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Communicating The Business Model at a Swedish Start-Up: An Interpretive Study

Emelie Havemo¹

Abstract

Purpose: Although the notion of articulating and communicating ideas is central to theories of business models, the current literature has scarcely explored how business models are used and communicated by practitioners. The label "business model" itself can both organize and construct beliefs and actions. The purpose of this paper is to explore the roles of practitioner-described business models by using an interpretive approach.

Design/Methodology/Approach: The study is based on the case study of a Swedish technology start-up with a business model labelled "hardware plus software". The firm's conceptualizations of this business model in public and non-public sources were analysed in order to show how a practitioner-described business model was used.

Findings and Contributions: The business model label can be used at different organizational levels using different levels of abstraction, and may include multiple–and sometimes conflicting–perspectives. The paper shows how a practitioner-defined business model label served as a communication device by supporting three roles: communicating strategy, learning from others, and articulating identity.

Originality/Value: The study introduces the notion of the business model as a communication device by showing how the label itself both enables and constrains interpretations of the firm in practice. The finding of parallel representations contradicts the implicit assumption that firms refer to a "single business model" by showing the diversity of articulations of the business model depending on the time frame, the role of the communicator, and communication arenas.

Keywords: communication, business model, archetypal label, case study, new venture

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Introduction

The idea of business models dates back to medieval forms of organizing as well as earlier strategy literature (Chesbrough and Rosenbloom, 2002; Baden-Fuller and Morgan, 2010; Demil and Lecocq, 2010), but recently the number of studies on business models has been growing rapidly since the business model label began to gain popularity with the rise of e-commerce in the late 1990s (Demil and Lecocq, 2010; Olve et al., 2013; Wirtz et al., 2016). The notion that all firms have a business model, whether they are aware of it or not, is continuously emphasized by researchers (e.g. Casadesus-Masanell and Ricart, 2010; Fielt, 2013; DaSilva and Trkman, 2014; Malmström and Johansson, 2017). In addition, the business model concept has evolved in parallel as a label used by practitioners as well as researchers (Chesbrough and Rosenbloom, 2002; Jensen, 2013; Petri, 2014). This highlights the business model label's potential to communicate about value creation in both academic and practical settings.

Although the idea of the business model as a communication device is not a well-used description at present (but see Doganova and Eyquem-Renault, 2009; Aversa et al., 2015; Täuscher and Abdelkafi, 2017; Havemo, 2018), the assumption of the business model's communicative power is implicit in many studies. For example, the business model has been proposed to be a story of how the enterprise works (Magretta, 2002), a description of how it creates value (Teece, 2010), and its way of doing business (Zott, Amit and Massa, 2011). While Magretta (2002) highlights the power of a "good story" or a shared idea about what makes the business successful, Teece (2010) argues that the business model can "articulate" the logic of value creation. Relatedly, some researchers highlight the ability to articulate causality as a main benefit of business models (Casadesus-Masanell and Ricart, 2010; Baden-Fuller and Mangematin, 2013). In line with this, Massa Tucci and Afuah (2017) note that business models fill a growing need for an explanatory concept in light of new revenue models in the digital economy (Massa, Tucci and Afuah, 2017). Both views-the business model as a story and the business model as a means to articulate value creation logics-implicitly assume that communication is a central aspect of business models.

As a label that carries meaning about how firms work, the meaning of the term "business model" can be

enacted to create outcomes for firms. Here I argue that it is the concept as such that carries specific associations, and can be meaningful from a communication perspective as a label for a set of ideas about value creation. The power of labels was emphasized by Ruth Hines (1988), who stated that accountants' power comes not from describing reality in accounting terms, but in creating accounting concepts in the first place and making them real to society as a whole. Her paper, titled In communicating reality, we construct reality, conveys that conceptualizations and labels equally organize and shape our understanding, thus creating the reality of the firm. In line with the view that labels are closely linked with social constructions to organize meaning, this paper adopts an interpretive approach, aiming to "understand phenomena through the meanings that people assign to them" (Klein and Myers, 1999, p. 69). This is done by studying business models as a label and what roles the label plays as actors in the case-study firm communicate using the label in different communication arenas. This paper thus differs from some of the business model literature, which focuses on researcher-described business models.

