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**ASSESSING SUSTAINABILITY AND COMMUNICATION PRACTICE: FINDINGS
FROM STARTUPS ACROSS GERMANY**

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Abstract

Global challenges led business and society to shift towards sustainable development. Startups, as accelerators for the transition, require the right tools to measure and demonstrate their impact but those are underexplored. This paper aims to evaluate the status quo and explores two types of sustainability assessment and communication; *self-derived* and *third party* methods. For the empirical research, German startups were interviewed through an online survey. Results of the quantitative data show several first insights. Overall, weak transparency and comparability have emerged to be the main problem of the subject. More support from government or the private sector is desired.

Keywords: Sustainability, Entrepreneurship, Startup, Sustainable Entrepreneurship, Sustainability Assessment, Sustainability Communication

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1. Introduction

The global challenges of this and future generations are more present than ever and the idea of sustainable development in business and society has become mainstream (Kutzschenbach and Daub 2019). The growing awareness and concerns about environmental degradation, social inequalities and an overuse of natural resources from consumers, as well as businesses, has in turn called for a transition towards a more sustainable economy and society. Governments are demanding enterprises reduce their negative impact on the environment, and supporting those that accelerate sustainable development. This is enacted through policies that pressure the business sector to include a sustainability strategy in their operation. On the other hand, increasing competition and growing interest for green alternatives has forced a change in business strategy.

Startups should play a leading role in transforming society and economy towards sustainable development since they are accelerators for the transition (Trautwein 2021). This requires the right tools in order to measure and demonstrate their impact, but the tools are still underexplored. To date, the research papers on sustainability assessment and communication practice, have mainly focused on corporate firms with established businesses, whereas the startup sector has not been given much attention as of yet. Only recently, a literature review of assessment methods for startups has been published (Trautwein 2021), yet the practical approach from the side of entrepreneurs is unknown.

This paper aims to initiate more empirical investigation and serves to gain an insight into the methods that are available for, and used by startups to assess and communicate their sustainability. Findings have been derived directly from German startups with a sustainability approach within different sectors, the aim of which is to show the status quo and find out how satisfied startups are with the existing tools.

The remainder of this paper is structured as follows: Firstly, an introduction to the definitions of the term sustainability; the ambiguity and challenges that come with these are presented. Secondly, insights about the role of sustainability in business are discussed, including the competitive advantages that can be derived from integrating a sustainability strategy: How can sustainability work as a success factor and how can value creation be derived from it? Startups were found to have high “importance ... for sustainable economic growth and solving fundamental challenges such as climate change” (Tiemann, Fichter, and Geier 2018, 83) and so, the case of sustainable entrepreneurship is introduced.

The third chapter offers a short overview of sustainability assessment methods and the associated limitations, as well as communication practices and greenwashing. Online research shows how startups demonstrate sustainability which sets the foundations for the following empirical research, that will first be explained in the methodology.

The research questions are posed: *What is the status quo of sustainability assessment and communication for startups? How are the used methods rated by practice?* This study underlines the hypothesis that the methods are divided into two categories, consisting of *self-derived* assessment and communication without external help, or using *third party* methods (labels/certificates and awards). Data that was collected through an online survey will be analyzed and presented. Limitations of this research are pointed out before the paper concludes with a summary of learnings and a discussion on ways to improve the status quo of sustainability assessment and communication methods for startups.

2. Sustainability and Business

In the following chapters an introduction to sustainability in relation to business is given, the term sustainability, and limitations that come with the definitions of it, are also explained. Thereafter, several reasons for companies to implement a sustainability strategy from an

economic point of view will be shown. Finally a newly emerging sector within entrepreneurship, known as a driving force for sustainable development, will be introduced.

2.1 Definitions Sustainability

Even though the term sustainability is well established, there are imprecise and generic interpretations of the concept. Defining a universal concept of sustainability is difficult because there are many different angles to the term, bringing up numerous definitions. A description as broad as to ‘maintain the status quo and not disappear’ can serve the purpose (Sayer, Campbell, and Campbell 2004). Other definitions see sustainability simply as longevity; “The longer a system can be maintained, the more sustainable it is” (Lew et al. 2018, 18). Among all broad or narrow definitions, the most cited of them all originates in the term ‘sustainable development’, which is closely related to and often used interchangeably with sustainability. This term was first described in the 1987 Brundtland Commission Report as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs“ (Brundtland et al. 1987, 23).

In the business sector, research and practice agree that sustainability can only be achieved through the simultaneous addressing of three aspects of it. Those determinants are; Economic, environmental and social; also known informally as profit, planet and people; or the triple bottom line. In the concept of the triple bottom line, companies are asked to pursue responsible practices and give equivalent attention to the three pillars of sustainability in their decision-making (Kutzschenbach and Daub 2019). Nevertheless, equal attention is not an easy task in practice, because all parts are interrelated – the difficulty also transfers to sustainability assessment, discussed in Chapter 3.1.

Numerous authors have analyzed and drawn conclusions from the multitude of definitions, and two elemental points shall be highlighted. Firstly, as Pater and Christea (2016, 364) state: The “relatively vague formulation of the concept of ‘sustainability’, generally correlated with the concept of ‘sustainable development’, ... led to the overuse of the term, to vagueness and a strong ambiguity”. Secondly, the determinants of sustainability are undetailed and limited, leading to a “wide variety of interpretations, methods, indices and indicators for the measurement ... of sustainability, difficult to use and compare in practice” (Pater and Cristea 2016, 364). These limitations will be touched upon throughout the research, as they are a central reason for the dissatisfaction of startups with some of the sustainability assessment and communication methods. In order to identify participants for this study, the definition of sustainable startup was laid out as ‘addressing at least one of the United Nations’ sustainable development goals (SDGs) through innovation’.

The following chapters evolve around the relation between business and sustainability by first looking at findings about competitive advantage through sustainability strategy and later exploring sustainable entrepreneurship.

2.2. Reasons for Business to integrate a Sustainability Strategy: Value Creation, Competitive Advantage

The traditional understanding of value creation has shifted in the last several years, towards a more extensive view, one that also includes non-economic gains. Increased competition has further lead business to focus on green and sustainable value creation (Hermundsdottir and Aspelund 2021). Following this development, more and more research evolved around integrating sustainability within business strategy and the effects of it.

Studies illustrated positive effects on competitive advantage, discussed as the ‘business case of sustainability’. To summarize, research argues that a sustainability strategy is associated with

higher profitability, efficiency, and competitiveness (Cherrafi et al. 2018). Green products improve productivity, and more efficient processes lead to lower costs. Practices in environmental management also lead to innovations which means new market opportunities can be exploited (Chang 2011) (Chen, Lai, and Wen 2006) (Schaltegger and Wagner 2017). The next chapter will also discuss how these innovations coming from startups, help in the transformation towards sustainable development.

Firms engaging in environmental sustainability further benefit by having a better image, improved stakeholder relations, advantage in talent recruitment, (Herrera Madueño et al. 2016) and improved customer satisfaction (Saeidi et al. 2015). An increasing number of investors are also showing interest in sustainability when considering investment (Trautwein 2021). Further reasons for business to integrate sustainability in their strategy come from individuals' perception on it: To consumers, sustainability as a product evaluation criterion became important and sustainability information was shown to have a significant impact on purchase intentions. The level of concern by the individual, and the awareness nevertheless still play a key role (Galbreth and Ghosh 2013) (O'Rourke and Ringer 2016).

Employees on the other hand are increasingly mission driven and care for the company's positive contribution to sustainable development. This can particularly be seen within younger generations: A remarkable 70% of millennials prefer to pursue a career in companies with strong sustainability agendas. ('Gen Z Makes Sustainability Important for All Businesses Sustainable Investment Group' n.d.). Incorporating sustainability into strategy will according to Severo Guimarães, and Dorion (2017) likely be critical to preserve future businesses.

Even though the arguments of most scientific papers, articles and surveys agree on the positive influence of competitiveness, most research only considers the environmental pillar of sustainability. The inclusion of the social attribute is lacking, in order to gain a more

comprehensive picture of the overall sustainability. This limitation goes along with the unsatisfactory definitions of sustainability itself, and the feeble attempt from research and practice to include all three aspects at once.

2.3. Startups and sustainable Entrepreneurship: A driving Force for sustainable Development

As stated before, the concerns about environmental degradation, social inequalities and overuse of natural resources have called for a transition towards a more sustainable economy and society. World leaders, including Germany, who agreed on the 17 sustainable development goals (SDGs), are not only committed but also expected to contribute and deliver on the transition. In order to meet the goals, policies are implementing measures on business and society, evolving around the 2030 Agenda for Sustainable Development.

The private sector and especially entrepreneurship is said to be an accelerator for sustainable development: “It is widely accepted in research and practice that sustainable entrepreneurship and start-ups play a key role in [finding solutions to fight climate change and social inequalities]”(Trautwein 2021). ‘Sustainable entrepreneurship’ is a new field of research that is currently under development (Sarango-Lalangui, Santos, and Hormiga 2018), and is described as “the discovery, creation, evaluation, and exploitation of opportunities to create future goods and services that is consistent with sustainable development goals” (Pacheco, Dean, and Payne 2010, 58).

On top of the competitive advantage that can be reached through a sustainability strategy, as discussed before, governments (and society) also rely on those sustainable innovations coming from startups. From the perspective of sustainable startups, the presented reasons can be a motivation for demonstrating sustainability to stakeholders. An initial assessment could assist

in decision making and strategic planning. By further implementing a strategy, along with communicating the enterprise's sustainability, entrepreneurs could achieve their intended goals. So far there is no overview when it comes to sustainable entrepreneurship and their applied methods used in their sustainability strategy. The present research will attempt to fill that gap showing the status quo of sustainability assessment and communication practice in the case of startups.

3. Sustainability Assessment and Communication

Before we dive into the applied research, sustainability assessment methods are introduced, along with a short discussion of limitations on the topic. Communication practice of sustainability and a particular challenge, greenwashing, is reviewed.

3.1. Assessments Methods and associated Limitations

As diverse and vague as the interpretations and definitions of sustainability are, as wide is the variety of assessment methods that exist. This diversity is also reflected in the explosion of published works using the term 'sustainability assessment' in recent years (Bond, Morrison-Saunders, and Pope, n.d.). There is not yet universal consensus on the definition of sustainability assessment, and how it should be applied.

The Organisation for Economic Co-operation and Development (OECD) divided the main sustainability assessment tools into economic (cost/benefit analysis, modelling, regression, scenarios); environmental (life-cycle analysis, material flows, resource accounting, NAMEA, ecological footprint) and social (sustainable livelihoods, human and social capital measurement, participatory processes)(Stevens, n.d.). The details of the methodologies shall be spared.

Drawbacks of sustainability assessment start with the large effort connected to the methods: It requires “significant staff time and resources to the task. [It] could also take an extended time period to complete” (US National Research Council of the National Academies 2011, 55). For a comprehensive assessment, a set of tools should be applied – which would increase the expenditure even more. Another main difficulty is giving equal attention to all three pillars of sustainability and giving adequate attention to long term effects. Without taking long term impacts into consideration, intergenerational equity is weak. Moreover, the assignment of monetary values to environmental and social assets for comparison is difficult (Stevens, n.d.).

After all, the majority of approaches do not give special attention to the size and maturity of business, there is little to no literature about startups and sustainability assessment. A recent overview of approaches specifically for startups, was offered by Constanze Trautwein (2021) in a systematic literature review. Other existing papers only cover very particular types of industries or assessment methods, whereas in the present paper, empirical research seeks to shed light on the topic.

3.2. Communication Practice and Greenwashing

Integrating sustainability into business strategy cannot be implemented without effective communication that aims to share triple bottom line information with stakeholders. Thereby it is key to have a transparent and credible communication, for it to be successful. Digital environments are playing an essential role in communicating sustainability and “Increasingly more often, the websites of large companies present wide sections dedicated ... to communicate their commitment to corporate sustainability to stakeholders” (Siano et al. 2016, 3). Indeed, the corporate website is an important factor because it enables a very direct presentation of sustainability initiatives. Core elements in the information display are transparency,

accountability and interactive reporting. By disclosing their commitment for sustainable development to stakeholders, sustainability oriented organisations can increase reputational capital. At the same time it increases the risk of potential reputation loss, when there is a gap between promised actions and the concrete results. This risk is becoming larger through greenwashing practices (Siano et al. 2016).

Greenwashing practices arise through the worsening of environmental problems and a growing market for green products. Consumers will often pay a higher price when sustainability information is included, and avoid products when it is missing (Meise et al. 2014), because of this companies include green information even though they may not take actions towards sustainable development. The term is defined as “the intersection of two firm behaviors: poor environmental performance and positive communication about environmental performance” (Delmas and Burbano 2011, 65).

Greenwashing is therefore ‘identity-washing’ of corporate identity and occurs through manipulating or hiding central aspects of the enterprise’s sustainability (Siano et al. 2016). In order to prevent being exposed to greenwashing risk, it is important to “educate consumers and improve policies to ensure consumers understand the real labels“ (Urbański and ul Haque 2020, 1).

Now that the theoretical grounding on the topic has been explored, the remainder of this paper is focused on the particular case of startups and their assessment and communication methods in practice.

