

Do SMEs actually know what Business Model Innovation is? Evidence from Switzerland

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Abstract: Business model innovation (BMI) has received increasing attention from academics in recent years and its positive impact on companies has been demonstrated in the literature. However, there is a lack of research though on whether the managers of SMEs actually know what BMI means and how to implement it. This study is looking at this gap and analysed the know-how about the term in the Swiss canton of Schwyz. It is based on a survey among 418 managers of SMEs and shows that there is lack of knowledge on what BMI is and how to implement it; however, the importance of it is well-known. This research contributes to the existing literature in three ways. Firstly, awareness is the first needed step in increasing the number of BMIs in Switzerland, as many companies do not know the term. Secondly, managers claim to have no issues in generating new ideas and know about the importance of BMI, but nevertheless, do not implement it. Thirdly, only a small minority of SMEs work with universities on innovation and miss out on a large support structure. The study closes with recommendations for companies as well as universities and other state organisations to support BMI in Switzerland through the steps awareness, empowerment, implementation.

Keywords: business model innovation, small and mid-sized enterprises, SME, innovation, Switzerland, quantitative research, survey

1. Introduction

In 2021, Switzerland was named the most innovative country in the world by the World Intellectual Property Organisation (WIPO, 2021) and in Europe according to the European Innovation Scoreboard (Hollanders et al., 2021). The main reasons are its research system and institutions, its human resources, and the intellectual assets – Switzerland has one of the highest numbers of patents per million inhabitants. Despite being an innovation leader, technological and societal changes are also challenging companies in Switzerland. Studies show (e.g. Peter, 2017) that companies are transforming themselves in the digital age and are also active in the area of strategic business development. Business model innovation (BMI) is a frequently mentioned topic. Nevertheless, not enough companies actively address their business model, even though Peter (2017) showed that the digital transformation influences the business model of 85 % of the companies surveyed.

While companies have to actively challenge their business models, only a minority of newly established companies are actively innovating, with BMI being the least used form. A survey among companies that have been founded in the past five years show that 34% and 31% do product and process innovation respectively, while only 15% do BMI (Meyer and Meyer, 2020). Similarly, when looking at the innovations planned for the next two years, only 25% plan to do BMI, while 40% plan product and 31% process innovation. This is despite the fact that BMI is the most promising form, according to Pohle and Chapman (2006), who concluded that companies using BMI have significantly increased their operating margins, while companies using product or process innovation have maintained their margins at the same level.

BMI has received increasing attention from scholars over the last two decades (Foss and Saebi, 2017; Geissdoerfer, Vladimirova and Evans, 2018); however, as just shown above it does not appear to be actively addressed by companies, particularly SMEs. This raises the question of whether companies are aware of what BMI is and how important it can be for the survival of SMEs. Therefore, companies in the Swiss canton of Schwyz were surveyed about their innovation activities with the aim to find out, whether they know about business model innovation and how innovative they are. The results will support the design of support programmes for SMEs. The following research questions were answered:

1. How familiar are small and medium sized companies (SMEs) with the term business model innovation?
2. What innovation activities have the companies carried out in the last 10 years?
3. What is the current level of innovation in the companies?
4. How important are innovation activities to them?

The paper is divided into the following sections. Section 2 explains the theoretical basis of BMI and the state of innovation in Switzerland. Section 3 shows the methodological approach of the research. The research results are presented in detail in section 4, followed by a discussion in section 5. Finally, practical implications and an outlook on further research are given. This paper contributes to the academic discussion by being the first to our knowledge to analyse the know-how and the perceived importance on BMI among SMEs. This contributes to the development of programmes to support BMI.

2. Theoretical background

2.1 Business Model Innovation Defined

López-Nicolás, Ruiz-Nicolás, and Mateo-Ortuño (2021) define business models by advancing the following reasons why business models are paramount: they identify customer needs; they detail how organisations responds to customer needs and deliver the desired value; they allure customers to pay for the value; and they allow for meticulous operational designs that ensure profitability. Similarly, Hernández-Chea et al. (2021) contend that a typical business model is one that endeavours to attain customer satisfaction, enhance regulatory operational compliance, and provide a decent return on investment for its organisation. Put differently, a business model is an organisation's description of its value proposition, value creation, value creation conditions and value capture (Schaltegger et al., 2016).

