

Sustainable Entrepreneurship in German Rural Areas: A Survey and Implications for Entrepreneurship Education and Support Programs

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ABSTRACT

Results from studies indicate that starting a sustainability-oriented business is associated with specific challenges. Our aim therefore was to investigate the mindset and needs of sustainable entrepreneurs, focusing on their motivations, challenges and support requirements during the establishment of sustainability-oriented start-ups. The focus was on respective start-ups in two rural and rather conservative regions in Germany. Together with an interdisciplinary group of students at a university course, we conducted guideline-based interviews with $N = 14$ founders of sustainability-oriented enterprises from different business sectors. The interviews were analysed using a category system aligned with the study's objectives. Findings highlight that sustainable thinking is deeply embedded in the respondents' values, often prioritizing ethical considerations over profit maximization. Many of them face a tension between sustainability and profitability, as sustainable products tend to be more expensive, and there is uncertainty about the availability of willing customers. Moreover, the research identifies specific support needs, including assistance with bureaucratic processes, networking opportunities, and strategies for customer acquisition. We derive implications for higher education institutions' education as well as for external programmes to support (prospective) sustainable entrepreneurs.

Keywords: Sustainable entrepreneurship, Qualitative study, Challenges and support needs, German rural area, Entrepreneurship education

INTRODUCTION

It is largely accepted that founders of sustainable enterprises make a valuable contribution to overcoming the economic and social challenges of our time and thus contribute to achieving the United Nations' Sustainable Development Goals, in particular (e.g. Ayandibu, 2024). It is therefore extremely important that (potential) sustainable entrepreneurs receive customized support offerings, e.g. from public authorities as well as educational institutions (ibid). Our impression is that, although the scientific discourse certainly calls for the economic and regulatory environment to be adapted to the specifics of sustainable entrepreneurship (e.g. to nurture a "circular economy"), the framework conditions for founding

a sustainable enterprise are sometimes “romanticized” (e.g. regarding the existence of sustainability-conscious customers). Especially in times of a cautious economic climate (as we are currently experiencing in Germany, for example, see Ifo institute, 2024), starting up a business or becoming self-employed is certainly risky. If it is also a start-up/self-employment with a focus on sustainability, surveys indicate that further specific challenges may arise, e.g. regarding regulatory barriers, financing and customer acquisition (for Germany, e.g. Fichter et al., 2024).

Where different framework conditions and requirements for the establishment of sustainable companies are discussed, the focus is usually either on (nations of) the global south and/or (nations of) the global north (e.g. Rashid, 2019). There is far less focus on regional differences within individual nations. Although Germany is increasingly focusing on sustainability in the corporate context and entrepreneurial sustainability awareness tends to be rather high (Sustainable Economy Barometer, 2023), there may be (especially rural) regions where sustainable start-ups face more challenges than in the larger industrial metropolitan areas. In the survey, we focused on the Upper Franconian region around Coburg University of Applied Sciences (HSCO). Upper Franconia is a rural region with companies that are primarily active in sectors (e.g. automotive industry, insurance industry) that are currently strongly affected by the forces of sustainable transformation. In addition, we also neighbor the region of southern Thuringia and surveyed sustainable entrepreneurs located there. In southern Thuringia, low prices play an even greater role for consumers due to comparatively low wage levels. As a result, there are currently political majorities for parties that do not attach great importance to sustainability and climate protection but primarily promote affordable living by maintaining the status quo. This makes it doubly difficult for sustainable entrepreneurs to sell their products and services there.