3.3 Startup Methods – derived from Online Research

Applied research through the websites of various German sustainability startups gave initial insight on how sustainability assessment and communication is being handled. While the

internal assessments cannot be recognized directly, a pattern of communication tools used by startups and shown on their website was found, including methods that integrate an assessment in the first place such as labels, certificates and awards. Labels are grouped very closely to certificates; labels are claims that may or may not be regulated, while a certification is a label where the product needs to meet certain standards set and regulated by an agency (Choi 2014), the two terms are further looked at as one category. Labels/certificates and awards are presented similarly across all categories and platforms (for example if they were offering their product additionally through a reseller) by displaying the logo of their achievement on their website's landing page or next to the product.

Similar to the practice of corporates as seen earlier, most startups created an extra landing page, for the display of sustainability details, story lines about production, and pictures. It suggests that this is a very popular method of communication because it is free. On the contrary applying and receiving third party certifications and/or awards is expected to be expensive in both time and money. These assumptions will be looked at in detail at a later stage of the research. To summarize, the online findings suggest that in practice, startups use two approaches for sustainability assessment and communication.

3.3.1. Hypothesis: Self-derived Assessment and Communication or Third Party

(Labels/Certificates, Awards)

The first of the two approaches explored in this paper, is *self-derived*. It describes first, the use of a businesses' own methods to show the contribution towards sustainable development. The possibilities range, as already mentioned, from mainly displaying information on the website, transparency about the origin of the product, or impact along the supply chain. Many startups also used SDGs in their communication.

As a first step before communicating, some sort of self-assessment method is expected to be used. Because startups conduct these themselves, self-derived methods are considered free except for time and effort expenses. Examples of free self-assessment tools would be The impact compass, B Corp Assessment or Manual for the Sustainability Assessment of Start-ups. The second option to assess and communicate sustainability efforts, is working with external service providers, here defined as *third party methods*. Third party methods like labels/certificates and awards, assess sustainability based on defined standards of the different provider and if the company fulfills those standards, a label is achieved which can be used for communication. Enterprises need to pay for this method but receive professional assessment and knowledge as well as credibility through the external service (the risk of greenwashing is nevertheless in many cases to some extent still there). Labels/certificates include Fair Trade or Green Dot and examples for awards on the German sustainability market are StartGreen Award, Deutscher Nachhaltigkeitspreis, or Green Product Award.

In the following chapter, the emerging research question will be introduced, underlying the hypothesis that the two presented methods are used by startups for an assessment and communication of sustainability.

4. Research Question: What is the Status Quo of Sustainability Assessment and Communication for Startups? How are the used Methods rated by Practice?

In the remainder of the paper, the identified two approaches startups use to demonstrate sustainability, are investigated: *Self-directed* and *third party* methods (labels/certificates, awards). The methodology for the empirical study is explained before results are analyzed. Motives to use one type or the other, as well as reasons to not do so, are inspected. The satisfaction with the different approaches is analyzed and improvements that startups wish for are presented. Finally, learnings as well as limitations are discussed.

4.1. Methodology

In this empirical research it was of interest to get a first overview within the sustainable entrepreneurship sector, and investigate the satisfaction with the available methods that are used to assess and communicate sustainability. The definition of sustainable startups belonging to the sector was interpreted broadly in order to collect enough data: Startups are regarded as sustainable if they contribute to at least one SDG. For the sample population startups according to this criteria were contacted. Due to the fact that sustainability is (to some extent) already part of their business strategy, this promised an easier access to information. These startups are expected to use or search for methods of sustainability assessment and communication and will as a result have feedback on it. Analyzing the status quo on a broad scale also requires not differentiating whether the startup evaluates and demonstrates sustainability on a *product*, or *enterprise* level.

There are differences depending on nationality in legal and governance frameworks when it comes to regulations of sustainability. Because of that also different assessment methods are used, depending on the country the business is operating. At the same time, the variety of labels/certificates/awards is on international scale large and distinct and makes comparison difficult. For that reason, this research was limited to one market - only startups operating in Germany were surveyed, aiming to create a common ground where comparisons could be drawn upon.

In order to collect information from practice, an online questionnaire was created and sent out to 510 German startups in the sustainability sector (the sample population) – out of which 79 participants answered – 94.9% of the respondents confirmed that they consider themselves as sustainability startups (Table Q4), meaning that they address at least one of the SDGs through innovation. 100% of respondents either already assess and communicate their sustainability

(Table Q6), or want to do so in the future – meaning that all of the participants could give insights on the different approaches.

The survey in order to gather quantitative data was structured as following. First, general questions were asked about the startup. Then, participants needed to evaluate the different methods on several attributes. All questions and answers can be seen in detail in Appendix: “Survey Questions and Answers”.

The survey was designed to take no longer than 10 minutes to answer, individuals were participating anonymously and on a voluntary basis. The data analysis was run with support of SPSS software, all outputs can be seen in Appendices.

4.2. Research Questions and Findings

In order to understand the current status quo, the research questions were divided into first: Finding out *why do startups (want to) assess and communicate their sustainability*. Secondly, to identify *what methods (out of the predetermined ways) are used the most*, and the level of *satisfaction* with them. If they were not using a method, the survey presented more follow up questions to find out about *main reasons why the startup was not using the method*. Finally, an open question was presented to all participants: *In one sentence, what improvements on the assessment and communication methods of sustainability would you wish for?*

4.2.1. Why do Startups assess and communicate their Sustainability?

All 79 participants answered the question *why do you (want to) assess and communicate the sustainability of your startup/product?* For each out of the 8 given motives, participants could indicate their opinion on a scale from one to five as follows: “1 - Strongly Disagree”, “2 – Disagree”, “3 – Neutral”, “4 – Agree”, “5 – Strongly Agree”.

Analysis of the frequency tables for each of the statements shows that no strong disagreements could be identified. The strongest agreement was recognized for the answer “To achieve purpose/mission of the company”. Out of the 79 answers, a remarkable 97.5% of participants either agree or strongly agree with this statement, 88.6% of respondents indicated to “strongly agree” (Table Q8A5).

The motivation that was agreed on second most, is “To build credibility and enhance brand awareness”, here 93.7% of participants agree or strongly agree (Table Q8A7). “To satisfy consumer interest and gain higher sales” takes third place with 67 answers (84.8%) of “Agree” or “Strongly Agree” (Table Q8A4). The unambiguous findings can be visually seen in the Images 7-9 in Appendix.

Because the presented three reasons have out of all statements remarkably high consent, the other results are not going to be touched upon in more detail and can be considered as less decisive. Those include “To have greater investment opportunities”, “To mitigate risk/ meet regulatory requirements”, “To attract and retain employees” and “To identify areas of potential cost savings and improved productivity” as well as “For innovation: To reveal areas where you could develop new services and products”.

Similar reasons for integrating a sustainability strategy were already discussed in the chapter of competitive advantage and the ‘business case’ of sustainability. Different than expected from literature (the business case), startups participating in the survey shared a more intrinsic motivation of assessing and communicating sustainability. The ‘economic reason’ only ranked third when comparing the frequencies of agreement upon the given statements. It is rather important for startups to gain brand awareness and be credible. On top of this, most participants stated they invest in their sustainability strategy in order to achieve the purpose or mission of the enterprise.

Considering that nearly all participants indicated to be a sustainable startup, it could be described as a sustainability strategy loop, where a business based on sustainable development includes the assessment and communication as key parts of the operations in order to fulfil their ambitions.

4.2.2. *What Methods are used in order to achieve that?*

Out of the identified methods between *self-directed* and *third party* methods, the one that was used most, is communication through a self-directed approach. 89.9% of the 79 respondents communicate the sustainability of their enterprise or product by themselves (Table Q10). This confirms the first presumption that the display of their own information is the most ‘popular’ way, as found through literature (covering corporations) and online research. Labels and certificates are used by 10 percent points more than awards (53.2%) (Table Q11 and Table Q12). More than half of the participating startups *don't* use self-assessment tools, even though they are free (Table Q9). This could also be due to the fact that assessment is much more complex in general and needs more resources than a simple communication does – results derived from the survey regarding this question will be shown in Chapter 4.2.4.

Moreover it was of interest to find out if there are differences in using a method depending on the size of the startup. Therefore two groups, small (1-10 employees) and bigger startups (>10 employees) were created and a Chi Square test performed. No differences could be identified, the distributions were identical and the test results not significant (for each method a Pearson’s Chi Square value higher than the level of significance (Alpha=0.05) was derived). Therefore the used method of sustainability assessment and communication is not dependent on the size of the startup (Appendix: Chi Square Tables for Research Question 4.3.2).

4.2.3. Satisfaction with the used Methods

In order to find out how content startups are with the methods used, two statements were presented and again, participants could choose to strongly disagree up to strongly agree and anything in between, on a scale from one to five. The first statement was designed to understand how each method “helps achieve the intended outcome” (outcomes as selected in the prior question), the second statement was to test whether the method “helps attain the authentic sustainability assessment and communication the startup aimed for” (98.7% of responses stated in the beginning that an authentic sustainability assessment and communication is highly important to them (7,8,9 and 10 out of 10) (Table Q5).

The results of the survey show that satisfaction was overall strongest for *communication through own method* and for *labels/certificates*. Interestingly own communication methods seem to help startups achieve their intended outcomes more compared to other methods: Out of those participants that use *own communication* (N=71), 73% agree that the method has helped achieve their intended outcomes (as recalled: To have greater investment opportunities, attract employees/customers, to save costs etc.) (Table Q10.Yes.A2). The mean of the answers resulted in 3.86 – close to “4 – Agree” and is therefore a strong indication for the common approval with the statement. Startups’ responses on *labels/certificates* demonstrate that the method helped to achieve the intended outcomes with a mean of 3.72 (Table 10).

As for the next question – if the method “helps attain the authentic sustainability assessment and communication the startup aimed for” – an even stronger sense of agreement was seen for the two favorite methods. *Labels/certificates* have this time a higher mean value (4.08) compared to communication through own methods, where a mean agreement of 4.06 was derived (Table 9). A remarkable 81.7% (N=71) agreed to the statement “By using self-directed methods I attained the authentic sustainability communication of my startup/product that I aimed for” (Table Q10.Yes.A1).

Even more impressive is the agreement towards labels/certificates: 88% of startups using this method (N=50), agree that they attained the authentic sustainability communication that they had aimed for (Table Q11.Yes.A1). Although the consent on this particular hypothesis is high, we will find out at a later point that at the same time, numerous startups criticize the third party methods and wish for improvements on them.

In another way to find out about the satisfaction with the used methods in practice, participants were asked to rate each method on the resources spent. This time the answer possibilities on the scale laid between “1 – Very Low” and “5 – Very High”.

Neither the frequency tables, nor the mean values showed discrepancies; all the mean values are very similar and close to 3 which is interpreted as “Neutral”. Therefore no strong opinions about time, nor money expenses connected to the different methods were identified (Table 11 and 12).

4.2.4. If a Method is not used: What are the main Reasons?

Why are startups not using the self-derived or third party methods? For this sub question, statements of possible reasons were given and it was of interest to find higher or lower agreements on them. As for the self-derived sustainability assessment method, it is expected that the reasons lie between *unawareness* and *too much time demand*, since there are no costs connected to the free tools. Table 13 shows that “I don't use self-assessment methods because I am not aware of them” has the highest mean, with a value of 3.51. The other answer possibilities showed no tendency towards disagreement nor agreement as the mean values are close to 3.

If a startup wants to demonstrate their sustainability, their own communication is expected to be the first method used (because it is completely free). The sample size of startups not using

the approach is too small (N=8) and thus we cannot interpret the answers meaningfully. When a startup is not using third party methods, the reasons were divided into *unawareness*, *too resource expensive* and *as startup not meeting the needed requirements*. Small businesses were earlier assumed to not have enough resources (time and money) to apply or receive third party methods, which proved to be somewhat true: When exploring the reasons behind *why a participant didn't receive or apply for labels/certificates*, two findings could be identified. Firstly, a strong disagreement (mean of 1.9) can be seen for the answer to the possibility of *unawareness*. Secondly, with a mean value of 3.97, the answer “because the process is very costly” is proved to be a strong reason.

At this point it needs to be mentioned that the spectrum of answer possibilities for this method was increased by a statement, after one participant commented that this would be a main reason: “I think labels/certificates are unreliable and lacking transparency - only functioning as greenwashing”. The 21 gained answers nevertheless only showed slight agreement (mean 3.33) towards the answer (Table 15).

The data on awards demonstrates that, from the perspective of startups, the process in order to receive awards is very time consuming. A mean value 3.46 connected to this statement suggests this. Nevertheless it should be interpreted with caution, keeping in mind that the mean is not as close to 4 and gives only a tendency. On the other hand startups disagree (mean of 2.27) that “not meeting the requirements in order to receive or apply for awards” was a reason for them to refuse the method (Table 16).

4.2.5. Improvements on the Sustainability Assessment and Communication Methods

Startups wish for

At the end of the survey, an open question was posed: *In one sentence, what improvements on the assessment and communication methods of sustainability would you wish for?* The 48

responses received on it show various interesting insights. A wish for more support and critique on the status quo was expressed, improvements suggested.

