
Pivots in Startups: Factors Influencing Business Model Innovation in Startups

Christian Comberg

HHL Leipzig Graduate School of Management, Jahnallee 59, 04109
Leipzig, Germany.
E-mail: christian.comberg@hhl.de

Friedemann Seith

HHL Leipzig Graduate School of Management, Jahnallee 59, 04109
Leipzig, Germany.
E-mail: friedemann.seith@hhl.de

Andrew German

HHL Leipzig Graduate School of Management, Jahnallee 59, 04109
Leipzig, Germany.
E-mail: andrew.german@hhl.de

Vivek K. Velamuri*

HHL Leipzig Graduate School of Management, Jahnallee 59, 04109
Leipzig, Germany.
E-mail: vivek.velamuri@hhl.de

* Corresponding author

Abstract: Pivoting, i.e. business model innovation in startups is a crucial topic for young firms, since the probability that startups create a first business model that immediately works without any errors in an environment of high uncertainty is often low. Although it is easier for startups to implement a new business model because of their agility; they often have just one shot to pivot due to limited financial resources. By applying an exploratory multiple case study approach, six factors that influence the pivoting process in startups were identified. These are: (1) role of founders, (2) sustainability of the BM, (3) cash and financing, (4) market conditions, (5) business financials, and (6) new technology. Further the impact of these key factors on the pivoting process of the firms under study is discussed. In total, our study emphasizes the importance of the identified triggers and influencing factors for a successful pivot.

Keywords: Business model innovation, pivoting, startups, case study research

1 Introduction

Over the past two decades, business models and business model innovation (BM and BMI) has received increased attention from both practitioners and academics alike. A BM itself has been identified as a distinct source for competitive advantage and therefore a valuable tool in competitive business environments (Christensen, 2001; Zott, Amit and Massa, 2011). According to the 2008 IBM Global CEO study, 70% of top business executives and public sector leaders stated that their enterprises are looking at BMI to create additional value (IBM, 2008). BMI is not only reserved for large, multi-national corporations, but smaller firms and new ventures (or "startups") can also be impacted by changes to their BM. In startups, an innovation to the business model is referred to as a "pivot" (Ries, 2011, p. 149) and can be particularly attractive because of the ease of implementation and quick decision making process in young firms (Santos, Spector, and Van der Heyden, 2009). Furthermore, startups seem to be confronted with BMI more often than incumbent firms, because the probability that founders of startups create a first business model that immediately works without any errors in an environment of high uncertainty is often low.

It is also reasonable to assume that influencing factors of BMI in incumbent firms and startups differ from each other. For example, the influence of founders in startups can be higher than in incumbent firms where the founders may only be involved as shareholders or may have entirely left the company. Furthermore, instead of a trigger such as a crisis or a market change (as in the case of incumbent firms), a startup may have simply chosen the wrong BM because it has no experience in the market.

Thus distinct research is recommended for BMI in both these contexts, i.e. incumbent firms and startups. In general a considerable amount of effort has been exerted by researchers exploring business model innovation and its definition, application, and effects on a firm (e.g. Zott et al., 2011; Mitchell and Coles, 2003, 2004). Through this research, numerous benefits of business model innovation have been identified, such as an increase in financial performance (e.g. Aspara, Hietanen, and Tikkanen, 2010), the ability to strengthen a firm's strategic position (e.g. Gambardella and McGahan, 2010), and its power to attract new customers (e.g. Kim and Mauborgne, 2005). However, while there is a variety of research available on BMI in incumbent firms (e.g., Chesbrough, 2010; Govindarajan and Trimble, 2005; Koen, Bertels, and Elsum, 2011; Santos et al., 2009), research in the context of BMI in startups, i.e. pivoting, is rather limited.

To fill this gap the study at hand draws especially attention to startups by exploring factors that influence BMI in the pivoting process. Therefore the aim of the study is to explore what matters during BMI in the context of startups. Key factors¹ are identified through a case study including four startups. The interviews and subsequent research are performed with the following research question in mind:

RQ: What are the key factors that influence BMI in startups?

To answer the research question the study on hand builds on existent theoretical contributions and draws upon a multiple case study approach, conducted with four

¹ A trigger initiates the pivoting process. An influence becomes relevant in the process of the pivot. Both, a trigger and an influence, are summarized as key factor.

startups²: Eli (e-learning industry), CoBu (company builder), MoGa (mobile gaming industry), and SponRe (sport online retail). The paper is organized as follows: Sec.2 contains the theoretical underpinning and deals with literature on BMI in the context of startups, i.e. pivoting. Section 3 provides a description of the research design and an overview about the case studies as well as the interviews. Using a qualitative cross case analysis, Sec. 4 identifies the key factors of BMI in startups. Finally, Sec. 5 contains the discussion part and concludes the paper.

