrand, F. 2001. *Entrepreneurship und Unternehmertum: Denkstrukturen für eine neue Zeit*. Springer-Verlag.

Carstens, J. and Schramm, D. M. 2014. *Startup-Crowdfunding und Crowdinvesting: Ein Guide für Gründer: Mit Kapital aus der Crowd junge Unternehmen online finanzieren*. Springer-Verlag.

Fueglistaller, U., Müller, C., Müller, S. and Volery, T. 2008. *Entrepreneurship: Modelle, Umsetzung, Perspektiven; mit Fallbeispielen aus Deutschland, Österreich und der Schweiz*. Springer.

Haasis, H., Fischer, T. R. and Simmert, D. B. 2007. *Mittelstand hat Zukunft: Praxishandbuch für eine erfolgreiche Unternehmenspolitik*. Springer.

Hahn, C. 2014. *Finanzierung und Besteuerung von Start-Up-Unternehmen: Praxisbuch für erfolgreiche Gründer*. Springer-Verlag.

Heintze, A. 2015. *Crowdinvesting: Wenn aus Fans Investoren werden*. Spiegel.

Hilse, J. 2010. *Praxishandbuch Firmenkundengeschäft: Geschäftsfelder, Risikomanagement, Marketing*. Springer-Verlag.

Inci, Y. 2014. *Crowdinvesting: Eine alternative Finanzierungsform für Start-Ups in Deutschland*. Diplomica Verlag.

Kaiser, D. G. and Busack, M. 2006. *Handbuch Alternative Investments*. Springer.

Kampmann, B., Keller, B., Knippelmeyer, M. et al. 2013. *Die Frauen und das Netz: Angebote und Nutzung aus Genderperspektive*. Springer-Verlag.

Kletzsch, M. 2013. *Crowdinvesting Schwarmfinanzierung*. BoD – Books on Demand.

Orthwein, I. 2014. *Crowdfunding: Grundlagen und Strategien für Kapitalsuchende und Geldgeber*. Igel Verlag RWS.

Peters, S. and von Garrel, J. 2013. *Arbeits-Zeitsouveränität für Führungskräfte von Morgen: Vereinbarkeit von Beruf und Privatheit*. Rainer Hampp Verlag.

Piwinger, M. and Zerfass, A. 2007. *Handbuch Unternehmenskommunikation*. Springer.

Sixt, E. 2014. *Schwarmökonomie und Crowdfunding: Webbasierte Finanzierungssysteme im Rahmen realwirtschaftlicher Bedingungen*. Springer-Verlag.

Stahlmann, M. 2013. *Crowdinvesting als Finanzierungsalternative fr deutsche Startups: Die Mehrwerte im Vergleich zu herkömmlichen Finanzierungsinstrumenten*. Diplomica Verlag.

Startups eV BD, Ripsas, S. and Tröger, S. 2014. *Deutscher Start-Up Monitor*. KPMG in Deutschland.

Voigt, M. 2013. *Unternehmerinnen und Unternehmenserfolg: Geschlechtsspezifische Besonderheiten bei Gründung und Führung von Unternehmen*. Springer-Verlag.

Waider, C. 2013. *Crowdfunding als alternatives Filminvestitionsmodell: Ist Crowdfunding und Crowdinvesting ein zukünftiges Filmfinanzierungsmittel?* Diplomica Verlag.

Warda, A. 2007. *Die Vereinbarkeit von Beruf und Familie: Der Beitrag Sozialer Arbeit im Mehrgenerationenhaus*. Diplomica Verlag.

Warmer, C. and Weber, S. 2015. *Mission: Startup*. Sachbuch. Springer-Verlag. ISBN 9783658066529.

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