Firstly, startups repeatedly wished for more support from the government – for example support to achieve sustainability labels, or grants for certification. If standards on measuring sustainability were implemented by the government, the current state could be improved. Moreover several answers demonstrated a desire for external (private) help in the execution of methods. Ideas include tools, guidelines, a how-to-guide, making the preparation easier, or an overview of the possibilities. More awareness of available methods is needed: “It is definitely a lack of information and good content. I can get access to 10000 blogs, Videos etc. on how to design a product, how to attract investors, but there’s only a few practical guidelines for assessment and communication methods.“ Another startup mentioned „neutral consulting of my startup to tell what's best for me and how and where to apply, maybe even do the processes for me.“

Critique and feedback about third party methods evolve mainly around the lack of transparency and comparability. „There are too many labels out there and most customers do not know what they stand for, which to trust etc. There are big differences between labels especially in regards to greenwashing.“ Another participant also mentioned that “the multitude of not strictly controlled „green“/green-washing labels is destructive”. Therefore the lack of comparability is seen to be confusing the customers, more awareness is needed.

Connected to the transparency and comparability issue, various answers evolved around the need for education. More transparent information would lead to more trust in it (on the consumers’ side) whether it is concerning labels or the companies’ own sustainability communication.

Sustainability assessment and communication through third party methods should be more simple, practicable, intuitive and less costly. There should also be more “alignment, more standardized and accessible options”.

The assessments should (for some participants) have more individualized procedures for different stages of the startup. More individualized processes were also desired for the “specific sustainability” of products, ”including social values”. This touches upon the limitation of many of the methods that only evaluate one part of the triple bottom line.

As explained before, it should be the ultimate goal to get a comprehensive view on business, by including all aspects of sustainability, also both short and long-term. While the *assessment* is for some participants not individual enough, others wish for a *certification* that is more universal and “can be used for different industries”, such as the B Corp certification.

There is a great need for independently certified, unified and transparent assessment and trustworthy labels that don’t fall in the greenwashing dilemma. The criticism falls on the system: Companies pay for a method, to get the ‘proof’ but a business model based on monetization might not fully be trusted to do a thorough and fair evaluation. One of the startups explains that “sustainability seems to be connected to money. Small StartUps can’t afford expensive but „highly reliable“ certifications. Quotation marks, because how reliable are certifications”.

4.3. Limitations

There are several limitations to the research that need to be pointed out. With the participants only selected from sustainable entrepreneurship sector (as defined for this research), the survey runs some risk of selection bias. The selection further becomes problematic through selection effect of variables interviewed on, because answer possibilities that participants were asked to evaluate upon, were limited and given.

Various difficulties of definitions throughout the survey further lead to limitations, such as the definition of sustainable startup (also intensifying the selection bias). It was only asked whether participants address at least one SDG, which might be a weak determination in the sense that startups are not required to focus on all three aspects of the triple bottom line (sustainability in its core sense) to fall under the group of sustainable startup for this research paper.

Moreover the ambivalence and ambiguity posed in several questions leads to difficulties interpreting the results because the answers of participants could be meant for either of the options. Examples of this include question Q11 and Q12 where “received or applied for” is a vague definition, or the simultaneous polling on product and/or startup level. A resulting problem is that, in case the startup only applied for the third party method so far, they cannot evaluate yet how satisfied they are with the outcome.

Any question including both *assessment* and *communication* poses the same dilemma (the participant might focus their answer on either strategic implementation). Answers are because of this also not perfectly comparable between third-party and self-derived approaches. The distinguishment (through separate questions) between *assessing* and *communicating* was made only for the self-derived approach.

In addition a response bias is present in this research, as in most (if not all) surveys. On top of the given answer options, respondents had no room to tell another opinion (other reasons), nor could they indicate that they didn't know the answer (except in comments at the end of survey). Another limitation connects to the fact that for some business sectors third party methods don't exist. For example labels are predominantly used for physical products and consumer goods, nevertheless startups from diverse industries answered the survey. The given answer possibilities might not be meaningful to these cases.

In this research, the assumption was made that startups mainly use the *self-derived* and *third party methods*. Because of this no insights could be gained about other types of sustainability

strategy. For example were methods of sustainability reporting excluded, also called ESG (Environmental, Social, Governance) reporting, such as the noteworthy Global Reporting Initiative.

Moreover the results derived on each questioned approach needs to be handled with caution: Within types of sustainability assessment or communication, there was no distinction made but participants using several labels or certificates for example, will also evaluate each one differently.

This research paper should be only considered as a preliminary approach to the topic. With the subject getting increasingly relevant, further studies should continue to cover approaches of sustainability assessment and communication used in practice.

5. Conclusion and Discussion

The aim of this paper was to give a first overview of the available methods of sustainability assessment and communication in the case of startups and as well to give insights on how well the status quo is perceived from practice. In an empirical research, sustainable startups were interviewed. Several first insights could be gained but overall, weak transparency and comparability have emerged to be the main problem of the subject.

The results of this research indicate that sustainability is not only a marketing trend and upcoming entrepreneurs are taking it as seriously as their consumers, which underlines the importance of good assessment tools and credible communication. The survey revealed that participating startups have a high self-motivation. They want to truly analyze their positive impact, know how sustainable they operate and communicate this credibly to their stakeholders. The 'business case' is less important to them.

Out of the investigated methods, the one that was used by almost all startups, is *own communication*. Self-assessment tools are not used, mostly because startups are not aware of

them (even though they are free) which shows that there is a need for more education. Labels/certificates are on one side associated with high satisfaction, helping to achieve intended goals and attaining authentic assessment and communication of sustainability. But at the same time they were criticized to be very costly and afflicted with weak transparency and comparability.

This weak transparency and comparability has been repeatedly identified as a core problem within the subject sustainability. The ambiguity and vagueness of the term also created its difficulties in this research: First, it was challenging to define which are 'sustainable startups' and the criteria was chosen broad for the matter of simplification. Due to this, results have their limitations of being hard to compare and interpret on.

Secondly, the multitude of available assessment and communication methods created challenges to survey on them. This also originates in the dilemma of unclear definitions.

For startups who are serious about creating positive impact, the main pain point (lack of transparency and comparability) leads to the following problem: The efforts they put into a real sustainability strategy are hindered by a poor market of assessment and communication methods. On the other hand it is important for the economy to identify which are the businesses with serious intentions or which are just greenwashing their products. Those that accelerate sustainable development should be rewarded for the efforts put in achieving sustainable change. It is important to educate consumers and improve policies; the right tools and incentives need to be in place.

In order to improve the status quo, uniform standards are necessary and need to be implemented by an entity that is capable of high authenticity. The government would be the ideal stakeholder to act on this: Strong labels and standards, set and regulated by the government would increase trust and avoid greenwashing, if they are unified and mandatory. This would allow consumers

to recognize credibility of the results that companies achieve, and draw valuable comparisons between different products and enterprises.

Climate change and social inequalities are some of the most pressing issues of this generation. A transformation of economy is urgent, but in order to achieve this, the right methods for sustainability assessment and communication are needed. Currently the market has its flaws - mainly the lack of transparency and comparability. This is why standards and labels implemented by the government can be a solution; efficient in guiding the economy towards sustainable change. The right incentives (that are important within the free market economy) are needed to create a fair competition where startups' efforts for implementing true sustainability strategies are rewarded. On top of that, governments could give out grants to startups who need financial support in their sustainability strategy, since having low resources will remain an obstacle to them.

Future research should explore the effects these standards and labels set by the government would have. The assumption should be tested whether consumers actually have a higher perception of credibility in the described scenario.

Until then, a business opportunity lies out there. Helping startups with processes or finding the right (third party) methods could be done through products and services like consulting, or forms of SaaS for example. In order to develop these, additional research tailored specifically to the needs of startups and simultaneously covering the requirements from policies and regulations, is needed.

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I. Graphs

I.I. Survey Questions and Answers

Startups: Assessment and communication of sustainability through self-directed or third party methods (labels/ certificates/ awards)

Dear participant,

Thank you for taking the time to answer the following questions. The survey will take approximately 10 minutes and the data will exclusively be held for research purposes.

Your identity will be kept confidential.

(1/3) First, a few general questions

Q1 When was your startup founded?

- 2011
- 2012
- 2013
- 2014
- 2015
- 2016
- 2017
- 2018
- 2019
- 2020
- 2021

Q2 In which sector are you active?

- Consumer Goods
- Energy
- Food
- Mobility
- Packaging
- Waste
- Other (Own description)

Q3 How many employees are currently working at your startup?

- 1-10
- 10-50
- >50

Q4 Do you consider yourself to be a sustainability startup?

- Yes, I address at least one of the United Nation's sustainable development goals (SDGs) through innovation
- No

Q5 How important is authentic sustainability assessment and communication of your startup/ product to you?

Scale from *1 – Not important at all* to *10 – Highly important*

(2/3) Assessment and communication of sustainability through self-directed or third party methods

1. *Self-assessment and self-directed/ own methods of communication;*
2. *Third party: Labels, certificates and awards*

Q6 Please chose what best describes your current status

- I already assess and communicate the sustainability of my startup/product
- I want to assess and communicate the sustainability of my startup/product at a later stage
- I don't want to assess and communicate the sustainability of my startup/product
(Finish survey)

Option, if answered “*I want to...at a later stage*”

(2/3) Q7 Why are you not assessing and communicating the sustainability of your startup/product yet?

- Because it is too early and I don't have adequate data to do it yet
- Because it is too resource expensive
- Because at this stage other topics have a higher priority
- Other

(2/3) Why do you (want to) assess and communicate the sustainability of your startup/product?

(each statement can be answered on the scale 1 to 5)

1 - Strongly disagree

2 - Disagree

3 - Neutral

4 - Agree

5 - Strongly agree

- Q8A1** To have greater investment opportunities
- Q8A2** To mitigate risk/meet regulatory requirements
- Q8A3** To attract and retain employees
- Q8A4** To satisfy consumer interest and gain higher sales
- Q8A5** To achieve the purpose/mission of the company
- Q8A6** To identify areas of potential cost savings and improved productivity
- Q8A7** To build credibility and enhance brand awareness
- Q8A8** For innovation: To reveal areas where you could develop new services and products

(3/3) What methods are you (not) using to assess and communicate the sustainability of your startup/product?

You will be asked about assessment and communication of sustainability with self-directed or third party methods

- 1. Self-assessment and self-directed/ own methods of communication;*
- 2. Third party: Labels, certificates and awards*

(3.1/3.4) Using free tools for self-assessment of sustainability

Examples: Through free self-assessment tools like "The impact compass", "B Corp Assessment", "Manual for the sustainability assessment of start-ups", etc.

Q9 I am using free tools to self-assess the sustainability of my startup/product

- Yes
- No

(3.2/3.4) Using own methods to communicate the sustainability of your startup/product

Examples: Through transparency on website; by using SDGs to demonstrate impact, etc.

Q10 I am communicating the sustainability of my startup/product through own methods

- Yes
- No

(3.3/3.4) Using labels/certificates to assess and communicate the sustainability of your startup/product

Examples: Fair Trade, FSC, Green Dot, Certified B Corp, etc.

Remark: OWN labels only, NOT of suppliers

Q11 I received or applied for labels/certificates (OWN labels, not of suppliers) to assess and communicate the sustainability of my startup/product

- Yes
- No

(3.4/3.4) Using awards to assess and communicate the sustainability of your startup/product

Examples: StartGreen Award, 'Deutscher Nachhaltigkeitspreis', Green Product Award, SI Sustainability Awards, etc.

Q12 I received or applied for awards to assess and communicate the sustainability of my startup/product

- Yes
- No

If Q9 Yes then: Using free tools for self-assessment of sustainability
(each statement can be answered on the scale 1 to 5)

1 - Strongly disagree

2 - Disagree

3 - Neutral

4 - Agree

5 - Strongly agree

- Q9.Yes.A1** By using free tools I attained the authentic sustainability assessment of my startup/product that I aimed for

- **Q9.Yes.A2** The self-assessment methods helped me achieve my intended outcomes (Recall 2/3: to have greater investment opportunities, attract employees/customers, to safe costs etc.)
- **Q9.Yes.A3** The time demand for self-assessing my sustainability was ___ for the intended outcomes I wanted (*scale goes from 1 – Very Low to 5 – Very High*)

If Q9 No then: Why not? Using free tools for self-assessment of sustainability
(each statement can be answered on the scale 1 to 5)

1 - Strongly disagree

2 - Disagree

3 - Neutral

4 - Agree

5 - Strongly agree

- **Q9.No.A1** I don't use self-assessment methods because I am not aware of them
- **Q9.No.A2** I don't use self-assessment methods because I don't know how to use them or which one is suitable for my specific startup/ product
- **Q9.No.A3** I don't use self-assessment methods because the process is very time consuming
- **Q9.No.A4** Other reasons

If Q10 Yes then: Using own methods for communicating sustainability
(each statement can be answered on the scale 1 to 5)

1 - Strongly disagree

2 - Disagree

3 - Neutral

4 - Agree

5 - Strongly agree

- **Q10.Yes.A1** By using self-directed methods I attained the authentic sustainability communication of my startup/product that I aimed for
- **Q10.Yes.A2** Communicating sustainability through my own methods helped me achieve my intended outcomes (Recall 2/3: to have greater investment opportunities, attract employees/customers, to safe costs etc.)
- **Q10.Yes.A3** The resources spent were ___ for the intended outcomes I wanted (*scale goes from 1 – Very Low to 5 – Very High*)

If Q10 No then: Why not? Using own methods to communicate sustainability
(each statement can be answered on the scale 1 to 5)

1 - Strongly disagree

2 - Disagree

3 - Neutral

4 - Agree

5 - Strongly agree

- **Q10.No.A1** I don't communicate sustainability through my own methods because it is too early and I don't have adequate data to do it yet
- **Q10.No.A2** I don't communicate sustainability through my own methods because it is too resource expensive
- **Q10.No.A3** I don't communicate sustainability through my own methods because at this stage other topics have a higher priority
- **Q10.No.A4** Other reasons

If Q11 Yes then: Using labels/certificates to assess and communicate sustainability
(each statement can be answered on the scale 1 to 5)

- 1 - Strongly disagree
- 2 - Disagree
- 3 - Neutral
- 4 - Agree
- 5 - Strongly agree

- **Q11.Yes.A1** Through labels/certificates I attained the authentic assessment and communication of the sustainability of my startup/product that I aimed for
- **Q11.Yes.A2** The labels/ certificates helped me achieve my intended outcomes (Recall 2/3: to have greater investment opportunities, attract employees/customers, to safe costs etc.)
- **Q11.Yes.A3** The time demand connected to the labels/ certificates was ___ for the intended outcomes I wanted (scale goes from 1 – Very Low to 5 – Very High)
- **Q11.Yes.A4** The costs connected to the labels/ certificates were ___ for the intended outcomes I wanted (scale goes from 1 – Very Low to 5 – Very High)

If Q11 No then: Why not? Using labels/certificates to assess and communicate sustainability
(each statement can be answered on the scale 1 to 5)

- 1 - Strongly disagree
- 2 - Disagree
- 3 - Neutral
- 4 - Agree
- 5 - Strongly agree

- **Q11.No.A1** I don't use labels/certificates because I am not aware of them
- **Q11.No.A2** I don't use labels/certificates because I don't know which one is suitable for my specific startup/ product
- **Q11.No.A3** I don't use labels/certificates because the process is very time consuming
- **Q11.No.A4** I don't use labels/certificates because the process in order to receive them is very costly
- **Q11.No.A5** As a startup I was not meeting the requirements in order to apply for or receive labels/certificates
- **Q11.No.A6** I think labels/certificates are unreliable and lacking transparency - only functioning as greenwashing.