2 Theoretical Background

Despite the fact that every company operates a business model (Chesbrough, 2007), business model research is a comparatively young research field. This becomes apparent by the fact that there is still no common accepted definition for the term “business model” and hence for BMI (Zott, Amit, and Massa, 2011). Business models form the basis of BMI, hence it is mandatory to define the term business model first. Normative business model definitions are especially suitable to indicate the business model elements that are affected by BMI. In line with Johnson, Christensen, and Kagermann (2008) we state that a business model consists of three interlocking elements, [i.e., customer value proposition (CVP), profit formula (PF), key resources and processes (KR&P)] that taken together, create, deliver, and capture value. Based on the above provided definition, BMI leads to a new combination of the CVP (i.e., perceived usefulness for customers), PF (i.e., the manner incomes are generated and costs are structured), and KR&P (i.e., resources and processes necessary to create, deliver, and capture value). Following this definition, a relevant change in one or more elements of a business model can result in BMI (Amit and Zott 2012; Mitchell and Coles 2003).

Sosna, Trevinyo-Rodríguez, and Velamuri (2010, p. 384) posit that firms *“begin with a business model and then - in response to certain triggers (typically external)”* adjust their business model without explicitly specifying these triggers. Furthermore, they suggest that a severe crisis might bring about a significant change in the business model, once more without identifying what kind of severe crisis that could be. De Reuver et al. (2009) explore these external triggers in more detail and state that market-related and technological changes are the most prevalent drivers of business model revision throughout their life cycle. They further note that regulation is not such a dominant trigger as expected. Giesen et al. (2010) identify other relevant external triggers such as the macro-economic climate and its impact on customer preferences and spending habits. Furthermore, they argue that internal triggers such as product or service innovations can be a catalyst for business model innovation. With regards to internal triggers, Demil and Lecocq (2010) further highlight top or middle managers’ decisions, but also the consequences of the interdependencies within or between the business model components. Sako (2012, p. 24) notes that the ability to *“satisfy consumers’ unmet needs is perhaps the most important driver of business model innovation”*, yet does not differentiate between incumbent or new firms.

In his 2011 New York Times bestseller “The Lean Startup”, Eric Ries (2011) introduces the term “pivot” in the context of business models to the academic world. The book centers on the question whether a startup should decide to pivot or to persevere.

² All the startups have been anonymized.

Ries (2011, p. 178) defines a pivot as a major change, a structured course correction “*designed to test a new fundamental hypothesis about the product, business model, and engine of growth*”. However, there have been copious amounts of blogs and articles referencing “pivots”, but these are based on a practitioners view and are not supported by any academic work.

As pivoting refers to a “*structured course correction of a BM*” (Ries 2011, p. 149), the concepts of Business model development (BMD) and BMI have to be distinguished carefully. Recognizing the relatedness of both concepts, Schneider and Spieth (2013) emphasize that BMD focusses on incremental innovations, i.e. adjustments within the established BM, whereas BMI focusses on exploring and exploiting opportunities in its external environment. Based on Ries’s definition of pivoting, which refers to major changes and course corrections instead of incremental adjustments (Ries, 2011); pivoting can be viewed as a concept of BMI. In addition, all the ten specific types of pivots (Ries, 2011) can be linked to at least one of the three BMI components defined by Johnson et al. (2008) (see Table 1).

Table 1 Ten types of pivots and BMI components

<i>Type of pivot (Ries, 2011)</i>	<i>Description</i>	<i>BMI component</i>
Zoom-in Pivot	A product's single feature becomes the main product	CVP
Zoom-out Pivot	The product becomes a feature of a larger product	CVP
Customer Segment Pivot	The hypothesis about the targeted customer changes	CVP
Customer Need Pivot	The real customer need is a different one than originally assumed and a new product may be required	CVP
Platform Pivot	An application becomes a platform or vice versa	CVP; PF
Business Architecture Pivot	The company changes from a complex systems model (high margin, low volume) to a volume operations model (low margin, high volume)	CVP; KR&P
Value Capture Pivot	Changes in how a company captures created value	PF
Engine of Growth Pivot	Change in growth strategy that may come with a change in value capture	PF; KR&P
Channel Pivot	The same customer solution can be offered through another channel more effectively	PF; KR&P
Technology Pivot	A new technology solves the same customer need at a superior price and/or performance	PF; KR&P

Source: Own illustration.

3 Research Design

Since research on key factors of BMI in startups, i.e. pivoting, is still limited, an explorative qualitative research approach was adopted. Because the research focuses on contemporary events without control over behaviour, a case study approach is superior to other qualitative research strategies (Yin, 2009). Furthermore, a holistic case design

seems to be the most suitable approach for the exploratory and qualitative character of this research, since a case study shall “illuminate a decision or a set of decisions; why they were taken, how they were implemented, and with what result” (Eisenhardt, 1989; Schramm, 1971, p. 6.; Yin, 2009). To enhance the resulting interference in the context specific factors and patterns, a comparative case analysis was chosen, i.e. data from multiple cases were assembled and examined in an iterative way.