In light of the above, there is an opportunity to enrich the business model literature with a practitioner-based perspective on how business models work, focusing especially on the role of business models as communication devices. Thus, the purpose of this paper is to explore the roles of practitioner-described business models by using an interpretive approach. This is done through a case study of a Swedish technology start-up, where the business model was a key component of how company actors described the company both internally and externally. The contribution of this paper is to lay the groundwork for a complementary perspective of business models as communication devices, which is implicit but not fully explored in the business model literature to date, and also to show the roles that a specific type of business model label, the archetype, plays once it is adapted from idea to practice.

The rest of the paper is organized as follows. In the literature review, I compare framework-based and practitioner-based descriptions of business models. Based on an overview of research of practitioner-based descriptions, I identify two research gaps related to the purpose of exploring practitioner-described business

models. These gaps are addressed in the paper. Next, I discuss the research methodology, including the case selection and how I captured a practitioner perspective on business models. The findings are presented in three sections, each of which contains a presentation of the empirical findings followed by an interpretive analysis in relation to the purpose of the paper. Finally, the findings are summarized and discussed in terms of research implications in the concluding discussion.

Literature Review

A large share of the strategic management literature on business models has been framework dominated, i.e. aimed at developing frameworks or describing business models according to frameworks. This is evident in the large number of studies proposing components (e.g. Amit and Zott, 2001; Hedman and Kalling, 2003; Demil and Lecocq, 2010; Osterwalder and Pigneur, 2010; see also Wirtz et al., 2016 for an overview), levels of analysis (e.g. Osterwalder, Pigneur and Tucci, 2005; Casadesus-Masanell and Ricart, 2010; Jensen, 2013; DaSilva and Trkman, 2014; Massa and Tucci, 2014), and themes (Zott, Amit and Massa, 2011; see also Fielt, 2013 for an overview) through which to analyse the business model. More recently, Massa, Tucci and Afuah (2017) proposed to divide previous research into categories depending on the treatment of the business model concept. They identified three different interpretations of the business model: as attributes of real firms, as cognitive or linguistic schemas, and as formal conceptual representations of how firms work. The cognitive schema view is interesting in light of the business model as a communication device, since it highlights both the storytelling and sensemaking aspects of business models. As Massa *et al.* point out:

"Narratives of the business model can be constructed by managers and entrepreneurs and used not only to simplify cognition, but also as a communication device that could allow achieving various goals, such as persuading external audiences, creating a sense of legitimacy around the venture (e.g., by drawing analogies between a venture's business model and the business model of a successful firm: "We want to be the Uber of...") or guiding social action (e.g., by focusing attention on what to consider in decision-making and instructing on how to operate)." (Massa, Tucci and Afuah, 2017, p. 84)

Several of the empirical studies identified as "cognitive schema" interpretations by Massa et al. (2017) use frameworks and conceptualizations developed by the researchers to describe business models, rather than business model labels used by the studied firms, which is a key aspect of the practical use of business models. This includes Martins, Rindova and Greenbaum (2015), who used a framework-based definition of what the "business model schema" should contain, such as "design of activities and exchanges that reflect critical interdependencies and value-creation relations" (p. 105), and also Aspara et al. (2013), who explored how the beliefs about the business of Finnish firm Nokia's top management played a role in the decisions taken to transform the business model. Although the study followed conceptualizations of the managers' cognitive schemas and how these influenced strategic transformations, the business model label seems to have been added ex-post by the researchers to explain change, rather than being the guiding terminology for the managers.

While these examples show the tendency to treat the business model as an analytical framing, there are few examples of a business model acting as a "good story" in practice. One such study is Doganova and Evquem-Renault (2009), who investigated how the business model of a French new venture served as a "market device" as it was adapted to different formats and scopes when communicating with different stakeholders. However, despite differences, the study indicates that, at the core, the basic cognitive schema remained the same. This implies that business model descriptions used across different communication arenas follow a common underlying logic. In another study, George and Bock (2011) analysed themes of business model definitions using two text samples, the business model literature and managers' definitions. More than 20 different themes were found through discourse analysis of the material, including the business model as exploitation of value, a plan or map, a structure, activities, design, and products and services. This implies a variety of interpretations of what the business model is among practitioners. The views were, however, derived from generic definitions of the term "business model" rather than descriptions of the managers' own firms, which leaves the question of what role the practitioner-described cognitive schema plays in firms.