- **Q11.No.A7** Other reasons

If Q12 Yes then: Using awards to assess and communicate sustainability
(each statement can be answered on the scale 1 to 5)

- 1 - Strongly disagree
- 2 - Disagree
- 3 - Neutral
- 4 - Agree
- 5 - Strongly agree

- **Q12.Yes.A1** Through awards I attained the authentic assessment and communication of the sustainability of my startup/product that I aimed for
- **Q12.Yes.A2** The award helped me achieve my intended outcomes (Recall 2/3: to have greater investment opportunities, attract employees/customers, to save costs etc.)
- **Q12.Yes.A3** The time demand connected to the award was ___ for the intended outcomes I wanted (scale goes from 1 – Very Low to 5 – Very High)
- **Q12.Yes.A4** The costs connected to the award were ___ for the intended outcomes I wanted (scale goes from 1 – Very Low to 5 – Very High)

If Q12 No then: Why not? Using awards to assess and communicate sustainability
(each statement can be answered on the scale 1 to 5)

- 1 - Strongly disagree
- 2 - Disagree
- 3 - Neutral
- 4 - Agree
- 5 - Strongly agree

- **Q12.No.A1** I don't use awards because I am not aware of them
- **Q12.No.A2** I don't use awards because I don't know which one is appropriate for my specific startup/ product
- **Q12.No.A3** I don't use awards because the process in order to receive them is very time consuming
- **Q12.No.A4** I don't use awards because the process in order to receive them is very costly
- **Q12.No.A5** As a startup I was not meeting the requirements in order to apply for or receive awards
- **Q12.No.A6** Other reasons

Final Question

Q13 In one sentence, what improvements on the sustainability assessment would you wish for?

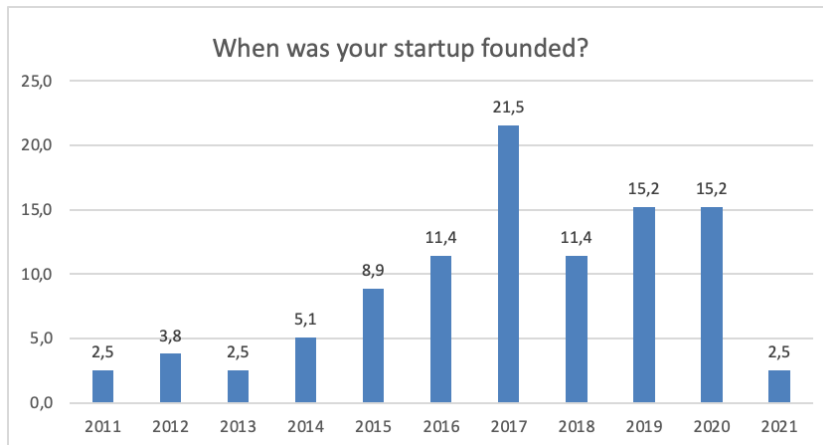
- *Free space for comments*

Q14 Free space for comments/feedback

- *Free space for comments*

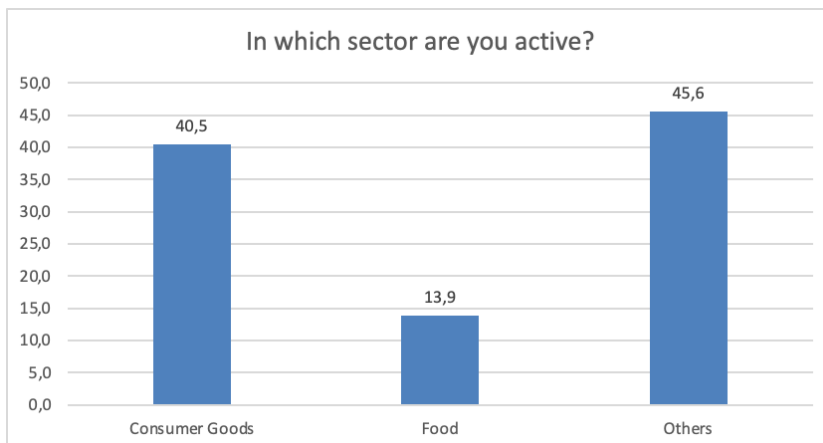
I.II. Survey Diagrams

Image 1: Q1 When was your startup founded?



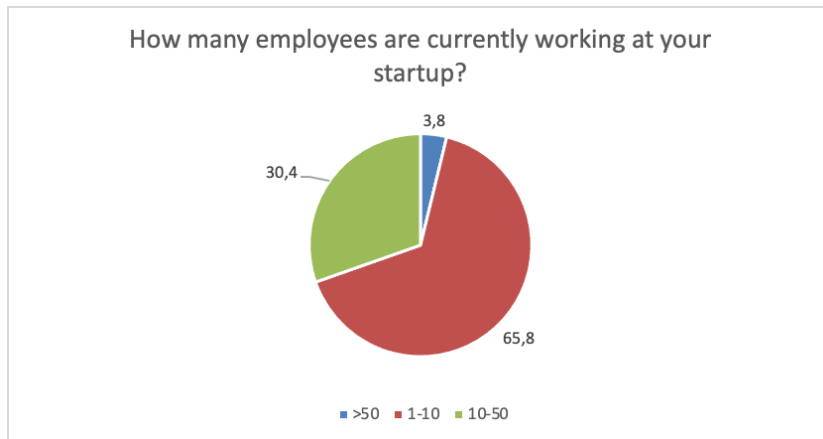
Note: Vertical scale in percentage points. N=79.

Image 2: Q2 In which sector are you active?



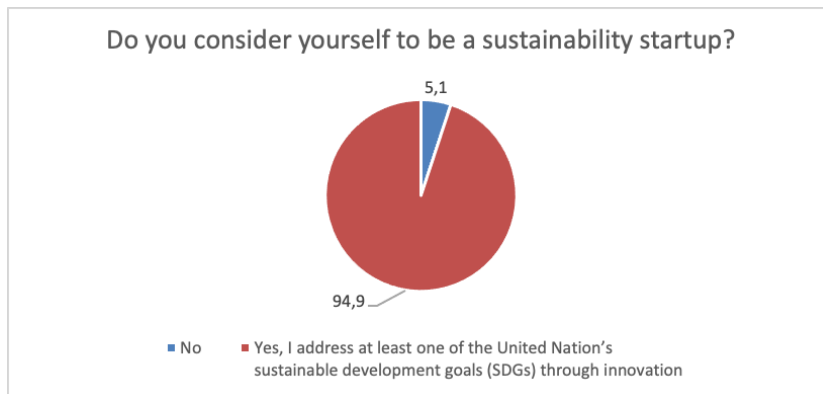
Note: Vertical scale in percentage points. N=79.

Image 3: Q3 How many employees are currently working at your startup?



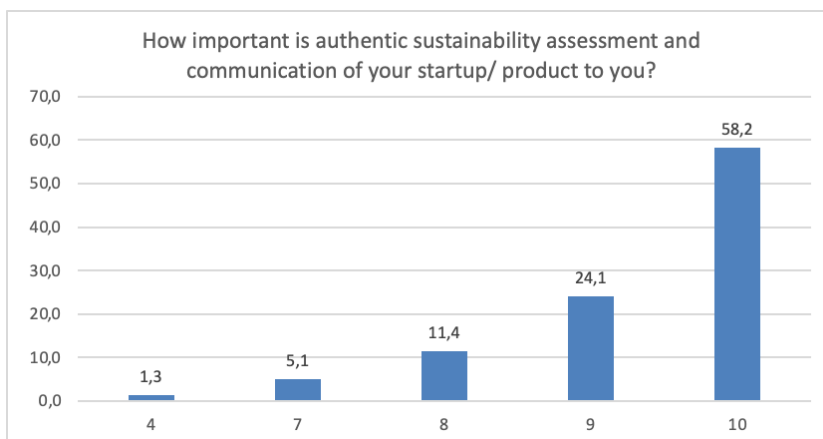
Note: Percentage points. N=79.

Image 4: Q4 Do you consider yourself to be a sustainability startup?



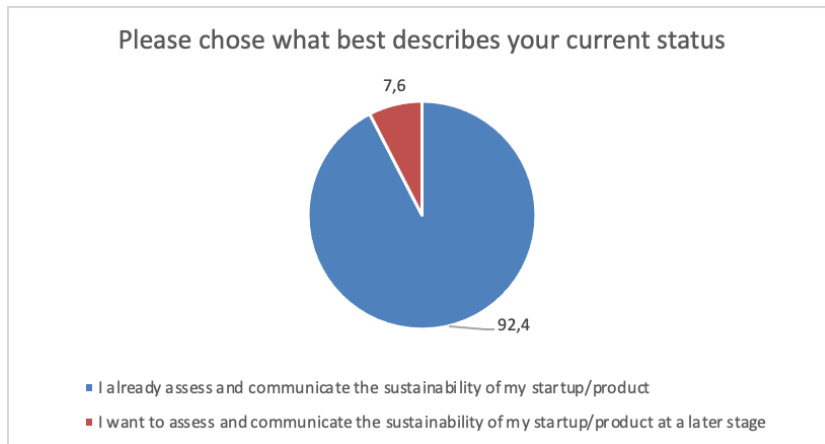
Note: Percentage points. N=79.

Image 5: Q5 How important is authentic sustainability assessment and communication of your startup/product to you?



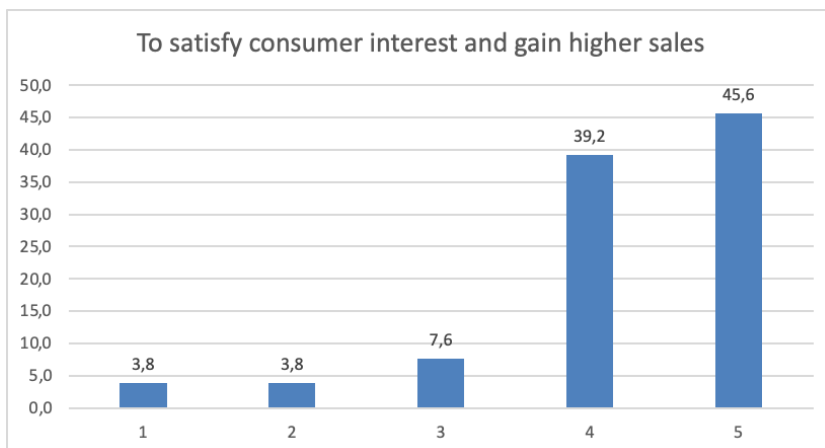
Note: Vertical scale in percentage points. N=79. Horizontal scale from 1=Not important at all to 10=Highly important.

Image 6: Q6 Please chose what best describes your current status



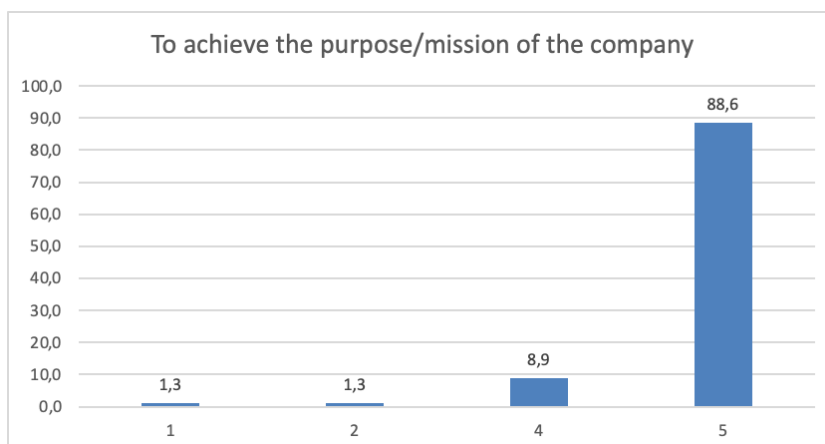
Note: Percentage points. N=79.