To satisfy the requirements of a case study and triangulation of data, several methods for data collection were chosen (Eisenhardt, 1989). First, a startup’s history was constructed referring to official online press releases of the startup’s web presence and articles published in online (startup) journals. The history helps to get a first glance at what the startup does and how it has developed. Second, interviews with key personnel (mostly founders) related with each pivot completed the cases by adding details to the histories and revealing the process behind the pivot that is usually not covered in the press. To increase external validity and ensure a high degree of generalization, four startups with different backgrounds (e.g. different market situations, investors, age, employees and history) and from several industries were examined. The cases were chosen according to replication logic, i.e. altering experimental conditions only to a minor extent, to ensure robustness of the findings (Yin, 2009). The sample of startups also includes more extreme and obvious pivoting cases but also minor pivots where it takes a second look to identify the pivot, as recommended for small samples by (Pettigrew, 1990). See Table 2 for an overview of the examined startups and selected company information.

Table 2 Overview of examined startups

<i>Startup</i>	<i>Company age</i>	<i>Full time employees</i>
Eli	5 years	~25
CoBu	2 years	>100
MoGa	4 years	~280
SponRe	3 years	>80

Source: Own illustration.

A semi-structured approach was chosen for the interview style. The interviews were conducted via telephone or in person and are 60-120 minutes in length. The interviewee had the opportunity to review the company history in advance to make suggestions on how to improve it with further details, if necessary. In a next step, a short review ensured correctness and completeness of the pre- and post-pivot business models for discussion. After having agreed upon the company’s history and the business models, open-ended questions were asked to understand the pivoting process and to reveal underlying influences. The questionnaires were built to reconstruct the pivot and to identify key factors along the process. It started with a discussion on the beginning of the pivot, questions on the influences during the creation of the new business model and ended with a conclusion in hindsight of the interviewee. The questionnaire confronted interviewees with questions such as “Who started the discussion that your startup may require a pivot”, “What criteria did you evaluate on whether to pivot or not”, “What criteria did the old business model not fulfil but the new business model does”, and “What would have

happened if you had not pivoted?” After the interviews were completed, they were transcribed and coded to cluster related information. To present the results in a plain way, each case was displayed in a flow chart. This helped in further steps of analysis. To increase the probability of identifying cross-case key factors, certain tactics such as pairing of cases and isolated analysis of data sources were applied (Eisenhardt, 1989).

4 Findings - Pivot case descriptions

To develop the findings, in a first step, each pivot case will be presented independently to show the company’s unique development over time. At the end of each description flow charts were created by combining the companies’ histories and the respective interviews (see Figure 1-4).

Eli

Eli was founded in July 2008 and focused on education through e-learning by providing pre-recorded university lectures via an online platform. Eli’s aim was to become Europe’s most comprehensive and user-friendliest platform for online, high-quality education.

In the beginning Eli worked together with “e-authors” (university professors) who produced high-quality and cost effective videos at their own expense. Registered users (i.e. students) could watch the videos online via a proprietary web-player that displayed the instructor as well as supporting illustrations (e.g. lecture slides). After going live in April, 2009, the founders quickly realized the existing business model was not producing the expected revenues and profitability. Universities in Germany were also slow in adapting to the innovative product offered by Eli. The startup also soon realized that it needed to expand its e-author and user base in order to augment its revenues. They began to focus on professional tracts such as Law, Medicine, and Education as well as partner with large corporations. At the same time Eli started to develop software-as-a-service³ solution to sell the technology as a white label.

In May, 2012 Eli began offering a more personalized experience, including giving feedback to users and mock exams. In early 2013, Eli expanded its offering to provide more holistic education solutions, including occupational courses focused on Microsoft Office or Adobe products. Currently Eli describes itself as a “platform for interactive online and mobile learning.”

Comparison of the pre- and post-pivot business models

Eli did not fundamentally change its business but rather the way it does business. The company still offers educational content online, but the content creators as well as the intended users have changed. Originally targeting only universities and their students, Eli now offers over 4,000 courses by industry experts for professional and recreational use.

³ SaaS is defined as “the capability provided to the consumer [to] use the provider’s applications running on a cloud infrastructure. The applications are accessible from various client devices through either a thin client interface, such as a web browser (e.g., web-based email), or a program interface [...]” (Mell and Grance, 2011, p. 2).

Drawing from the argumentation of Ries (2011), Eli underwent a mix of Customer Segment Pivot, Value Capture Pivot, Engine of Growth Pivot and Channel Pivot.