Finally, in Germany, the task of supporting start-up projects and addressing the wider challenges facing society is increasingly being promoted politically (e.g. BayHIG, 2022; Bundesregierung, 2023). It is therefore important to know and understand the challenges and potential of sustainable entrepreneurs (also at a regional level). Finally, current studies show that the proportion of green start-ups in the two regions under consideration is low compared to other German regions (see Fichter et al, 2025). This could be a sign that the (green) start-up infrastructure in these two regions needs to be further promoted. To ensure the development of a sustainable entrepreneurial mindset (EU Commission, 2019) and to better support (prospective) founders in the field of sustainability, we conducted a survey of sustainable entrepreneurs and self-employed individuals as part of a university course together with an interdisciplinary group of students. Our objective was to identify challenges, motives and support needs when starting a sustainable enterprise. Insights into this will ultimately help to set up needs-based offers for sustainable entrepreneurship education in higher education institutions (HEIs)/start-up advice as well as for regional structural funding.

In the following chapter, the methods used to collect and analyze the data are described before the core results are presented and the implications are outlined.

METHOD

The idea for this study emerged from a dialog with regional practice partners of our university (Coburg Chamber of Commerce and Industry, Upper Franconia Chamber of Crafts). They wanted to get recommendations which programmes they could set up to support sustainable entrepreneurs. The special thing was that all steps of the research process were planned and implemented in a participatory and egalitarian manner together with a group of students. To pursue the explorative approach of our study, we decided to conduct interviews with sustainable entrepreneurs in the HSCO's environment (i.e. former graduates and/or collaboration partners of the HSCO). This provided the opportunity to get to know sustainable entrepreneurs from the university's direct neighbourhood.

As part of two longer seminar sessions, we collaboratively developed an interview guideline and a category system (see below) for analysing the interviews. We followed methodological recommendations for conducting qualitative studies (Kuckartz, 2018). We also developed a standardized contact email for the acquisition of interview partners. Each participant (two lecturers and 12 students) conducted an interview and then analysed the data. The findings of the individual interviews were then summarized. Each participant first presented the results of the analysis of their interview. We then discussed the findings as a group and worked out the core results of the overall study. Doing this, we were supported by two experts, the Professor of Entrepreneurship and Innovation and the Vice President for Sustainability and Entrepreneurship at the university.

Ultimately, we were able to conduct interviews with $N = 14$ sustainable founders from the Upper Franconia/South Thuringia region. 9 of the interviewees were male, 5 were female. They are working in the following branches: sustainable fashion retail, upcycling musical instrument making, furniture upcycling, 3D printing design elements from sustainable materials, landscape maintenance, sustainability-oriented software service (several start-ups), sustainably produced stuffed toys and children's fashion, indoor vegetable gardening. Most respondents were in an early start-up phase at the time of the survey and were self-employed alongside a regular job. The respondents were informed that their answers would be treated as strictly confidential and anonymous. All of them consented to their data being recorded and analysed.

The interview guideline all respondents were interviewed with in the period from December 2023 to January 2024 contained the following questions:

- Who are you and what do you in general do?
- To what extent would you describe yourself as a sustainability-oriented founder? How do you define sustainability in your start-up?
- What phase is your start-up currently in?

- Why did you start up here in the region?
- What were the biggest challenges in setting up your start-up?
- What specific requests for support do you have/have you had for your start-up?
- What do you think are the most important success factors for a sustainability-oriented start-up here in the region?
- What would be the most important advice you would give to prospective sustainability-oriented founders here in the region?
- Do you think that a sustainability-oriented start-up has more problems and if so, which ones?
- What advantages and disadvantages have you experienced when starting a sustainability-oriented business?
- To what extent is it a challenge for you to be both profit-oriented and successful in a sustainability-oriented way?
- Is there anything else you would like to tell us?