Image 7: Q8A4 To satisfy consumer interest and gain higher sales



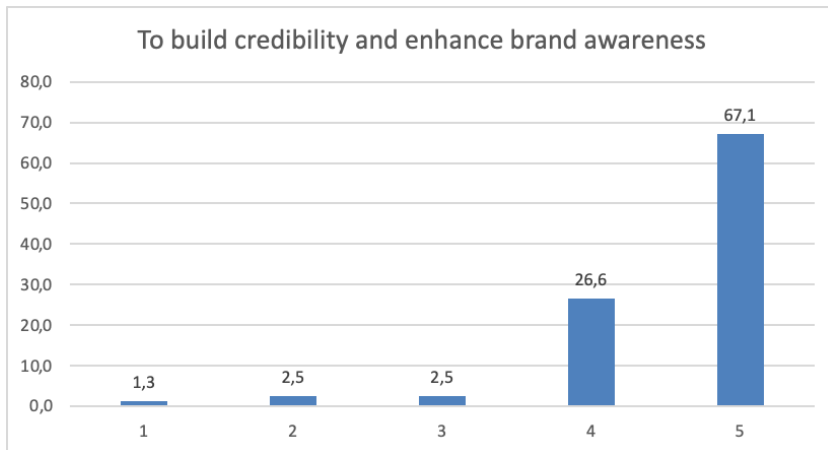
Note: Vertical scale in percentage points. N=79. Horizontal scale from 1=Strongly Disagree to 5=Strongly Agree.

Image 8: Q8A5 To achieve the purpose/mission of the company



Note: Vertical scale in percentage points. N=79. Horizontal scale from 1=Strongly Disagree to 5=Strongly Agree.

Image 9: Q8A7 To build credibility and enhance brand awareness



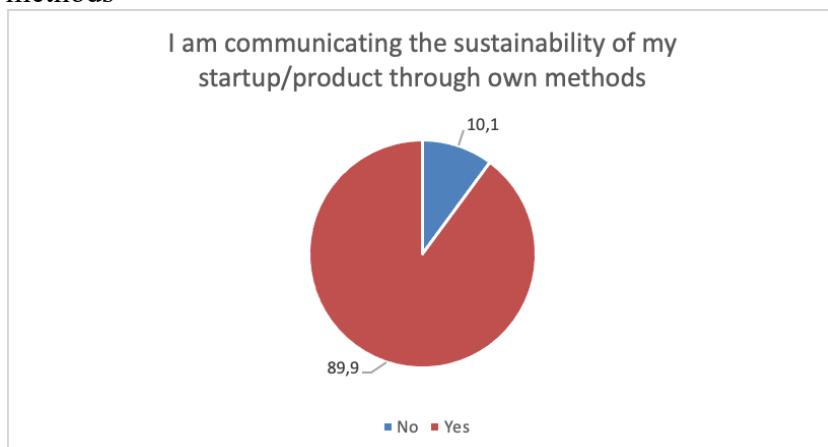
Note: Vertical scale in percentage points. N=79. Horizontal scale from 1=Strongly Disagree to 5=Strongly Agree.

Image 10: Q9 I am using free tools to self-assess the sustainability of my startup/product



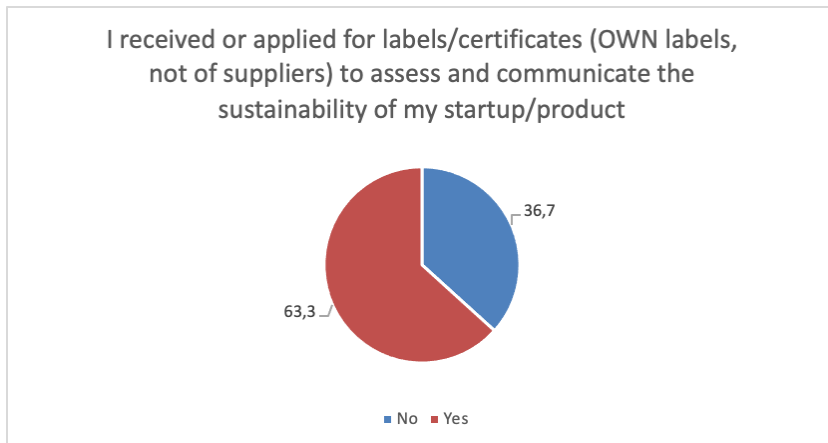
Note: Percentage points. N=79.

Image 11: Q10 I am communicating the sustainability of my startup/product through own methods



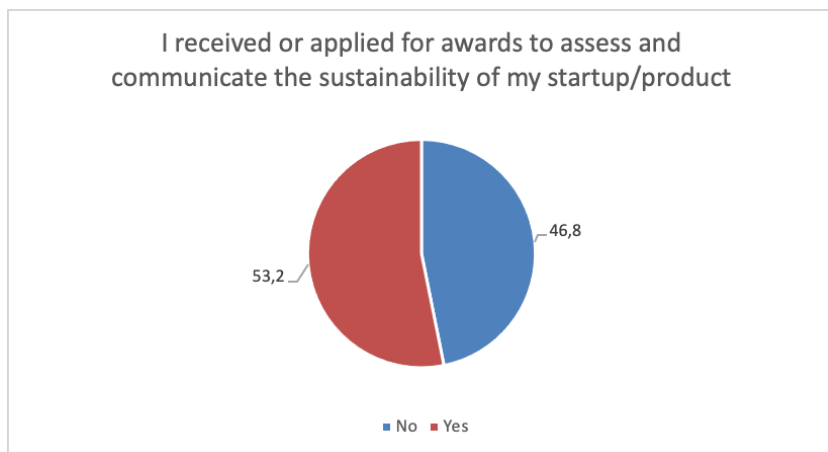
Note: Percentage points. N=79.

Image 12: Q11 I received or applied for labels/certificates (OWN labels, not of suppliers) to assess and communicate the sustainability of my startup/product



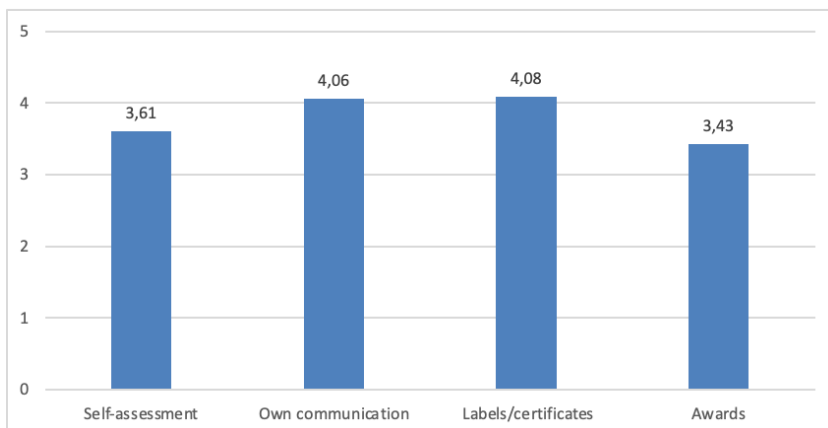
Note: Percentage points. N=79.

Image 13: Q12 I received or applied for awards to assess and communicate the sustainability of my startup/product



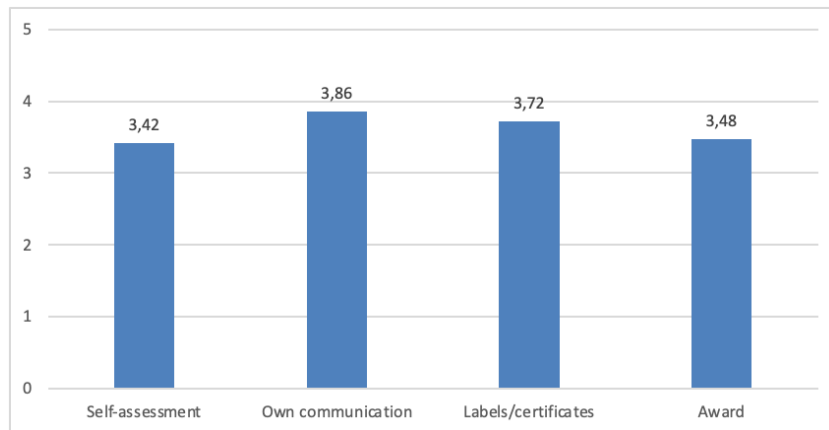
Note: Percentage points. N=79.

Image 14: Means comparison for research question 4.3.2. - A1 The method “helps attain the authentic sustainability assessment and communication the startup aimed for”



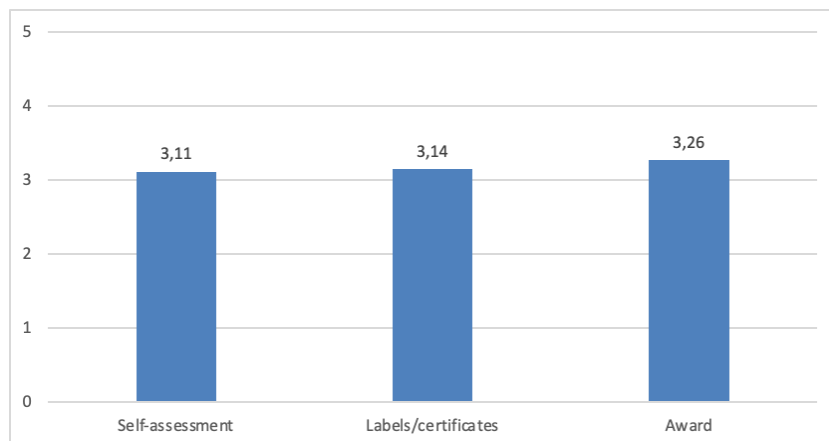
Note: Vertical Scale 1=Strongly Disagree to 5=Strongly Agree. Mean Values of answers Q9.Yes.A1 (N=36), Q10.Yes.A1 (N=71), Q11.Yes.A1 (50), Q12.Yes.A1 (N=42).

Image 15: Means comparison for research question 4.3.2. – A2 The method “helps achieve the intended outcome”



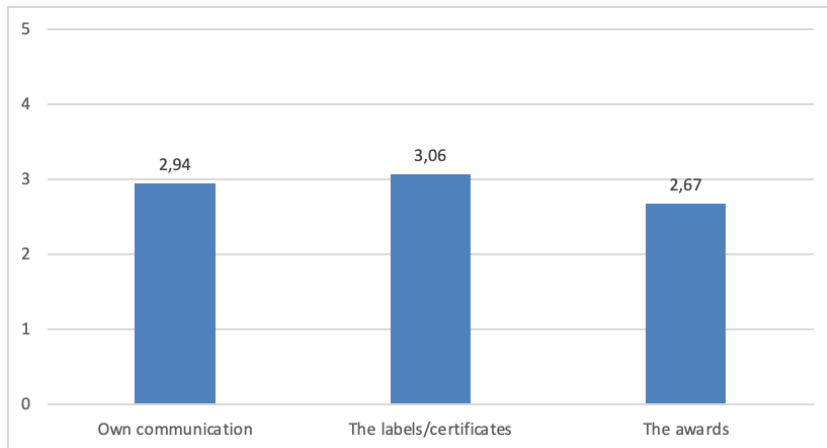
Note: Vertical Scale 1=Strongly Disagree to 5=Strongly Agree. Mean Values of answers Q9.Yes.A2 (N=36), Q10.Yes.A2 (N=71), Q11.Yes.A2 (N=50), Q12.Yes.A2 (N=42).

Image 16: Means comparison for research question 4.3.2. – “The time demand connected to the method was ___ for the intended outcomes I wanted” (Q9.Yes.A3, Q11.Yes.A3, Q12.Yes.A3)



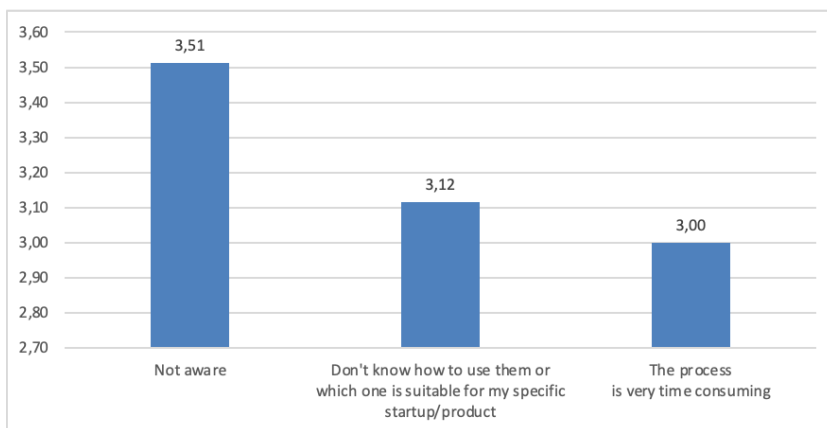
Note: Vertical Scale 1=Very Low to 5=Very High. Mean Values of answers Q9.Yes.A3 (N=36), Q11.Yes.A3 (N=50), Q12.Yes.A3 (N=42).