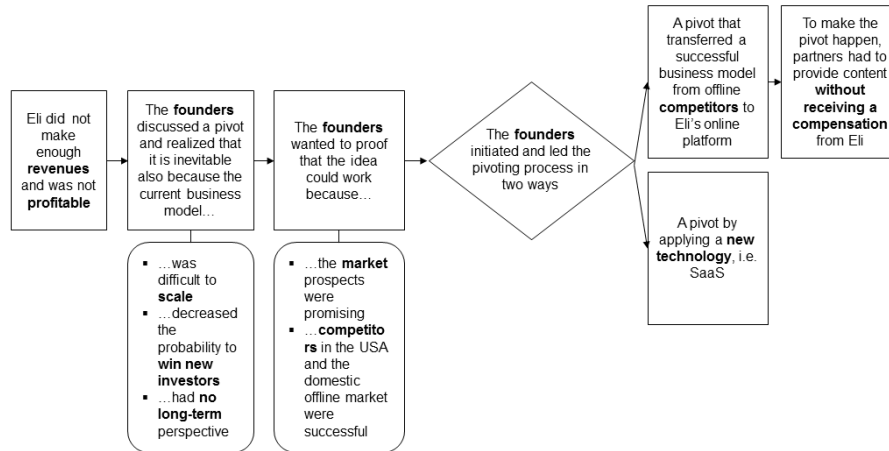


Figure 1 Flow chart of the pivot of Eli

CoBu

CoBu was founded in May 2011. Originally founded as a digital distributor for video games, two months later the founders changed the focus to the physical distribution of games through flash sales (e.g. Groupon). CoBu started offering limited-time deals for online, offline and mobile games, hardware, and game complements such as virtual commodities. CoBu's long-term goal was to become the leading marketing partner for game publishers, focusing on user acquisition.

At the end of 2011, CoBu was growing rapidly, but profitability was still lagging. The market for physical distribution of goods became more competitive and offered decreasing margins. At this point, CoBu decided to focus on free-to-play games⁴. After acquiring a "games marketing network" in early 2012, CoBu's range of marketing channels and total customer reach for free-to-play games was expanded.

In the middle of 2012, CoBu also founded the holding company "CoBu-Ventures", a company builder and incubator for game marketing and distribution startups. Soon after that the CoBu-Ventures founded two separate companies: (1) a mobile games marketing company, and (2) a mobile app for discovering new games. In December, 2012, the original startup CoBu was folded, leaving only three companies in the portfolio of CoBu-Ventures. By 2013 CoBu-Ventures had over 180 employees in offices in three different continents.

Comparison of the pre- and post-pivot business models

The CoBu pivot was drastic. The only remaining original components are the founders,

⁴ Games that can be played for free but generate revenues from in-game purchases and/or advertisements.

the market (i.e. mobile gaming industry), and the step in the value chain the company operates in (i.e. marketing and distribution). Drawing from the argumentation of Ries (2011), CoBu underwent a mix of Customer Segment Pivot, Business Architecture Pivot, Value Capture Pivot, and Engine of Growth Pivot.

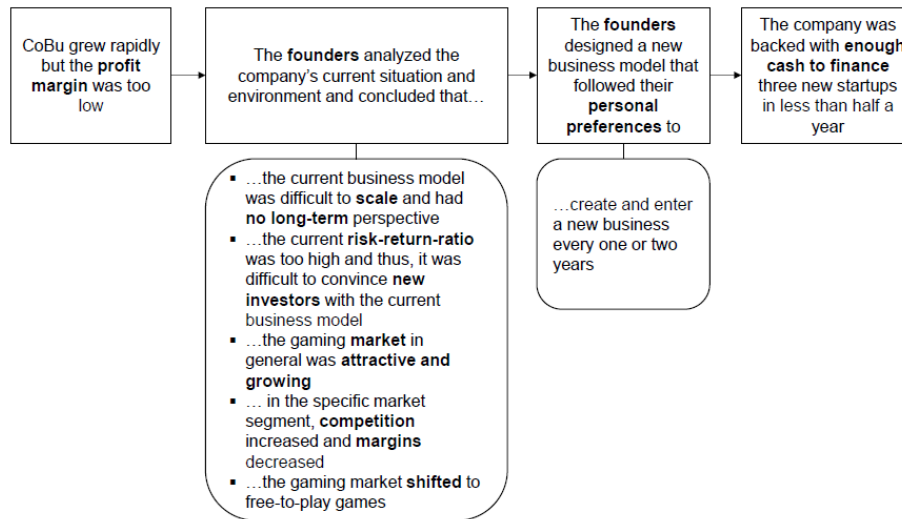


Figure 2 Flow chart of the pivot at CoBu

MoGa

MoGa, founded in January 2009, is a leading player in the mobile gaming industry. The company’s initial concept was to develop free-to-play video games for social network platforms, or “social games”. Expected revenue streams were from in-game purchases and premium account fees. MoGa’s first game, released on Facebook in July 2009, attracted over 2.5m monthly active users after just five weeks. In March, 2010, even with millions of active users MoGa had not generated any revenue.

In July, 2010 MoGa began to monetize their games with the virtual currency, Facebook Credits. In March, 2011, MoGa confirmed several million Euros in 2010 revenue, and also stopped offering games on the VZ-Networks. In May, 2011 MoGa had become the third largest social game developer.

In the middle of 2011, the founders of MoGa noticed a “technological revolution” occurring with mobile devices, and announced their plan expansion to mobile games. Mobile users connecting with Facebook were significantly more engaged and eight times more likely to spend money on in-game purchases.