Business model innovation has been defined differently by various scholars. López-Nicolás et al. (2021) set the tone by contending that BMI is the deliberate, unique, and major change ushered unto the key components of the organisation's operational architecture. Burhan et al. (2021) define BMI as the changes that are employed by established or new organisations to their value creation, value delivery, and value capture infrastructure in response to changing customer needs, changing times, and sustainability. From these definitions, it can be summarised that BMI is the change, whether holistic or atomistic, that is applied to the way organisations, whether existing or new, conduct their business. This change is deliberate and aimed at bettering all the facets of business operations throughout the value chain either in response to opportunities, challenges in the operational environment or as a medium for growth and expansion.

Compared to product or process innovation, BMI involves holistic company-wide changes, while the others involve less drastic changes to parts of the organisation and its procedures. Furthermore, whereas BMI focuses on increasing value for all stakeholders (shareholders, customers, employees, and society), product innovation focuses on value enhancement for customers and process innovation on the organisation's internal operations (Geissdoerfer, Vladimirova, Fossen, and Evans, 2018). Resultantly, the decision to pursue the different forms of business innovation (either product innovation, process innovation, or BMI) will mostly be influenced by the organisation's resources, objectives, customer needs, industry environment, as well as market position.

2.2 Importance of business model innovation

Companies that do not pay attention to their business models run the risk of underperforming that comes as a result of diminishing earlier strengths (Musandiwa and Ngwakwe, 2022; Xu and Vermeulen, 2021). Various reasons have been put forward that illustrate the importance of BMI. To begin with, BMI is critical to the survival of today's institutions as it not only provides a firm with a competitive edge but also improves organisational efficiency by creating and enhancing mechanisms that drive and maintain customer value (Hamelink and Opendakker, 2019; Pieroni, McAloone, and Pigosso, 2019; Velu, 2015).

Furthermore, Ferreras-Méndez et al. (2021) assert that BMI provides firms with the means to translate their entrepreneurial orientation into innovative processes that drive organisational success. By improving value creation, BMI will ultimately drive organisational growth and market dominance.

Business model innovations, particularly those based on new technologies, generate immense positive gains for companies which result in the acquisition of competitive advantages, and the greater the use of technology in the BMIs, the greater the competitive advantage will be (Dymitrowski and Mielcarek, 2021). As BMI will introduce new operational infrastructure, the resulting changes will be difficult for competitors to duplicate.

In a research conducted to ascertain the benefits and hinderances associated with BMI on farmlands in Sweden, from which parallels can be drawn with SMEs, Hansson et al. (2022) single out the key benefits of BMI toward organisations. These are: realizing uncaptured value (BMI allows for companies to realize increased production and revenue and also allow for the tapping into new markets); creation of sustainable business responsibility

(through setting up of new robust business systems, organisations are better equipped to deal with various risk and grasping opportunities in more sustainable ways); reaching breaking point (BMI appeals to companies that seem to have reached a ceiling in profitability as it provides ways to reinvigorate business); and valuing organisational resources (due to the holistic nature of BMI, companies get to appreciate every component of the system, from employees, customers, infrastructure to stakeholders, and the role they play in the success of the organisation).

BMI has however not been adopted by SMEs due to numerous explanations (Mangematin et al., 2017; Stampfl, 2016). It is also worth noting that Hansson et al. (2022) identified the major deterrents for SMEs in instituting BMI. These included:

- Avoiding financial risk (changing a business model involves costs and loss of revenue, which most SMEs try to avoid by all means)
- Unclear targets and benefits (companies are often unsure of the level of change and expertise required before benefits can be realised)
- Restriction by old value creation activities (there is a fear that BMI will not be able to replicate the desired value that the old model was able to deliver)
- low tolerance for business change (there is reluctance among SMEs to move away from proven, effective methods in exchange for new, unfamiliar processes).

However, the benefits of the business model, which outweigh these concerns, should be compelling reasons for SMEs to adopt BMI.