Image 17: Means comparison for research question 4.3.2. – “The costs connected to the method were ___ for the intended outcomes I wanted”



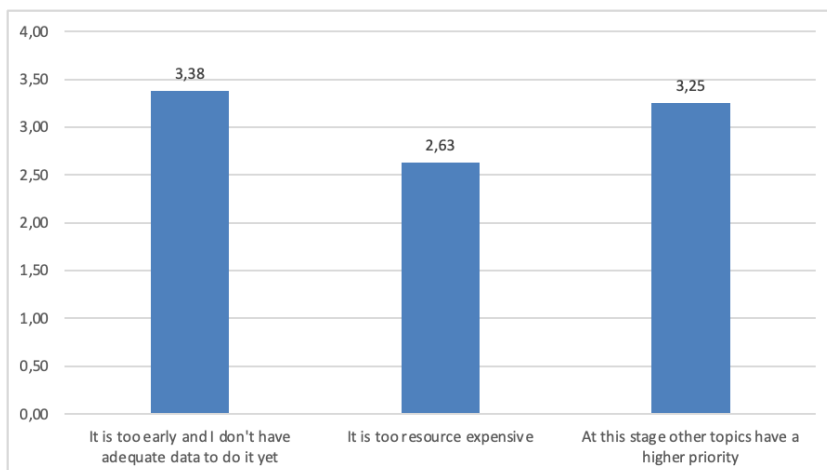
Note: Vertical Scale 1=Very Low to 5=Very High. Mean Values of answers Q10.Yes.A3 (N=71), Q11.Yes.A4 (N=50), Q12.Yes.A4 (N=42).

Image 18: Means comparison for research question 4.3.4. – Q9.No Why not? Using free tools for self-assessment of sustainability (Q9.No.A1, Q9.No.A2, Q9.No.A3)



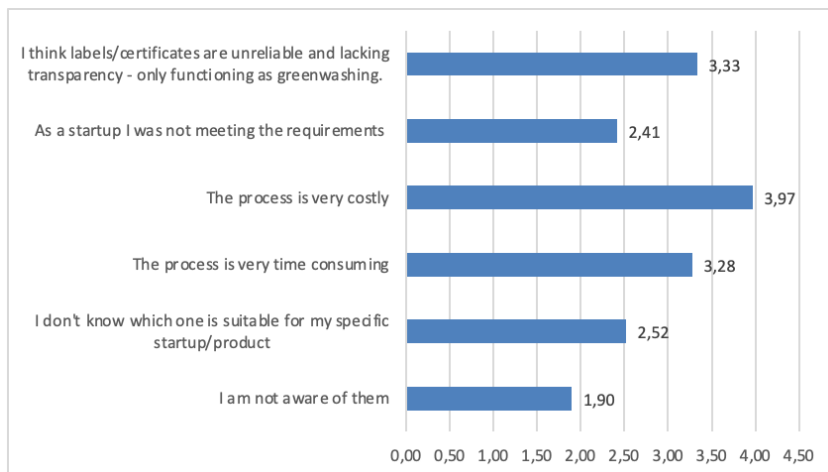
Note: Vertical Scale Mean Values 1=Strongly Disagree to 5=Strongly Agree

Image 19: Means comparison for research question 4.3.4. – Q10.No Why not? Using own methods to communicate sustainability (Q10.No.A1, Q10.No.A2, Q10.No.A3)



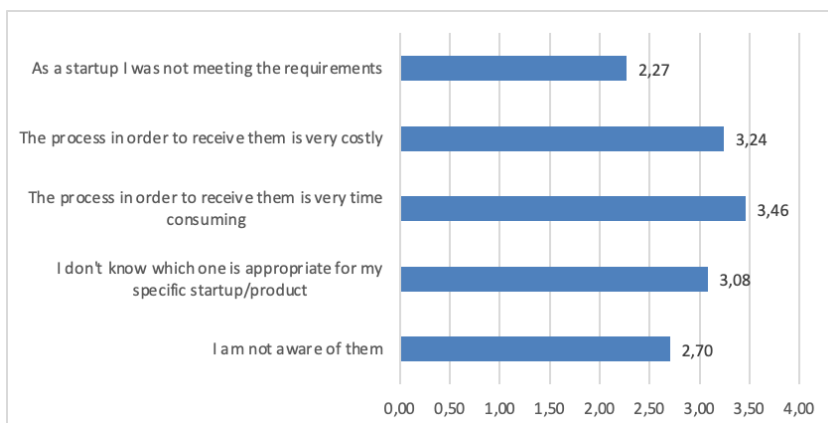
Note: Vertical Scale Mean Values 1=Strongly Disagree to 5=Strongly Agree

Image 20: Means comparison for research question 4.3.4. – Q11.No Why not? Using labels/certificates to assess and communicate sustainability (Q11.No.A1, Q11.No.A2, Q11.No.A3, Q11.No.A4, Q11.No.A5, Q11.No.A6)



Note: Horizontal Scale Mean Values 1=Strongly Disagree to 5=Strongly Agree

Image 21: Means comparison for research question 4.3.4. – Q12.No Why not? Using awards to assess and communicate sustainability (Q12.No.A1, Q12.No.A2, Q12.No.A3, Q12.No.A4, Q12.No.A5)



Note: Horizontal Scale Mean Values 1=Strongly Disagree to 5=Strongly Agree

II. Tables

II.I. Chi square Tables for Research question 4.2.2.

Table 1: Crosstab of Q9*Q3

Crosstab		How many employees are currently working at your startup?		
		1-10	> 10	Total
No	Count	29	14	43
	%	55,8%	51,9%	54,4%

I am using free tools to self-assess the sustainability of my startup/product	Count	23	13	36
	Yes %	44,2%	48,1%	45,6%
Total	Count	52	27	79
	%	100,0%	100,0%	100,0%

Table 2: Chi-Square Tests of Q9*Q3

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	,110 ^a	1	0,740		
Continuity Correction ^b	0,009	1	0,926		
Likelihood Ratio	0,110	1	0,740		
Fisher's Exact Test				0,814	0,462
N of Valid Cases	79				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 12,30.

b. Computed only for a 2x2 table

Table 3: Crosstab of Q10*Q3

		How many employees are currently working at your startup?		Total
		1-10	> 10	
I am communicating the sustainability of my startup/product through own methods	No	Count 7	1	8
		% 13,5%	3,7%	10,1%
	Yes	Count 45	26	71
		% 86,5%	96,3%	89,9%
Total		Count 52	27	79
		% 100,0%	100,0%	100,0%

Table 4: Chi-Square Tests of Q10*Q3

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1,859 ^a	1	0,173		
Continuity Correction ^b	0,942	1	0,332		

Likelihood Ratio	2,160	1	0,142		
Fisher's Exact Test				0,253	0,167
N of Valid Cases	79				

a. 1 cells (25,0%) have expected count less than 5. The minimum expected count is 2,73.

b. Computed only for a 2x2 table

Table 5: Crosstab of Q11*Q3

		How many employees are currently working at your startup?			
		1-10	> 10	Total	
I received or applied for labels/certificates (OWN labels, not of suppliers) to assess and communicate the sustainability of my startup/product	No	Count	19	10	29
		%	36,5%	37,0%	36,7%
	Yes	Count	33	17	50
		%	63,5%	63,0%	63,3%
Total		Count	52	27	79
		%	100,0%	100,0%	100,0%

Table 6: Chi-Square Tests of Q11*Q3

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	,002 ^a	1	0,965		
Continuity Correction ^b	0,000	1	1,000		
Likelihood Ratio	0,002	1	0,965		
Fisher's Exact Test				1,000	0,577
N of Valid Cases	79				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 9,91.

b. Computed only for a 2x2 table

Table 7: Crosstab of Q12*Q3

		How many employees are currently working at your startup?		
		1-10	> 10	Total

I received or applied for awards to assess and communicate the sustainability of my startup/product	No	Count	22	15	37
		%	42,3%	55,6%	46,8%
	Yes	Count	30	12	42
		%	57,7%	44,4%	53,2%
Total		Count	52	27	79
		%	100,0%	100,0%	100,0%

Table 8: Chi-Square Tests of Q12*Q3

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1,253 ^a	1	0,263		
Continuity Correction ^b	0,777	1	0,378		
Likelihood Ratio	1,253	1	0,263		
Fisher's Exact Test				0,343	0,189
N of Valid Cases	79				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 12,65.

b. Computed only for a 2x2 table

II.II. Mean Tables for Research Question 4.2.3.

Table 9: Comparison of means for questions “helps attain the authentic sustainability assessment and communication the startup aimed for” (Q9.Yes.A1, Q10.Yes.A1, Q11.Yes.A1, Q12.Yes.A1)

	By using free tools I attained the authentic sustainability assessment of my startup/product that I aimed for	By using self-directed methods I attained the authentic sustainability communication of my startup/product that I aimed for	Through labels/certificates I attained the authentic assessment and communication of the sustainability of my startup/product that I aimed for	Through awards I attained the authentic assessment and communication of the sustainability of my startup/product that I aimed for
Mean	3,61	4,06	4,08	3,43
N	36	71	50	42
SD	0,766	0,695	0,695	1,039
Median	4,00	4,00	4,00	4,00

Minimum	2	2	2	1
Maximum	5	5	5	5

Table 10: Comparison of means for questions “helps achieve the intended outcome” (Q9.Yes.A2, Q10.Yes.A2, Q11.Yes.A2, Q12.Yes.A2)

	The self assessment methods helped me achieve my intended outcomes (Recall 2/3: to have greater investment opportunities, attract employees/customers, to safe costs etc.)	Communicating sustainability through my own methods helped me achieve my intended outcomes (Recall 2/3: to have greater investment opportunities, attract employees/customers, to safe costs etc.)	The labels/ certificates helped me achieve my intended outcomes (Recall 2/3: to have greater investment opportunities, attract employees/customers, to safe costs etc.)	The award helped me achieve my intended outcomes (Recall 2/3: to have greater investment opportunities, attract employees/customers, to safe costs etc.)
Mean	3,42	3,86	3,72	3,48
N	36	71	50	42
SD	0,874	0,867	0,784	1,042
Median	3,50	4,00	4,00	4,00
Minimum	1	1	2	1
Maximum	5	5	5	5

Table 11: Comparison of means for time demand of method (Q9.Yes.A3, Q11.Yes.A3, Q12.Yes.A3)

	Self-assessment	Labels/certificates	Award
Mean	3,11	3,14	3,26
N	36	50	42
Std. Deviation	0,708	0,783	0,885
Median	3,00	3,00	3,00
Minimum	1	1	1
Maximum	5	5	5

Table 12: Comparison of means for cost expense of method (Q10.Yes.A3, Q11.Yes.A4, Q12.Yes.A4)

	Own communication	Labels/certificates	Award
Mean	2,94	3,06	2,67
N	71	50	42

Std. Deviation	0,735	0,793	1,052
Median	3,00	3,00	3,00
Minimum	1	1	1
Maximum	5	4	5

Table 13: Q9.No Comparison of means why “not using self-assessment method”

		I don't use self-assessment methods because I am not aware of them	I don't use self-assessment methods because I don't know how to use them or which one is suitable for my specific startup/ product	I don't use self-assessment methods because the process is very time consuming
I am using free tools to self-assess the sustainability of my startup/ product	Mean	3,51	3,12	3,00
	N	43	43	43
	Std. Deviation	1,183	1,276	1,291
No	Mean	3,51	3,12	3,00
	N	43	43	43
	Std. Deviation	1,183	1,276	1,291
Total				

Table 14: Q10.No Comparison of means why “not using own communication method”

		I don't communicate sustainability through my own methods because it is too early and I don't have adequate data to do it yet	I don't communicate sustainability through my own methods because it is too resource expensive	I don't communicate sustainability through my own methods because at this stage other topics have a higher priority
I am communicating the sustainability of my startup/product through own methods	Mean	3,38	2,63	3,25
	N	8	8	8
	Std. Deviation	0,916	1,506	1,282
No	Mean	3,38	2,63	3,25
	N	8	8	8
	Std. Deviation	0,916	1,506	1,282
Total				

Table 15: Q11.No Comparison of means why “not using labels/certificates”

I received or applied for labels/certificates (OWN labels, not of suppliers) to assess and communicate the sustainability of my startup/product	I don't use labels/certificates because I am not aware of them	I don't use labels/certificates because I don't know which one is suitable for my specific startup/product	I don't use labels/certificates because the process is very time consuming	I don't use labels/certificates because the process is very costly	As a startup I was not meeting the requirements in order to receive or apply for labels/certificates	I think labels/certificates are unreliable and lacking transparency - only functioning as greenwashing.
Mean	1,90	2,52	3,28	3,97	2,41	3,33
N	29	29	29	29	29	21
Std. Deviation	1,081	1,379	1,192	1,349	1,268	1,238
No	Mean 1,90	2,52	3,28	3,97	2,41	3,33
	N 29	29	29	29	29	21
	Std. Deviation 1,081	1,379	1,192	1,349	1,268	1,238
Total	Mean 1,90	2,52	3,28	3,97	2,41	3,33
	N 29	29	29	29	29	21
	Std. Deviation 1,081	1,379	1,192	1,349	1,268	1,238

Table 16: Q12.No Comparison of means why “not using awards”