From August 2011-2013, MoGa launched six games onto mobile platforms, including its own downloadable games for Apple iOS and Google Android across a variety of device, as well as the mobile version of Facebook. In February, 2013, MoGa announced 50% of the company’s revenues were already generated through mobile versions of its games. In August, 2013, 280 employees were employed at MoGa. In January, 2014, MoGa launched its first game on the popular Korean messaging service KakaoTalk.

Comparison of the pre- and post-pivot business models

MoGa underwent a fundamental change since its inception in 2009. Games were originally made to be played on social networks, and now new games are developed first for mobile devices, and then brought to other platforms. The company now pursues a multiple-device strategy. The customers are the same, but they can now seamlessly play on Facebook and their mobile devices. Drawing from the argumentation of Ries (2011), MoGa underwent a mix of Value Capture Pivot, Engine of Growth Pivot, Channel Pivot and Technology Pivot.

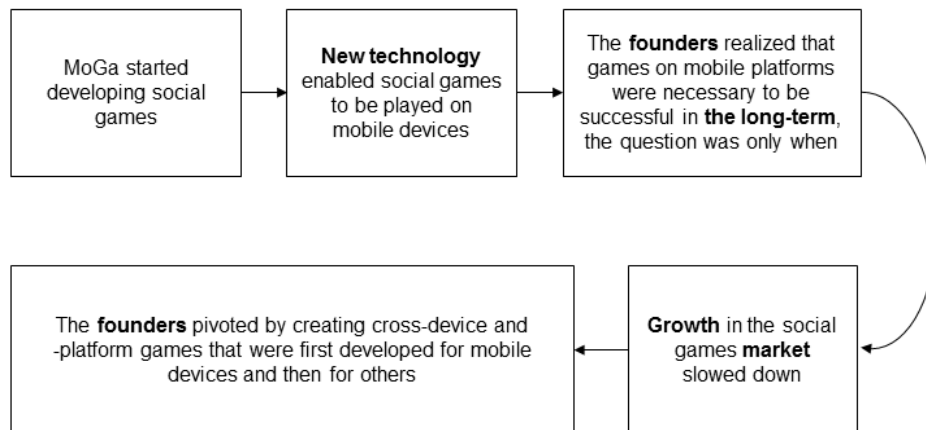


Figure 3 Flow chart of the pivot of MoGa

SponRe

SponRe was founded in May 2010. The company was meant to be the first online shopping club for sport enthusiasts, offering only sports and outdoor products (e.g. for running, cycling, winter sports, sport nutrition and more) for low prices at limited quantities in a short time period. At the beginning SponRe operated in two central European countries based on an “invite-only”-principle (i.e., customers became members through invites by existing customers). The second round financing was accompanied by a re-launch of the website. SponRe now offered several flash sales at the same time instead of just one. The founders still felt that the shopping club was limited in scale and that they wanted to grow into a larger company in the long-term. In 2011 the startup announced that it will establish a “standard online shop” for sport and outdoor articles besides its existing “shopping club business”.

By middle of 2012, the startup was managing the two companies (1) the standard online shop, and (2) the shopping club business. By the middle of 2013, the SponRe employed over 70 people in total. To grow further, the company partnered with other more specialized online retail companies (e.g. an outdoor climbing shop). SponRe sold the products of its new partners on its website for a commission fee.

Comparison of the pre- and post-pivot business models

SponRe underwent two pivots. During the first pivot, SponRe augmented the shopping club business by introducing the standard online retail. Both these business ran as separate entities under the umbrella brand SponRe. In the second pivot, to improve the product portfolio its standard online retail business, SponRe partnered with other retailers to bring their products on its website. Drawing from the argumentation of Ries (2011), SponRe underwent a mix of Customer Segment Pivot, Value Capture Pivot, and Engine of Growth Pivot.

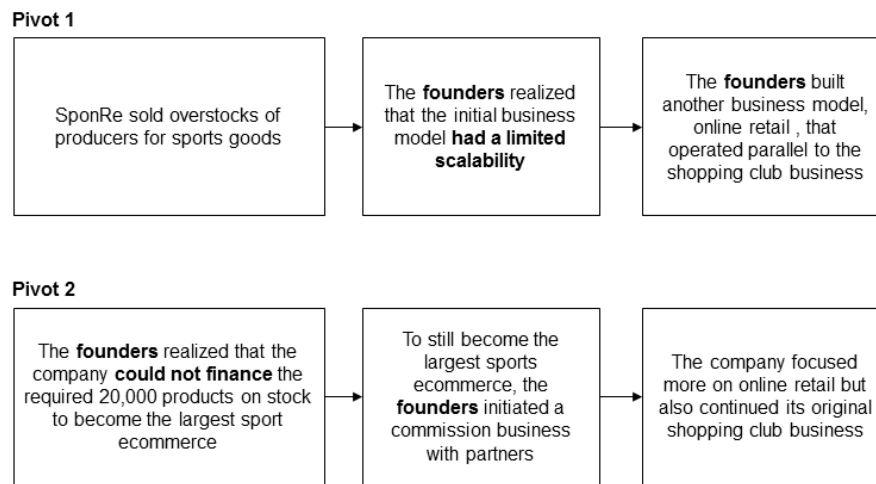


Figure 4 Flow chart of the pivot of SponRe

5 Findings from the cross-case analysis

The second step provides a cross-case analysis whereby the cases were compared side by side to identify generic cross-case key factors. This step revealed that BMI in startups is strongly influenced by: (1) role of founders, (2) sustainability of the BM, (3) cash and financing, (4) market conditions, (5) business financials, and (6) new technology. Table 3 gives an overview about the identified key factors.