The collaboratively developed category system for analysing the interviews consisted of the following main (M) - and subcategories (S):

- M1: General information about founder and start-up
 - S1: Person of the founder
 - S2: Start-up and core activities
 - S3: Phase start-up life cycle
 - S4: Current status of sustainable orientation of the start-up
- M2: Self-concept as a sustainability-oriented founder/Understanding of entrepreneurial sustainability
 - S1: Sustainability-oriented founder
 - S2: Sustainability-oriented business
- M3: Success factors for a sustainability-oriented start-up
 - S1: Choice of start-up location
 - S2: Own insights of the starting-up process (“advice”)
- M4: Challenges in the start-up process
 - S1: Challenges starting the business
 - S2: Sustainability-orientation vs. profit-orientation
 - S3-Sx: Expand list, depending on the interview
- M5: Requests/need for support
 - S1-Sx: Expand list, depending on the interview
- M6: Advantages and disadvantages of founding a sustainability-oriented start-up
 - S1: Advantages (expand list, depending on the interview)
 - S2: Disadvantages (expand list, depending on the interview)
- M7: Further Information

The following chapter presents the core results of the analyses regarding the motives and support needs (derived from challenges) of the sustainability-oriented founders surveyed. Selected examples from the interviews are used to illustrate the results. The small sample size should be taken into consideration here. Start-up projects are also only represented in the sample within a few sectors and digital service providers are represented several times. In addition, there are many side-line start-ups in the early start-up phase in the sample.

RESULTS

(1) *Motives/Motivation for Setting Up a Sustainability-Oriented Start-Up*

Sustainable thinking and acting are deeply ingrained in the mindset of the respondents. Personal “idealistic” values and beliefs take precedence over purely profit-driven considerations when in doubt:

“For me, a very significant value (...) I’ve realized that acting sustainably doesn’t mean making sacrifices but rather living according to my values and seeking solutions that help to save resources.”

Additionally, many founders pursue their ventures part-time alongside a regular job to ensure financial security and reduce risk. This aspect is reflected in the following quotes from the interviews:

“I honestly thought, why did I even do this? The whole stress with registration processes and bureaucracy almost made me lose my enthusiasm. But because I’m doing this on the side, I didn’t have the pressure of having to make a living from it.”

“For me, having a part-time job was important because I simply needed financial security. It gave me the freedom to try out my ideas without taking a big risk.”

The entrepreneurs experience a tension between sustainability orientation and profit orientation. Products and services are often more expensive (including the cost of materials and other resources); there is also uncertainty about where to find sustainability-conscious customers who are willing to pay, especially at a regional level:

“I think sustainability often means that products are more expensive. Although people are more aware, many are not willing to spend more money – especially in these times, where everything has already become more expensive.”

(2) *Support Needs and Wishes of Sustainability-Oriented Founders*

The founders face challenges and express the need for support and advice on bureaucratic issues and requirements (e.g., regarding the choice of legal structure for their company, applications during the startup process, startup grants, or tax-related questions):

“I (...) made phone calls, and everywhere I got different answers. Nobody could clearly tell me whether I needed a VAT ID as a small business owner or not. The tax registration form was incomprehensible, and I had to figure everything out on my own.”

Additionally, they express a desire for support in building (regional) networks. This includes the desire for places where physical meetings and exchanges can take place, as well as for the provision or establishment of infrastructural and personnel resources:

“I find networks very important. Through my degree program, I’ve built many contacts with companies and project partners, which has been helpful for starting my business. Upper Franconia offers good opportunities in this regard because it’s a tightly connected region.”

The respondents’ statements suggest that support with strategies for customer outreach and acquisition could be beneficial for many. This includes questions such as: How can I specifically reach sustainability-conscious customers and potential collaborations, especially in the region:

“A major challenge for me is finding customers at all. (...) It requires much greater reach for someone to actually buy the product. That’s why I’m currently focusing heavily on advertising.”