2.3 Innovation in Switzerland

As shown in the introduction, Switzerland is by some measures the most innovative country in the world. However, there is very limited research on BMI in the country. Philippi and Hinz (2018) looked at the types of innovation from a Swiss innovation competition and found that 18.3% of the participants do BMI, while product and service innovations are still the dominant type with 60%. They conclude that many participants have the opportunity to innovate their business model but are not aware of it and its possibilities and that BMI will become more important in the future. Similarly, a survey of companies founded in the last five years found that only 15% had conducted a BMI in the last five years and 25% planned to do so in the next two years (Meyer and Meyer, 2020). BMI is therefore still in its infancy in Switzerland.

The State Secretariat for Education, Research and Innovation looks at the innovation landscape in general (Spescha and Wörter, 2020). The number of companies with R&D activities has fallen in recent years; however, the overall expenditure has increased. It can be concluded that the number of companies with innovation activities is decreasing, but the innovation expenditure of those companies with innovation management is increasing (Spescha and Wörter, 2020). The innovation report also shows the main obstacles for companies to innovate, which are high costs, missing equity or external capital, long duration of amortization, as well as the easy imitation of products and services. (Spescha and Wörter, 2020)

2.3.1 Canton Schwyz

The survey was conducted in Schwyz - one Switzerland's 26 Swiss cantons. Schwyz has a population of 163'176 with no major city within its borders. Thanks to its central location and favourable tax conditions, the canton has the third highest number of registered companies per 1000 inhabitants in the country. In 2020, there were 19'134 corporations, compared with only 8'060 in 2000. The company structure changed considerably over the last 15 years. The first (21.8% to 10.5%) and second economic sectors (19.4% to 15.6%) have lost some of their share of all companies in Schwyz, while the third sector (58.8% to 73.9%) has gained significantly. (Kanton Schwyz, 2022) This is in line with the general shift in the Swiss economy towards more companies in the third sector; however, Schwyz has a much higher share of companies in the first sector, which accounts for only 2.4% among all Swiss companies (Federal Statistics Office, 2022).

3. Methodology

3.1 Sample and data

A quantitative written survey was conducted to investigate the innovation status of SMEs in the canton of Schwyz. A representative sample of managers of SMEs registered in the Commercial Register and located in the

Canton of Schwyz was selected using a random sampling method. The data were provided to the University by the Swiss Federal Statistical Office. The survey was sent by mail in November 2021 to a total of 3,918 company managers, of which 237 could not be delivered. The managers had the option of completing the questionnaire in writing and returning it with a self-addressed stamped envelope or answering the questions online. A total of 418 responses were obtained. This corresponds to a response rate of 11.4%. 34% participated in the online survey and 66% chose to complete the paper survey.

3.2 Measures of Variables

The questionnaire used in this study was developed by the FHNW School of Business together with representatives from the Office of Economic Affairs of the Canton of Schwyz and the cantonal development organisation Schwyz Next. The survey contained nine questions divided into a demographic section and an innovation section. In the innovations section, the companies were asked about their knowledge about BMI, and what innovation activities have been and will be carried out in the past respectively the future. Also the importance of different innovation activities was collected with a scale from agree, rather agree, rather disagree and disagree. None of the questions were compulsory, so the number of respondents per factor may vary. A sample of the questionnaire can be requested from the authors.

3.3 Data analysis procedure

The data obtained from the survey was analysed using the statistical software SPSS. The responses were statistically analysed to provide a picture of the innovation status of the SMEs. The results are presented and described in the next section 4. Participation was anonymous and managers who were interested in the results could leave their e-mail address. However, these were removed from the database for analysis so that no conclusions could be drawn about individuals.

4. Results

This section provides the results of the survey with 418 managers.

4.1 Demographics of the managers and the companies

The management of SMEs are dominated by men. 75% of the companies are managed by men, only 25% by women. The average age of the managers is 50 years with the biggest proportion, 40%, between 51 and 60 years old. The share of female managers is the highest in the age group under 30 (31.3%) and decreases with each age group until it reaches 13.3% among managers aged over 60. This data shows that there are more female manager in the younger generations, which could lead to an increase in the total number of female managers in the long-term.