Table 3 Key factors that influence BMI in startups

<i>Key factors</i>	<i>Eli</i>	<i>CoBu</i>	<i>MoGa</i>	<i>SponRe</i>
(1) Role of founders	<ul style="list-style-type: none"> • Founders led the pivot 	<ul style="list-style-type: none"> • Founders took initiative • Founders led the pivot 	<ul style="list-style-type: none"> • Founders took initiative • Founders led the pivot 	<ul style="list-style-type: none"> • Founders led the pivot
(2) Sustainability of the business model	<ul style="list-style-type: none"> • Long-term perspective of business model • Scalability • Ability to win new investors 	<ul style="list-style-type: none"> • Long-term perspective of business model • Scalability • Ability to win new investors 	<ul style="list-style-type: none"> • Long-term perspective of business model 	<ul style="list-style-type: none"> • Limited scalability
(3) Cash and financing	<ul style="list-style-type: none"> • Financing the pivot 	<ul style="list-style-type: none"> • Financing the pivot 		<ul style="list-style-type: none"> • Financing the current business model
(4) Market conditions	<ul style="list-style-type: none"> • Market attractiveness • Competitors 	<ul style="list-style-type: none"> • Market attractiveness • Competitors • Market trends 	<ul style="list-style-type: none"> • Market attractiveness • Decreasing market growth 	
(5) Business financials	<ul style="list-style-type: none"> • Profitability • Revenues 	<ul style="list-style-type: none"> • Profitability 		
(6) New technology	<ul style="list-style-type: none"> • New technology 		<ul style="list-style-type: none"> • Technology shift • Change in customer behavior 	

Source: Own illustration.

(1) Role of Founders

In all four cases under research, it became evident in the interviews that the founders were one of the most important factors that influenced the process of the pivot and often were actors who took initiative. One reason could be easy that they often had an in-depth overview of the current situation of the startup. The founders analyzed the current situation of a startup and its environment to start the discussion about a pivot. As one founder stated:

“one of us [one of the founders] made the decision that we had to change something. It was obvious to all [the founders], but one person was made responsible for leading [the process].”

Usually one or more founders discuss the necessity of a redesign and finally decide to pivot. This also implies the coordination of all players related to the pivot (e.g. employees, investors, customers, industry experts etc.) as one founder pointed out:

“First, it was only the group of founders. Later, the whole team got involved. We checked our assumptions with investors and industry experts, but the founders [...] were the leading force behind the pivot”

While the founders are the primary facilitators of the pivot, they are not a trigger. They simply realize the need to change the BM, and then drive the process. Nevertheless they influence the pivot the most since their leadership is instrumental to the pivot, as one founder said:

“The founders are executors. They have to analyze that something is wrong. This something is the trigger of the pivot, not the founders themselves. [...] But looking at what or who is responsible for the success of the pivot, it is the founders.”

Concluding, founders are often not a trigger of a pivot, but an influencer and therefore a key factor. They analyse the current BM and realize that a pivot is inevitable for the company, and then execute it according to their decision making.

(2) Sustainability of BM

To be sustainable, a startup needs to grow. The business model needs to be designed in a way that the company can scale up quickly and maybe even go international. The interviews confirmed that this was an important factor during the pivot, as one founder said:

“[The new business model] enables internationalization. We can now source multilingual content. You can acquire new authors who record their content in English and Spanish.”

Another founder stated:

“Post-pivot, [the business model] is very international, only 10% of our revenues are generated in Germany. Pre-pivot, almost all our revenues came from Germany.”

Besides growth, startups need capital and investors to sustain months or even years of non-profitability. If the business model is no longer attractive to investors, startups will find it difficult to pitch for new money. As one founder said

“We simply had to prove that the business model is working to further grow and be attractive for investors”

The founders of CoBu realized that the way they were doing business (i.e. through flash sales) was not sustainable and had no long-term future. The market the company operated in was promising; the company grew rapidly and was profitable. But the concept of flash sales was built on a hype that could not retain its rapid growth.

“We would have built a company that would not have gotten a lot of new capital from investors, it would have been profitable on a small scale but with no growth in sight.”

Another founder noted:

“What was a trigger of the pivot? That the business model had no prospects. [...] We looked at [...] how we got it financed, in what type of models do investors invest and how do they invest?”