CONCLUSION

(1) Entrepreneurship Education in Higher Education Institutions

Regarding the training of a sustainable entrepreneurial mindset, knowledge and skills, we would draw the following implications based on the findings:

- In addition to focusing on the training of methods in the innovation/start-up process (e.g. business ideation with design thinking, business modeling with business model canvas) (cf. Rosário, 2024), additionally addressing formal conditions of the start-up process (e.g. bureaucratic requirements for registering self-employment/companies) would appear to make sense, as these are often seemingly rather opaque for founders and also have a demotivating effect.
- Classic topics in (economic) science teaching should be enriched with a view to the specific challenges of sustainable entrepreneurship or sustainable founding (cf. Ayandibu, 2024): in the business administration area e.g. through sustainability marketing and alternative financing concepts such as crowdfunding; at the economic level, discussions on the market economy framework (growth pressure vs. sufficiency strategies) and the internalization of external costs should be expanded.
- The promotion of interdisciplinary skills (e.g. collaboration and communication skills) in study programs also makes sense regarding sustainable entrepreneurship and should be expanded further. After all, collaboration and knowledge exchange are highly relevant for (sustainable) start-ups and objectives (ibid). It is repeatedly mentioned that it is crucial for the success of a sustainable start-up and anything but easy to find. It is repeatedly mentioned that it is crucial for the success of a sustainable start-up and anything but easy to find collaboration partners, who fit for both professional and interpersonal reasons.

As stated, entrepreneurship education at universities often relies on methods such as working on case studies or business modelling and business plan creation. Although we also practice this quite frequently at HSCO, we have deliberately chosen a rather “unusual” method by bringing students into contact with sustainable entrepreneurs against the background of scientific questions and methods. An approach that can fulfill the task of science-led yet practice-oriented education of students by higher education institutions. For HEIs to be able to fulfil their areas of responsibility and role model functions (e.g. in teaching, transfer and organizational development), it makes sense to combine sustainability and entrepreneurship respectively the training of competencies in these domains (Planck et al., 2024). As part of the final evaluation of the course, the students reported that they had expected more practice-oriented methods (e.g. business ideation and business modelling), but that the experience gained from the exchange with real sustainable entrepreneurs was very valuable. The following selected student responses from the written anonymous course evaluation are intended to illustrate this:

- *“It has encouraged not only to be superficially sustainable but to start up in a fundamentally and efficiently sustainable way.”*
- *“The interview was a new but very exciting approach for me - you always learn something new through interaction and exchange (...) Up to now I have considered sustainability more in my private life - now I am also looking at it in relation to a working context; very interesting.”*

The feedback from the students also shows that this type of educational program is not only suitable for strengthening the sustainable mindset of prospective entrepreneurs, but also for promoting sustainable and innovative thinking in the sense of intrapreneurship. An aspect that should not be neglected in the context of sustainable entrepreneurship education (Leal et al., 2024a).

(2) University External Support for Sustainable Entrepreneurs

The following recommendations for external partners can be derived from the results of the surveys:

- Identifying/creating opportunities for financial support for specifically sustainability-oriented founders (e.g. financial compensation options within the framework of economic development). These (temporary) structural support measures would help sustainable entrepreneurs to overcome the discrepancy between sustainable orientation and economic viability (especially in the early phase).
- Making advisory services more flexible in terms of time or hybrid offers (e.g. online explanatory videos and checklists). This would take into account the challenge, particularly for sustainable founders who work part-time, of having to coordinate their regular job and their start-up.

A few final thoughts from the lecturers’ point of view should close this article: As the seminar was part of the university-wide compulsory elective course program in the so-called Studium Generale, we had an

interdisciplinary mix of students. This was valuable both for us lecturers and for the students (e.g. social work, visual computing, business administration). Ultimately, it was also reflected in the variety of different branches in which the interviewees work and therefore also provided a good insight into sustainable entrepreneurship and its risks and potential across disciplinary boundaries. Although interdisciplinarity is certainly required for higher education learning opportunities, especially in the context of learning about sustainable development, it often appears to be difficult to implement in higher education practice (cf. Leal et al., 2024b). Or as one student stated in the course evaluation: *“I found the presentations [on the interviews of the fellow students] interesting, to see how other entrepreneurs deal with the topic of sustainability, what significance the topic has.”*

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