38.3% have a university degree (bachelor, master, or PhD), while the others mostly have higher vocational degrees or a vocational baccalaureate. The companies tend to be small, which is also comparable to the average size of Swiss companies. 72% of the companies surveyed have fewer than 6 employees, 20% have between 6 and 25 employees, 5% between 26 and 50 and only 3% over 50. In the country as a whole, 1.8% have more than 50 employees (Bundesamt für Statistik, 2022)

4.2 Knowledge on Business Model Innovation

The majority of respondents do not know precisely what BMI is, as shown in figure 1. Almost a quarter do not know it at all and almost a third have heard the term, but are unlikely to be able to describe it accurately. Only a third know very well or quite precisely what BMI means.

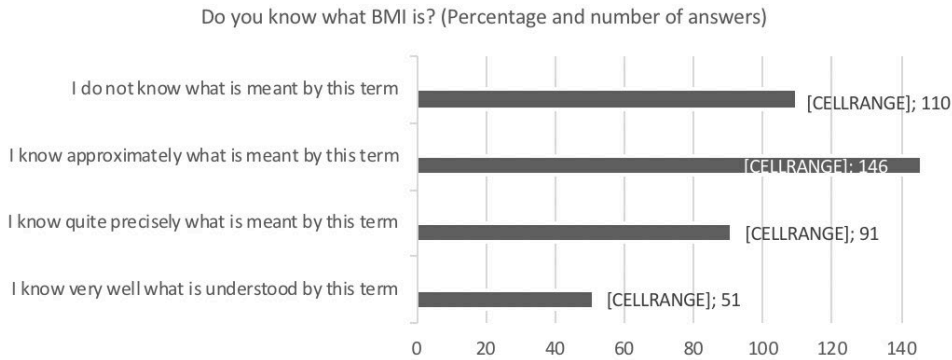


Figure 1: Knowledge of the term Business Model Innovation

These numbers also correspond well to the type of innovation that the SMEs have carried out over the past 10 years (figure 2). 60.9% of the respondents did at least one type of innovation. The most popular is product or service innovation, followed by process innovation. Less than a quarter (22.9%) have implemented new business models in the past 10 years.

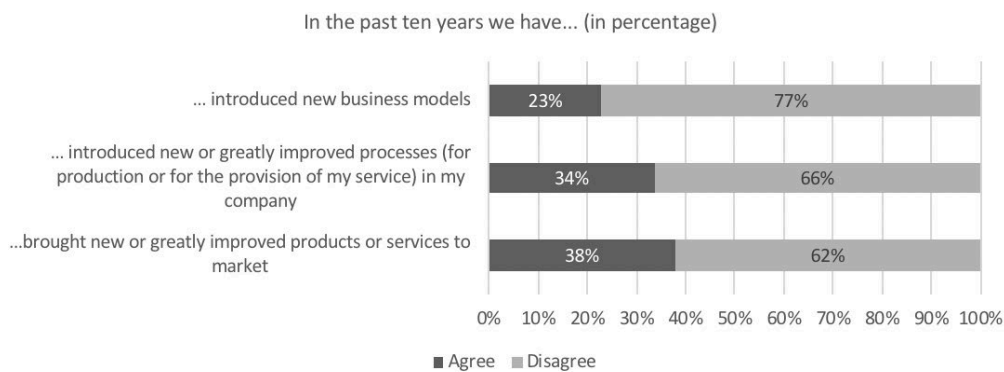


Figure 2: Innovation in the past 10 years

There is a connection between the education and the implementation of new business models. The higher the education of the manager, the more likely the company is to do BMI. The data also shows that the bigger the company is, the more BMI is done.

Interestingly and in contrast to not knowing the term, BMI are important for the businesses and the know-how is there as visible in table 1. 66% say that BMI is important or rather important for their business. While 61.8% say that the know-how to develop new business models is available in their company. There is a correlation between the perceived importance and the available know-how, the higher the know-how, the more the managers understand the importance.

While the know-how is available, tools and checklists to develop and test new business models are less known. Only 9.8% agree to have it, while 35.1% rather agree.