In conclusion, recognizing their current BM would not be sustainable in the long term was another key factor for each of the firms under study. Even though a startup could have been profitable at the time, the founders had enough foresight to realize that the firm's in-place BM would not survive and initiated the BMI.

(3) Cash and Financing

In three of the four cases under research, cash and financing played an important role in different ways. At Eli, cash was already a scarce resource because revenues were low and profitability in long distance. In the beginning, the pivot required the partners to provide content for Eli's online platform without receiving any compensation by Eli because it could not be financed. This led to a barrier of the pivot that had the potential to become a hurdle impossible to overcome. Fortunately, the founders managed that partners were willing to defer compensation to realize future business, as one founder said:

“[The partners] had to invest significant time and money without knowing if they will ever earn money with it. This was difficult to sell but in hindsight, it worked pretty well”

At CoBu, the company was backed with enough cash by venture capitalists to finance resources, i.e. staff and management. The pivot took place in less than six months and resulted in three new startups under a holding structure, as one founder stated:

“We were lucky to have resources that allowed us to do so many things at the same time. The luxury to have these management resources is rare and definitely not the regular case. Otherwise, we would have not founded three new businesses. It was luck or even chosen consciously because we knew: we have the resources”

In the case of SponRe's second pivot, financing played the role of a trigger. The founders wanted to become the largest sport ecommerce in central Europe. But reaching this kind of size requires the company to expand its full price product portfolio. This enhancement of products would have come with increased complexity for management and with a strong need of cash to finance all these products prior to selling them. The amount of money required to finance 20,000 products in stock was estimated by management to be around €20m. A pivot and the new business model including commission business with partners solved this issue:

“It was the impossibility to scale our business because we had restrictions in terms of financing. The new business solved that. [...] If we would have had infinite resources, we would not have needed [a pivot]”.

Concluding, cash and financing can be triggers and influences (barrier, facilitator or

influence) on the pivoting process.

(4) Market conditions

The market that the startups were operating in always played a crucial role in the pivot. None of the startups has switched to another market but elements such as growth, competitors, trends, and overall attractiveness shaped the new business models. Eli realized that the first business model bringing together university professors and students did not pay off as initially planned. But they decided to stay in the market because the overall attractiveness was high: the global market for education was four times the market of fashion and the global e-learning market was expected to grow with a CAGR larger than 20% until 2017 (IBIS Capital, 2013). They looked at existing competitors in the German market and transmitted the existing business model of offline revision courses to their online platform. They knew that this could work by looking at existing startups such as Lynda.com in the USA.

CoBu also looked at competitors. By combining market data and opinions by industry experts in their network, the team of founders identified market trends such as increasing competition, declining margins and a shift to free-to-play games. MoGa also closely followed market developments and decided that market figures should initiate a change, as one founder said:

“Mobile was always a topic for us, it was more the question when. When we noticed growth slowing in Facebook in Western countries we saw we needed to get back in a growing market segment.”

In conclusion, while none of the startups switched markets entirely, there were relevant factors within the market that dictated a change. By evaluating existing competition, market data or even additional customer segments, the founders realized that other areas of the market needed to be exploited.

(5) Business Financials

To generate growth, companies need money to invest. Solid revenue streams are one of the most important things for a startup to survive. Eli had one crucial issue: even though it created value for its customer segments (reputation for universities and professors, online access to recorded lectures for students), the startup was not able to capture this value. Professors were not willing to make money with their lectures. Students were not willing to pay for recorded lectures. Therefore the founders had to redesign their initial business model in a way that enabled the company to make revenues, operate profitably and survive in the long-term. In contrast, CoBu grew rapidly and made stable and growing revenues. But costs for e.g. marketing were so high that in the end the profit was relatively low, as one founder stated:

“[...] it was the financial KPIs that did not convince. We grew but the margins did not match [our expectations]. We had to invest a lot of money into marketing. We made a long-term financial model to see how much financing we needed to reach a certain company size. The result was that the financing risk [and] the risk-return ratio was too high [...]”.

One may assume that in the case of MoGa, increasing revenues were part of the pivot because the company did not make any revenues for a year. But the company already had defined revenue streams in its initial business model but it took a year until it realized them. Concluding, a bad or not-satisfying situation in a startup's profit and loss can spark a pivot. It could not be shown that it also influences the pivot in the process, besides that an innovated business model needs to solve the initial issue.