		I don't use awards because I am not aware of them	I don't use awards because I don't know which one is appropriate for my specific startup/product	I don't use awards because the process in order to receive them is very time consuming	I don't use awards because the process in order to receive them is very costly	As a startup I was not meeting the requirements in order to receive or apply for awards
I received or applied for awards to assess and communicate the sustainability of my startup/product	Mean	2,70	3,08	3,46	3,24	2,27
	N	37	37	37	37	37
	Std. Deviation	1,222	1,256	1,043	0,925	1,045
No	Mean	2,70	3,08	3,46	3,24	2,27
	N	37	37	37	37	37
	Std. Deviation	1,222	1,256	1,043	0,925	1,045
Total	Mean	2,70	3,08	3,46	3,24	2,27
	N	37	37	37	37	37
	Std. Deviation	1,222	1,256	1,043	0,925	1,045

II.III. Frequency Tables

Table Q1: Frequency of: When was your startup founded?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 2011	2	2,5	2,5	2,5
2012	3	3,8	3,8	6,3
2013	2	2,5	2,5	8,9
2014	4	5,1	5,1	13,9
2015	7	8,9	8,9	22,8
2016	9	11,4	11,4	34,2
2017	17	21,5	21,5	55,7
2018	9	11,4	11,4	67,1
2019	12	15,2	15,2	82,3
2020	12	15,2	15,2	97,5
2021	2	2,5	2,5	100,0
Total	79	100,0	100,0	

Table Q2: Frequency of: In which sector are you active?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Bioninformatics and innovation services	1	1,3	1,3	1,3
Consumer Goods	32	40,5	40,5	41,8
Design Print/Web education	1	1,3	1,3	43,0
Energy	3	3,8	3,8	48,1
Finance	1	1,3	1,3	49,4
Food	11	13,9	13,9	63,3
Furniture	1	1,3	1,3	64,6
Gardening	1	1,3	1,3	65,8
Impact Investing	1	1,3	1,3	67,1
insect breeding	1	1,3	1,3	68,4
IT & Communications	1	1,3	1,3	69,6
Marketing	1	1,3	1,3	70,9
Mobility	2	2,5	2,5	73,4
Packaging	4	5,1	5,1	78,5
Retail	2	2,5	2,5	81,0
Saas	1	1,3	1,3	82,3
Self care	1	1,3	1,3	83,5
Social Business: Consumer goods, service delivery, communication	1	1,3	1,3	84,8

Social Impact and Recruiting	1	1,3	1,3	86,1
Supply chain textiles	1	1,3	1,3	87,3
Tourism	2	2,5	2,5	91,1
Urban farming infrastructure equipment	1	1,3	1,3	92,4
Urban gardening	1	1,3	1,3	93,7
Waste	3	3,8	3,8	97,5
Wholesale B2B	1	1,3	1,3	98,7
Workwear	1	1,3	1,3	100,0
Total	79	100,0	100,0	

Table Q3: Frequency of: How many employees are currently working at your startup?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid >50	3	3,8	3,8	3,8
1-10	52	65,8	65,8	69,6
10-50	24	30,4	30,4	100,0
Total	79	100,0	100,0	

Table Q4: Frequency of: Do you consider yourself to be a sustainability startup?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid No	4	5,1	5,1	5,1
Yes, I address at least one of the United Nation's sustainable development goals (SDGs) through innovation	75	94,9	94,9	100,0
Total	79	100,0	100,0	

Table Q5: Frequency of: How important is authentic sustainability assessment and communication of your startup/product to you?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 4	1	1,3	1,3	1,3
7	4	5,1	5,1	6,3
8	9	11,4	11,4	17,7

9	19	24,1	24,1	41,8
10	46	58,2	58,2	100,0
Total	79	100,0	100,0	

Table Q6: Frequency of: Please chose what best describes your current status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I already assess and communicate the sustainability of my startup/product	73	92,4	92,4	92,4
	I want to assess and communicate the sustainability of my startup/product at a later stage	6	7,6	7,6	100,0
	Total	79	100,0	100,0	

Table Q7: Frequency of: Why are you not assessing and communicating the sustainability of your startup/product yet?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		73	92,4	92,4	92,4
	Because at this stage other topics have a higher priority	2	2,5	2,5	94,9
	Because it is too early and I don't have adequate data to do it yet	1	1,3	1,3	96,2
	Because it is too early and I don't have adequate data to do it yet, Because it is too resource expensive, Because at this stage other topics have a higher priority	2	2,5	2,5	98,7
	Because it is too resource expensive, Because at this stage other topics have a higher priority	1	1,3	1,3	100,0
	Total	79	100,0	100,0	

Q8 Why do you (want to) assess and communicate the sustainability of your startup/ product?

Table Q8A1: Frequency of: To have greater investment opportunities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	10	12,7	12,7	12,7
	2	20	25,3	25,3	38,0
	3	29	36,7	36,7	74,7
	4	13	16,5	16,5	91,1
	5	7	8,9	8,9	100,0
	Total	79	100,0	100,0	

Table Q8A2: Frequency of: To mitigate risk/ meet regulatory requirements

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	16	20,3	20,3	20,3
	2	20	25,3	25,3	45,6
	3	25	31,6	31,6	77,2
	4	11	13,9	13,9	91,1
	5	7	8,9	8,9	100,0
	Total	79	100,0	100,0	

Table Q8A3: Frequency of: To attract and retain employees

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	5	6,3	6,3	6,3
	2	8	10,1	10,1	16,5
	3	17	21,5	21,5	38,0
	4	30	38,0	38,0	75,9
	5	19	24,1	24,1	100,0
	Total	79	100,0	100,0	

Table Q8A4: Frequency of: To satisfy consumer interest and gain higher sales

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	3	3,8	3,8	3,8
	2	3	3,8	3,8	7,6

	3	6	7,6	7,6	15,2
	4	31	39,2	39,2	54,4
	5	36	45,6	45,6	100,0
	Total	79	100,0	100,0	

Table Q8A5: Frequency of: To achieve the purpose/mission of the company

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	1,3	1,3	1,3
	2	1	1,3	1,3	2,5
	4	7	8,9	8,9	11,4
	5	70	88,6	88,6	100,0
	Total	79	100,0	100,0	

Table Q8A6: Frequency of: To identify areas of potential cost savings and improved productivity

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	8	10,1	10,1	10,1
	2	12	15,2	15,2	25,3
	3	30	38,0	38,0	63,3
	4	24	30,4	30,4	93,7
	5	5	6,3	6,3	100,0
	Total	79	100,0	100,0	

Table Q8A7: Frequency of: To build credibility and enhance brand awareness

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	1,3	1,3	1,3
	2	2	2,5	2,5	3,8
	3	2	2,5	2,5	6,3
	4	21	26,6	26,6	32,9
	5	53	67,1	67,1	100,0
	Total	79	100,0	100,0	

Table Q8A8: Frequency of: For innovation: To reveal areas where you could develop new services and products

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	3	3,8	3,8	3,8
	2	6	7,6	7,6	11,4
	3	14	17,7	17,7	29,1
	4	33	41,8	41,8	70,9
	5	23	29,1	29,1	100,0
	Total	79	100,0	100,0	

Table Q9: Frequency of: I am using free tools to self-assess the sustainability of my startup/product

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	43	54,4	54,4	54,4
	Yes	36	45,6	45,6	100,0
	Total	79	100,0	100,0	

Table Q10: Frequency of: I am communicating the sustainability of my startup/product through own methods

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	8	10,1	10,1	10,1
	Yes	71	89,9	89,9	100,0
	Total	79	100,0	100,0	

Table Q11: Frequency of: I received or applied for labels/certificates (OWN labels, not of suppliers) to assess and communicate the sustainability of my startup/product

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	29	36,7	36,7	36,7
	Yes	50	63,3	63,3	100,0
	Total	79	100,0	100,0	

Table Q12: Frequency of: I received or applied for awards to assess and communicate the sustainability of my startup/product

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	37	46,8	46,8	46,8
	Yes	42	53,2	53,2	100,0

Total	79	100,0	100,0	
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Table Q9.Yes.A1: Frequency of: By using free tools I attained the authentic sustainability assessment of my startup/product that I aimed for

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	3	3,8	8,3	8,3
	3	11	13,9	30,6	38,9
	4	19	24,1	52,8	91,7
	5	3	3,8	8,3	100,0
	Total	36	45,6	100,0	
Missing	System	43	54,4		
Total		79	100,0		

Table Q9.Yes.A2: Frequency of: The self assessment methods helped me achieve my intended outcomes (Recall 2/3: to have greater investment opportunities, attract employees/customers, to safe costs etc.)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	2	2,5	5,6	5,6
	2	1	1,3	2,8	8,3
	3	15	19,0	41,7	50,0
	4	16	20,3	44,4	94,4
	5	2	2,5	5,6	100,0
	Total	36	45,6	100,0	
Missing	System	43	54,4		
Total		79	100,0		

Table Q9.Yes.A3: Frequency of: The time demand for self-assessing my sustainability was ___ for the intended outcomes I wanted

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	1,3	2,8	2,8
	2	3	3,8	8,3	11,1
	3	24	30,4	66,7	77,8
	4	7	8,9	19,4	97,2
	5	1	1,3	2,8	100,0
	Total	36	45,6	100,0	
Missing	System	43	54,4		
Total		79	100,0		

Table Q9.No.A1: Frequency of: I don't use self-assessment methods because I am not aware of them

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	3	3,8	7,0	7,0
	2	6	7,6	14,0	20,9
	3	9	11,4	20,9	41,9
	4	16	20,3	37,2	79,1
	5	9	11,4	20,9	100,0
	Total	43	54,4	100,0	
Missing System		36	45,6		
Total		79	100,0		

Table Q9.No.A2: Frequency of: I don't use self-assessment methods because I don't know how to use them or which one is suitable for my specific startup/ product

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	6	7,6	14,0	14,0
	2	6	7,6	14,0	27,9
	3	16	20,3	37,2	65,1
	4	7	8,9	16,3	81,4
	5	8	10,1	18,6	100,0
	Total	43	54,4	100,0	
Missing System		36	45,6		
Total		79	100,0		

Table Q9.No.A3: Frequency of: I don't use self-assessment methods because the process is very time consuming

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	7	8,9	16,3	16,3
	2	8	10,1	18,6	34,9
	3	12	15,2	27,9	62,8
	4	10	12,7	23,3	86,0
	5	6	7,6	14,0	100,0
	Total	43	54,4	100,0	
Missing System		36	45,6		
Total		79	100,0		

Table Q9.No.A4: Frequency of: Other reasons

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		72	91,1	91,1	91,1
	Other reasons	7	8,9	8,9	100,0
	Total	79	100,0	100,0	

Table Q10.Yes.A1: Frequency of: By using self-directed methods I attained the authentic sustainability communication of my startup/product that I aimed for

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	1	1,3	1,4	1,4
	3	12	15,2	16,9	18,3
	4	40	50,6	56,3	74,6
	5	18	22,8	25,4	100,0
	Total	71	89,9	100,0	
Missing	System	8	10,1		
Total		79	100,0		

Table Q10.Yes.A2: Frequency of: Communicating sustainability through my own methods helped me achieve my intended outcomes (Recall 2/3: to have greater investment opportunities, attract employees/customers, to save costs etc.)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	1,3	1,4	1,4
	2	4	5,1	5,6	7,0
	3	14	17,7	19,7	26,8
	4	37	46,8	52,1	78,9
	5	15	19,0	21,1	100,0
	Total	71	89,9	100,0	
Missing	System	8	10,1		
Total		79	100,0		

Table Q10.Yes.A3: Frequency of: The resources spent were ___ for the intended outcomes I wanted

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	3	3,8	4,2	4,2
	2	11	13,9	15,5	19,7

	3	45	57,0	63,4	83,1
	4	11	13,9	15,5	98,6
	5	1	1,3	1,4	100,0
	Total	71	89,9	100,0	
Missing	System	8	10,1		
Total		79	100,0		

Table Q10.No.A1: Frequency of: I don't communicate sustainability through my own methods because it is too early and I don't have adequate data to do it yet

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	1	1,3	12,5	12,5
	3	4	5,1	50,0	62,5
	4	2	2,5	25,0	87,5
	5	1	1,3	12,5	100,0
	Total	8	10,1	100,0	
Missing	System	71	89,9		
Total		79	100,0		

Table Q10.No.A2: Frequency of: I don't communicate sustainability through my own methods because it is too resource expensive

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	3	3,8	37,5	37,5
	3	3	3,8	37,5	75,0
	4	1	1,3	12,5	87,5
	5	1	1,3	12,5	100,0
	Total	8	10,1	100,0	
Missing	System	71	89,9		
Total		79	100,0		

Table Q10.No.A3: Frequency of: I don't communicate sustainability through my own methods because at this stage other topics have a higher priority

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	1,3	12,5	12,5
	2	1	1,3	12,5	25,0
	3	2	2,5	25,0	50,0
	4	3	3,8	37,5	87,5
	5	1	1,3	12,5	100,0

	Total	8	10,1	100,0	
Missing	System	71	89,9		
Total		79	100,0		

Table Q10.No.A4: Frequency of: Other reasons

	Frequency	Percent
Missing System	79	100,0

Table Q11.Yes.A1: Frequency of: Through labels/certificates I attained the authentic assessment and communication of the sustainability of my startup/product that I aimed for

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	2	2,5	4,0	4,0
	3	4	5,1	8,0	12,0
	4	32	40,5	64,0	76,0
	5	12	15,2	24,0	100,0
	Total	50	63,3	100,0	
Missing	System	29	36,7		
Total		79	100,0		