If we compare the responses of managers saying that BMI is important and those that have implemented it, we see that 41% of companies with high importance have done BMI in the past 10 years, while 26.1% of the companies which stated that BMI is rather important have implemented. Comparing this to the total percentage of 22.9%, it becomes visible that the companies that are aware of the importance also implement more BMI.

Table 1 shows the implementation and financing of innovations. 60.1% agree or rather agree that implementing innovations is no problem in their company, which corresponds with the 60.9% of companies that have done at least one type of innovation in the past ten years. Financing innovations is more difficult and only 47.8% agree or rather agree that it is no problem.

Also, the generation of new ideas is no problem for the companies. 84.3% of respondents say that they agree or rather agree with the statement. This shows that new ideas are not used to develop and implement innovations, as much lower percentages actually did implement one of the three types of innovation.

Table 1: Different aspects of business model innovation and the agreement among participants

	Agree	Rather agree	Rather disagree	Disagree	Don't know
Product innovation is very important for our business.	148 37.6%	134 34.0%	58 14.7%	46 11.7%	4 1.0%
Business model innovation are very important for our business	101 25.7%	157 39.9%	88 22.4%	37 9.4%	8 2.0%
The know-how for product innovations is available in our company.	116 29.7%	159 40.8%	63 16.2%	40 10.3%	10 2.6%
The know-how for business model innovation is available in our company	84 21.4%	156 39.8%	91 23.2%	46 11.7%	11 2.8%
Tools and checklists for developing and testing new business models are very well known in our company.	38 9.7%	136 34.6%	121 30.8%	85 21.6%	8 2.0%
Introducing innovative products or business models to the market is no problem for our company.	71 18.1%	162 41.2%	101 25.7%	40 10.2%	14 3.6%
Financing innovations is no problem	65 14.0%	120 30.7%	106 27.1%	80 20.5%	16 4.1%
Generating ideas is no problem in our company.	133 28.6%	194 49.4%	43 10.9%	13 3.3%	5 1.3%
There are relations / partnerships with universities / institutes of higher education	38 9.7%	42 10.7%	72 18.3%	226 57.5%	12 3.1%

In addition, SMEs do not have partnerships with universities or other institutions of higher learning. It can be assumed that over 75% have no partnerships (57.9% disagree and 18.5% rather disagree. Here, the higher the know-how about BMI, the more often they have partnerships. Also, the higher the education, the more often they have partnerships. Of the companies with a manager with a PhD, 56.3% have partnerships.

5. Discussion

While BMI has become increasingly important in the literature, it still has a niche existence among SMEs, which is confirmed by our findings. While SMEs recognise the importance of BMI and also claim to have the knowledge, only few actually implement BMI. The number of companies doing BMI (22.9%) is similar to the numbers found in other studies in Switzerland (Meyer and Meyer, 2020; Philippi and Hinz, 2018). It can therefore be assumed that between 15% and 25% of Swiss companies are working on BMI.

The main finding is that the majority of managers do not know what BMI is and therefore also do not think about doing BMI. Nevertheless, the benefits are manifold and have been shown in the literature (e.g. Hamelink and Opdenakker, 2019; Hansson et al., 2022; Pieroni, McAlloone, and Pigosso, 2019; Velu, 2015) and interestingly, the managers themselves claim that BMI is important to them. Hansson et al. (2022) also state that unclear goals and benefits of BMI are a major barrier for SMEs. This may partly explain the discrepancy between know-how and importance. Managers may have heard of it and know that it is important for their business, but they do not know how to start and what the exact targets could be for their business. This highlights the need for more education. Economic development organisations and universities will play a crucial role in this.

Financing innovation was found to be a major obstacle for SMEs to innovate, with half of the participants stating that financing was indeed a problem. This is also confirmed by Hansson et al. (2022), who found that avoiding financial risks is one of the main barriers for SMEs to implement new business models. The Swiss Innovation Report (Spescha and Wörter, 2020) also mentions mainly financial barriers to innovation - high costs, lack of capital and long payback periods. Innovation agencies, such as Innosuisse in Switzerland, should play a stronger role in financing new business models in order to reduce the financial risks of SMEs. Traditional start-up financiers, such as venture capitalists, could also look to expand their business by investing in new business models of existing companies.