(6) New Technology

As described earlier, new ICT are not seen as a prerequisite for business model innovation but it can trigger it. At MoGa, customers changed their behaviour of how they play games. They switched from social platforms on desktop devices (such as a personal computer) to mobile devices. But this change is initiated by new technology: new mobile devices such as smartphones and tablets enable games to be played in a way that is superior to desktop devices, as one manager said:

„Traffic and user activity are exploding on mobile devices whereas growth in the web browser/desktop segment is slowing down. The entire user behavior is different. Not because they are other users: Users in the mobile segment are the same as in the web browser/desktop segment. The context and the technology are different.“

The same manager added:

„In my opinion we are at the beginning of a second disruption-wave through mobile. The second wave is even more powerful, because it is global. I think there are 1.2 billion smartphone users worldwide. That is a giant mass market. Therefore I believe that many other players have to switch to mobile to survive.“

Concluding, the shift away from pure social games to mobile games was initiated and influenced by new technology. But new ICT cannot only trigger a pivot but also influence it in the process. At Eli, the founders decided to follow more than one path for business model innovation. Software-as-a-service opened another opportunity for Eli to innovate. Eli wanted to develop a white label solution and sell it later to companies. This path of business model innovation did not develop as well as the change in content and adaption of value capture but it existed. Concluding, new technology was clearly an impetus for the pivot and also influenced it in the process.

6 Discussion

This work contributes to the ongoing discussion on business model innovation. More specifically, it takes a closer look on business model innovation in startups that are more flexible in their organizational structures and hence, business model innovation can be expected to be easier to implement than in large corporations. Our data analysis reveals that the firms under study were affected by six key factors when pivoting. Namely, these are: role of founders, cash and financing, sustainability of the business model, market conditions, business financials and new technology.

It was not surprising that the role of founders was the strongest driver of a pivot. In a startup, founders combine top management and ownership. They shape the company and

its goals. They are the most important contact persons for all stakeholders (e.g. investors, employees, press, and more). They interpret signs and signals in the environment and the market and react to it. They have the best overview of the company and are aware of all current developments. Concluding, they are the most crucial people for the startup's business development and strategy. Hence, fundamental innovation of the business model needs to be led by a founder or the team of founders, from deciding on a change to implementation. In line with de Reuver et al. (2009) our study also identified market conditions and new technology as key influences of BMI in startups. In addition, our analysis emphasizes the strong interrelatedness between these two key influences. In MoGa's case customers switched from social platforms on desktop devices (such as a personal computer) to mobile devices. This shows that next to new technology (smartphones) also the diffusion of these new technologies and the acceptance among users has to be high to have an impact on the pivoting process. In contrast to Sosna, Trevinyo-Rodríguez, and Velamuri (2010) our findings show that triggers and influences on BM don't have to be "typically" external. Role of founders, business financials and (depending on the definition), cash and financing are clearly internal influences. Therefore, this work adds to the work of Giesen et al. (2010) who also mentioned internal factors but did not specify or name them. Surprisingly, the interviews concordantly showed that the investors were not one of the key factors in a pivot. One might expect that due to their importance as being capital providers, they are strongly involved in the pivoting process because it initiates a fundamental change in operations. On the other side, this may also be the main reason why investors are barely involved, because investors have nothing to do with operations. According to the interviews they only had to confirm a pivot.

The identification of key factors allows for more implications. Ries (2011) recommends startups and founders to meet on a regular basis and discuss the current business and business model. The identified key factors let practitioners better understand the process of a pivot. First, it helps top management to interpret signs in day-to-day business on whether a pivot may become an option or even necessary. For example, it offers the perspective that low revenues or profits may not be a result of poor operations but of market conditions or it may hint to non-sustainability of the business model (e.g. because the business model is short-term oriented and partially based on a hype like the first business model of CoBu). Furthermore, it supports startups in designing a new business model or even starting the discussion about it. The set of factors can serve as a guideline for top management to thoroughly analyze their environment and screen for factors they so far may have ignored. For example, one interviewee revealed that cash and financing may make any founder blind for required changes in the business: "Someone who has a lot of cash can make a quicker pivot. But it is less likely that he even will. If you have €10m on your bank account, you rather stick to your path. You would have to be very visionary to see that something is not right with €10m" CoBu showed that strong financing can facilitate the pivot. Startups should ask themselves on a regular basis if they should pivot, nevertheless a strong or weak cash situation.

Still, the validity of this study's findings is limited due to a comparably small sample size. The sample was not of a larger size because of two reasons. First, the total pool of startups is limited because not all startups are widely covered in the press. This was necessary to guarantee a valid source of data from a different point of view besides interviews. Second, startups may hesitate to admit that they pivoted because this would imply that the first try of implementing a business model failed. Lastly, all startups were

based in Europe. A sample with startups from different countries should increase the total informative value of such a study.

This work mainly focuses on startups and its founders or top management. Future research could investigate the view of capital providers (i.e. venture capitalists and business angels) on business model innovation in startups. For example, the leading character of founders in a pivot endangers it to be subject of a bias without the founders noticing it. It would be interesting to see empirically whether a stronger involvement of investors in a pivot improved or worsened the outcome and quality of a new business model.

Finally our study sheds light on business model innovation in startups. Although not very visible to outsiders, pivoting in startups occurs frequently, and is more common than one might expect it to be. It is a useful tool to correct wrong decisions of the past and strengthen the business for the future. Therefore founders and top management should constantly pay attention to the necessity of a pivot and implement it when required. Our identified key factors support this difficult endeavour.

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