Table Q11.Yes.A2: Frequency of: The labels/ certificates helped me achieve my intended outcomes (Recall 2/3: to have greater investment opportunities, attract employees/customers, to save costs etc.)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	4	5,1	8,0	8,0
	3	12	15,2	24,0	32,0
	4	28	35,4	56,0	88,0
	5	6	7,6	12,0	100,0
	Total	50	63,3	100,0	
Missing	System	29	36,7		
Total		79	100,0		

Table Q11.Yes.A3: Frequency of: The time demand connected to the labels/ certificates was ___ for the intended outcomes I wanted

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	1,3	2,0	2,0

	2	8	10,1	16,0	18,0
	3	25	31,6	50,0	68,0
	4	15	19,0	30,0	98,0
	5	1	1,3	2,0	100,0
	Total	50	63,3	100,0	
Missing	System	29	36,7		
Total		79	100,0		

Table Q11.Yes.A4: Frequency of: The costs connected to the labels/certificates were ___ for the intended outcomes I wanted

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	3	3,8	6,0	6,0
	2	5	6,3	10,0	16,0
	3	28	35,4	56,0	72,0
	4	14	17,7	28,0	100,0
	Total	50	63,3	100,0	
Missing	System	29	36,7		
Total		79	100,0		

Table Q11.No.A1: Frequency of: I don't use labels/certificates because I am not aware of them

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	16	20,3	55,2	55,2
	2	2	2,5	6,9	62,1
	3	9	11,4	31,0	93,1
	4	2	2,5	6,9	100,0
	Total	29	36,7	100,0	
Missing	System	50	63,3		
Total		79	100,0		

Table Q11.No.A2: Frequency of: I don't use labels/certificates because I don't know which one is suitable for my specific startup/product

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	10	12,7	34,5	34,5
	2	4	5,1	13,8	48,3
	3	8	10,1	27,6	75,9
	4	4	5,1	13,8	89,7
	5	3	3,8	10,3	100,0
	Total	29	36,7	100,0	

Missing System	50	63,3		
Total	79	100,0		

Table Q11.No.A3: Frequency of: I don't use labels/certificates because the process is very time consuming

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	3	3,8	10,3	10,3
	2	4	5,1	13,8	24,1
	3	8	10,1	27,6	51,7
	4	10	12,7	34,5	86,2
	5	4	5,1	13,8	100,0
	Total	29	36,7	100,0	
Missing System	50	63,3			
Total	79	100,0			

Table Q11.No.A4: Frequency of: I don't use labels/certificates because the process is very costly

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	3	3,8	10,3	10,3
	2	1	1,3	3,4	13,8
	3	5	6,3	17,2	31,0
	4	5	6,3	17,2	48,3
	5	15	19,0	51,7	100,0
	Total	29	36,7	100,0	
Missing System	50	63,3			
Total	79	100,0			

Table Q11.No.A5: Frequency of: As a startup I was not meeting the requirements in order to receive or apply for labels/certificates

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	9	11,4	31,0	31,0
	2	7	8,9	24,1	55,2
	3	7	8,9	24,1	79,3
	4	4	5,1	13,8	93,1
	5	2	2,5	6,9	100,0
	Total	29	36,7	100,0	
Missing System	50	63,3			
Total	79	100,0			

Table Q11.No.A6: Frequency of: I think labels/certificates are unreliable and lacking transparency - only functioning as greenwashing.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	2	2,5	9,5	9,5
	2	3	3,8	14,3	23,8
	3	6	7,6	28,6	52,4
	4	6	7,6	28,6	81,0
	5	4	5,1	19,0	100,0
	Total	21	26,6	100,0	
Missing System		58	73,4		
Total		79	100,0		

Table Q11.No.A7: Frequency of: Other reasons

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		72	91,1	91,1	91,1
	Other reasons	7	8,9	8,9	100,0
	Total	79	100,0	100,0	

Table Q12.Yes.A1: Frequency of: Through awards I attained the authentic assessment and communication of the sustainability of my startup/product that I aimed for

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	2	2,5	4,8	4,8
	2	7	8,9	16,7	21,4
	3	8	10,1	19,0	40,5
	4	21	26,6	50,0	90,5
	5	4	5,1	9,5	100,0
	Total	42	53,2	100,0	
Missing System		37	46,8		
Total		79	100,0		

Table Q12.Yes.A2: Frequency of: The award helped me achieve my intended outcomes (Recall 2/3: to have greater investment opportunities, attract employees/customers, to save costs etc.)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	1,3	2,4	2,4

	2	8	10,1	19,0	21,4
	3	9	11,4	21,4	42,9
	4	18	22,8	42,9	85,7
	5	6	7,6	14,3	100,0
	Total	42	53,2	100,0	
Missing	System	37	46,8		
Total		79	100,0		

Table Q12.Yes.A3: Frequency of: The time demand connected to the award was ___ for the intended outcomes I wanted

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	1,3	2,4	2,4
	2	6	7,6	14,3	16,7
	3	19	24,1	45,2	61,9
	4	13	16,5	31,0	92,9
	5	3	3,8	7,1	100,0
	Total	42	53,2	100,0	
Missing	System	37	46,8		
Total		79	100,0		

Table Q12.Yes.A4: Frequency of: The costs connected to the award were ___ for the intended outcomes I wanted

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	6	7,6	14,3	14,3
	2	12	15,2	28,6	42,9
	3	16	20,3	38,1	81,0
	4	6	7,6	14,3	95,2
	5	2	2,5	4,8	100,0
	Total	42	53,2	100,0	
Missing	System	37	46,8		
Total		79	100,0		

Table Q12.No.A1: Frequency of: I don't use awards because I am not aware of them

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	9	11,4	24,3	24,3
	2	5	6,3	13,5	37,8
	3	13	16,5	35,1	73,0
	4	8	10,1	21,6	94,6

	5	2	2,5	5,4	100,0
	Total	37	46,8	100,0	
Missing	System	42	53,2		
Total		79	100,0		

Table Q12.No.A2: Frequency of: I don't use awards because I don't know which one is appropriate for my specific startup/product

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	7	8,9	18,9	18,9
	2	3	3,8	8,1	27,0
	3	10	12,7	27,0	54,1
	4	14	17,7	37,8	91,9
	5	3	3,8	8,1	100,0
	Total	37	46,8	100,0	
Missing	System	42	53,2		
Total		79	100,0		

Table Q12.No.A3: Frequency of: I don't use awards because the process in order to receive them is very time consuming

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	2	2,5	5,4	5,4
	2	4	5,1	10,8	16,2
	3	11	13,9	29,7	45,9
	4	15	19,0	40,5	86,5
	5	5	6,3	13,5	100,0
	Total	37	46,8	100,0	
Missing	System	42	53,2		
Total		79	100,0		

Table Q12.No.A4: Frequency of: I don't use awards because the process in order to receive them is very costly

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	1,3	2,7	2,7
	2	7	8,9	18,9	21,6
	3	13	16,5	35,1	56,8
	4	14	17,7	37,8	94,6
	5	2	2,5	5,4	100,0
	Total	37	46,8	100,0	
Missing	System	42	53,2		

Total	79	100,0		
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Table Q12.No.A5: Frequency of: As a startup I was not meeting the requirements in order to receive or apply for awards

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	12	15,2	32,4	32,4
	2	6	7,6	16,2	48,6
	3	17	21,5	45,9	94,6
	4	1	1,3	2,7	97,3
	5	1	1,3	2,7	100,0
	Total	37	46,8	100,0	
Missing	System	42	53,2		
Total		79	100,0		

Table Q12.No.A6: Frequency of: Other reasons

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		71	89,9	89,9	89,9
	Don't know any awards for a regular consumer brand startup. I only know awards for sustainable innovation	1	1,3	1,3	91,1
	Other reasons	7	8,9	8,9	100,0
	Total	79	100,0	100,0	

Table Q13: Qualitative answers to: In one sentence, what improvements on the assessment and communication methods of sustainability would you wish for?

Valid	see below
	A support network that connects already established companies with smaller start ups to help with certain sustainability tools and processes.
	A user-friendly, easy-to-use free tool to assess the sustainability of my products and company on a systematic level.
	Active support from government to achive such sustainability labels alignment, more standardized and accessible options, so not everyone can just do this or that and then claim to be sustainable or create some kind of logo or label that suggests sustainability but is not a real certificate
	An easy, intuitive tool for assessing the whole lifecycle.

assessment for sustainability should be made more accessible and more understandable, its very complex and hard to get through.

Better ways to compare different products.

Certificates that can be trusted with a business model that is not based on payments by the entities that are being certified.

clear definitions

clear guidance and free assessment and more overview

cost free certificates

Ein Leitfaden dem man folgen kann oder eine Übersicht der Möglichkeiten.

Translation: A guidebook that can be followed or an overview of possibilities.

Es ist notwendig vertrauenswürdige und glaubhafte Methoden verpflichtend anzuwenden, um breites Vertrauen der Konsumenten zu erlangen.

Translation: An obligatory application of trustworthy and credible methods is necessary, in order to obtain vast trust of consumers.

get the right certification

Global renowned certification that can be used for different industries - especially in fashion or product related markets. Who is the leading approach? BCorps?

Grants for certification.

Honestly, I wrote my bachelor thesis about sustainable communication and I did a lot of research. For me it is definitely a lack of information and good content - I can get access to 10000 of blogs, Videos etc. on how to design a product, how to attract investors, but there's only a few practical guidelines for assessment and communication methods.

I need an integrated tool that pulls data from my different systems and applications directly to assess the matter.

I would wish for on standardized procedure with different levels of depth for different stages of startups

Independently certified, unified and transparent assessment

Individual assessments that combine methodes (esp. appropriate criteria) to assess product-specific sustainability including social values

less work/ ressources needed

make it easier to assess the sustainability impact of our products in various ways

making all the criteria clearer and more transparent to the consumer

Maybe some external help to get certificates & universal assessment incl. Logos to put on packaging & content

More EU Standards on measuring sustainability

More labels and certificates should be available for sustainable startups (and licensing processes should be way more simple). They should also have more opportunities to receive awards.

more time

more transparency

More transparency and less "green washing". A better understanding from brands of what a sustainable product or business actually is, and more courage to admit that we are not perfect.

More transparency beyond seals, better affordable ways of tracing and monitoring.

more transparent assessment methods for sustainable finance

Neutral consulting of my startup to tell what's best for my and how and where to apply, maybe even do the processes for me.
Nothing right now
Readability of CSR or Sustainability reports needs to improve! (following GRI or ISO reporting standards --> no customer ever reads these --> low awareness and transparency will remain).
Reduction and/or comparability between labels. There are too many labels out there and most customers do not know what they stand for, which to trust etc. There a big differences between labels especially in regards to greenwashing.
Simple open source certification, put result and promise into open blockchain.
Stonger focus in used B Corps assesment in climate topics
Sustainably labels for companies are useless and unreliable. Just a way to confuse customers and take money from startups without delivering the needed trust - simply because they lack transparency. We are completely against them and will never use them. unfortunately the research didn't even have this option so in my option was trying to confirm it's own biases.
That some certifications can be individualised (every genre/field is different)
that they were more widespread/comparable/obvious and most of all, easier and cheaper to apply for / receive (faster process, lower fees)
That you can trust the labels and also trust the company's. Often there is just the word "sustainability" which doesn't mean anything until there is a label proofing it.
The opportunity for retailers/wholesalers to use established certificates (GOTS, Fairtrade, FSC, etc.) for free (unless, of course, they change the product and thus need assessment, too).
There should be an easy tool or way to achieve information and apply for it being a very small start-up of 1-2 people, taking care of everything.
There should be awareness on what do be able to do.
We prefer to communicate our sustainability through our own channels such as: our newspaper, blog and such. Our latest channel is a QR code on each product with information about the farmers and the whole value chain.
We'd love to improve the measurement and reporting of the positive impact that we achieve by supporting third party projects through funding and media work, but it should be simple, practicable and cost-efficient.

Table Q14: Qualitative answers to: Free space for comments/ feedback

Valid
Besonders bei Siegeln variiert der Aufwand & Nutzen enorm. Hier sollte differenziert gefragt werden, welches Siegel.
Translation: Especially for labels there are huge differences in effort and benefit. There should be differentiated questions for each label.
good luck ;-)
I'm afraid that my start-up is to small for what you are looking for.
Really interesting survey! Well done!

Sustainability seems to be connected to money. Small StartUps cant afford expensive but "highly reliable" certifications. Quotation marks, because how reliable are certifications (watching SEASPIRACY --> dolphine safe labels)?

The multitude of not strictly controlled "green" /green-washing labels is destructive

There are many different methods and tools out there. I think it is important to understand why you want to do this. Is it because of marketing purposes (= green washing and superficial sustainabilty blabla) or do you really want to be a role model and multiplier for change? We went through years of finding this out and after having received quite a number of awards and social start up prizes we realised that it is not really more than one or two postings on instagram saying "yeah, we won this or that", pictures in front of sponsor walls during the award and one or the other good contact. During the last years, realising the above mentioned, we got in touch with the concept of the "Economy for the Common Good" (<https://web.ecogood.org/de/>). It took us one year to finalise our first "Gemeinwohnbilanz" and I have to say that this concept really makes sense to us. The whole process ist super important for the development of the organisation and at the end you will have a report to share, including a certificate and a score.