One aspect still overlooked by Swiss SMEs is collaboration with higher education institutions. Switzerland is ranked second in the world for university-industry collaboration in terms of innovation (WIPO, 2021). However, SMEs in particular are becoming less innovative, as the Swiss Innovation Report has shown. This could be changed by partnerships with universities. In their systematic literature review, Pereira and Franco (2021) found that the main barrier is a lack of knowledge about matching university programmes and how to access them. Similar findings are presented by Johnston (2021), who shows that the ability of companies to access and

understand university provision is crucial. Higher education institutions should therefore focus on their communication with SMEs in order to promote their programmes more effectively.

6. Implications and conclusion

BMI is crucial for any business, especially for SMEs that compete with large corporations and have a limited budget, but it is very difficult to achieve (Chesbrough, 2010). This paper has shown that the term BMI is not yet well known among business leaders and that the implementation of BMI is limited. However, it is interesting to note that a much larger proportion of managers are aware of its importance and claim to have the knowledge to implement it than actually do so. There is still a lot of ambiguity around the term BMI, as evidenced by the large proportion of managers who do not know exactly what it means.

Looking at these results, we formulated the following recommendations:

6.1 For companies that are already innovative:

Innovative companies should make even better use of the potential of BMIs. Product and process innovations are still carried out much more frequently than BMIs. Based on planned product or process innovations, these companies should also examine the potential for adjustments to the target group, the market entry, or the financial business model. Often it does not take many additional changes to create an even more attractive business model.

- Tools and instruments: The use of specific tools can simplify life in innovation management and accelerate implementation. Here, even already innovative companies state that they do not have a large repertoire of methods.

- Partnerships with universities: Although partnerships with universities are considered very useful, they are still pursued by a relatively small minority. There is still potential for implementation, even for already innovative companies.

6.2 For companies that have not been innovative:

They see innovation of all kinds as less important and have significantly less knowledge about how to approach and implement innovation. It is therefore not surprising that these companies are unlikely to innovate in the coming years. The challenge is to break this vicious circle. The first step is to recognise that innovation is important for your company. Then the necessary skills must be built up and concrete innovation projects planned and implemented.

A larger number of companies claim to have the know-how for innovation and BMI, but do not implement anything. Further research is needed to find the reasons for this, and to find ways to support these companies effectively.

6.3 Recommendations for regional economic development organisations or similar institutions:

Institutions, which help companies to make their businesses fit for the future, can use these findings to identify the following priorities in their range of services:

- *Awareness*: The term BMI and its importance is still unknown to many companies. This needs to be increased through further activities, information, and examples.
- *Empowerment*: Companies that have recognised the importance of (business model) innovation are motivated to acquire the necessary skills, either on the job or through workshops, training events or targeted reading. Here, institutions can offer appropriate programmes.
- *Implementation* with tools and instruments: Tools for the development and implementation of (business model) innovations are still too rarely used. It is important to promote selected tools and instruments and to offer support in their correct and targeted use.
- *Partnerships* with universities: The study identified these partnerships as a tool used by particularly successful and innovative companies. However, many SMEs are reluctant to approach universities for partnerships. Here, organisations could play a door-opening role by advising and encouraging regional SMEs and helping them to make contact with suitable higher education institutions.

6.4 Limitations and further studies

This paper has three major limitations. Firstly, the data are cross-sectional and cannot be compared over time. Second, the study area was limited to one canton in Switzerland. While we are confident that the results are valid for its neighbouring cantons with a similar economic structure, it needs to be analysed whether the economic powerhouses of Switzerland, such as Zurich, Basel, or Geneva, would show similar results. Thirdly, although the response rate of 11.34% is normal for a mass survey, it can lead to a non-response bias. Despite these limitations, our study provides valuable insights into the SMEs surveyed, laying the groundwork for further research in this area.

Further studies should look at the barriers to innovation and analyse why 56% of companies that claim to have no problems innovating have not innovated in the last 10 years. Understanding these reasons will help to provide them with more tailored support. In addition, the innovative companies' processes for implementing BMI should be studied in order to develop recommendations for other companies. Another interesting direction for further research is the differentiation between economic sectors.

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