In their empirical investigation of how one type of external stakeholder (financial analysts) interpreted the business model of a Danish pharmaceutical company, Nielsen and Bukh (2011) found that the analysts had trouble explicating what a business model was, both as a general concept and for the case company. The researchers found that more specific descriptions including internal configurations and relationships were found more useful than industry level definitions, but also that the concept "business model" could be a hurdle in terms of getting the interviewees to talk about the value creation processes of the case company. While these findings were limited to a complex business model and a single case, they suggest that explaining a business model to organizational outsiders can be difficult, and that understanding is linked to different degrees of abstraction.

Financial disclosure is another field where the business model artefact has gained research attention in recent years. In this context, the analysed material is firms' business model disclosures in annual reports (e.g. Beattie and Smith, 2013; Giunta, Bambagiotti-Alberti and Verrucchi, 2013; Haslam *et al.*, 2015; Bini, Dainelli and Giunta, 2016; Michalak *et al.*, 2017; Havemo, 2018). This literature highlights another dimension of the business model as a communication device, namely that it can serve as a way for firms, regulators, and society to describe the firm in quantifiable terms to its stakeholders. However, as Michalak *et al.* (2017) noted in their overview of voluntary disclosure behaviour of business models, there are few studies of business model disclosure in the intellectual capital reporting field to date.

Among the extant studies, it has been suggested that the business model could increase the information quality of reports by providing a holistic framework (Bukh, 2003; ICAEW, 2010; Beattie and Smith, 2013; Nielsen and Roslender, 2015), though as Michalak *et al.* (2017) show, the definition of "business model" differs across frameworks like the strategic report and integrated reporting guidelines, making comparisons difficult. A recent study that examined business model reporting was conducted by Bini *et al.* (2016). By performing content analysis on business model disclosure in UK annual reports, they found that the most commonly reported business model component was value creation, but that explanations of interdependencies in line with the "holistic framework" idea were rare. This is supported in Havemo (2018), which shows that for firms using visualizations of their business models in annual reports, it was common to depict the business model with few visual indicators of change (value creation logics). At the same time, Bini *et al.* (2016) indicated that a range of business model descriptions were used in UK firms' disclosures, from very limited to more expansive accounts, which suggests that firms use the business model as a communication device in different ways in their external communication.

In their study of business model disclosures, Giunta *et al.* (2013) observed what they call fashion effects in Italian annual reports, suggesting that some firms report business models mostly because it is fashionable, i.e. an attempt at impression management. In a similar vein, Melloni *et al.* (2016) sought to determine whether business model disclosure is informative by checking for thematic manipulation. With their sample of 51 companies that have adopted the Integrated Reporting (IR) framework, Melloni *et al.* (2016) concluded that business model disclosure usually adopted a positive tone, which the authors argue is an indication of impression management.

In sum, previous research has shown that firms report on the business model to different extents and for different purposes (Bini, Dainelli and Giunta, 2016; Mel-Ioni, Stacchezzini and Lai, 2016), and that there is a large span of interpretations of what business models mean to practitioners (George and Bock, 2011; Täuscher and Abdelkafi, 2017; Havemo, 2018). This suggests that the business model serves a purpose as a communicative device for firms. However, the literature on business models is largely framed in analytical rather than empirical terms, using a framework approach where the label "business model" is often used ex-ante to analyse an empirical material. With the exception of Doganova & Eyquem-Renault (2009), who propose that the business model can serve as a "market device" for new ventures when engaging with investors, there are few studies indicating the practical uses of a business model as a communication device. Taken together, these aspects leave a gap in the knowledge of how firms use the business model label in practice, which is the question that this study addresses through the purpose of exploring practitioner-described business models.

Research Method

To investigate practitioner-described business models, a single-case research design was chosen to allow for a comparison of the business model descriptions across communication arenas. It could therefore be described as empirically driven and exploratory. The case, a Swedish new venture ("Tech Startup"), was chosen because the business model was a prominent element in the way the firm defined itself. As a fast-growing tech start-up in Swedish industry, Tech Startup needed to be able to explain its value proposition to investors, similar to the venture in the study by Doganova and Eyguem-Renault (2009), and this is where the business model played a part. In addition, by studying a small company with a limited scope of operations, it was expected that "business model" would refer to a single idea, enabling comparisons between communication arenas.

Tech Startup produced, marketed and sold a consumer electronics product in the "wearables" segment, similar to products such as the Fitbit activity tracker and the GoPro action camera. At its peak, Tech Startup had around 50 employees in three Swedish offices and one US office, and had attracted media attention in Sweden and abroad as a start-up to watch. With hopes of rapid growth, the firm had taken on venture capital from

multiple investors in several rounds. The time period covered in the interviews and other material (2014-2016) corresponds to the height of the firm's success in the sense of having generated substantial venture capital to scale operations, and being in the process of launching a new version of its offering. Given the new product launch, the interviews were characterized by a positive, if uncertain, outlook on the future. However, as of 2017, the company was no longer in business following the unsuccessful launch of the new product and the inability to sustain sufficient revenues, resulting in bankruptcy. One limitation of the paper is that, since the purpose is to explore practical articulations of the business model, there is no data available to speculate about any potential relationship between the business model and the bankruptcy of the firm. I will therefore not return to this aspect in the empirical section.

To capture descriptions used across communication arenas, data was gathered from both public and nonpublic sources, including interviews, the annual report and a crowdfunding pitch. Since the study's aim is to explore the roles of practitioner-described business models, the focus on both internal and external uses of the business model allows issues to emerge based on the data collected from the case company. An overview of the sources for this study is presented in Table 1.

Source	Public (y/n)	Description	Time frame	Business model mentions
Interviews	n	2 semi-structured interviews with CFO, approx. 2 hours	March/April 2015	High
	n	1 semi-structured interview with HR man- ager (HRM), approx. 1 hour	June 2015	Moderate
Company presentation	n	Company presentation and Q&A session by CFO to audience of junior and senior researchers, 1 hour	March 2015	Some
Crowdfunding pitch at Kickstarter	У	The company's crowdfunding pitch, where the product idea was described and custom- ers could contribute funding	2012	None
Conference appearances	Y	Video from tech conference, interview/ panel with CEO	2013	Some
Annual reports	У	Publicly available annual reports	2013-2015	Some
Online communication	У	Tech Startup's website, including the com- pany's blog, which contained news	2014-2016	None (except press release)

Table 1: List of Sources

In the table, I also indicate the extent to which the business model was mentioned in the sources. Understandably, the business model featured more clearly in the interviews, which were designed to discuss the business model, while the public sources ranged from no mentions to some mentions of the business model.

For the internal perspective, three interviews were conducted with two managers at the case company. Two semi-structured interviews were conducted with the CFO. The main interview used open-ended questions designed to allow the subject to discuss topics such as the business model, the value chain, and key stakeholders. The second interview was a follow-up interview to address topics not covered by the first interview, mainly regarding the firm's partnering strategy and considerations regarding business model scalability. The interview with the HR manager addressed the topic of the business model, but also covered questions regarding HRrelated aspects in general, and collaborations within and outside the company. The HR manager was new to the company whereas the CFO had been with the company for a longer period. Questions about the business model were open-ended in the sense that the term "business model" (in Swedish) was used by both the interviewer and interviewees, but without an agreement about the definition of the term. The CFO leaned more towards external descriptions and activities, whereas the HR manager focused on boundary-spanning collaborations and on the task of managing human resources and activities inside the company.

Once it became clear that the interviewees used other definitions than I did, the rest of the interview discussions were interpreted based on this view rather than any theoretical definition that might otherwise be used. For example, the idea of seeing activities (which feature e.g. in the business model canvas by Osterwalder and Pigneur (2010)) as part of the firm's business model was rejected by the CFO, who argued that the business model was "hardware plus software". In addition, it was also clear in the material that the organizational members used the business model label differently depending on the context and the source of communication. Both these aspects seem to be largely unexplored in the business model literature, and therefore came to serve as a point of departure for practitioner-based perspectives on business models. The method used to capture accounts of the business model was to use an interpretive approach. The usual limitations of interpretive analyses therefore apply: the interpreter cannot know for certain that every utterance has been interpreted as it was meant, nor that the communicators' intentions have been captured in their entirety. However, to guide the analysis, I have taken care to be transparent about how the paper topic was developed in this chapter, and to include the interpreted texts (e.g. interview quotations, annual report content) as part of the empirical findings in the next chapter.

After the interviews, which were recorded with the interviewees' permission, the sessions were transcribed (in Swedish, the interview language). The collected business model descriptions were gathered in a single file to provide an overview of the material (Miles, Huberman and Saldaña, 2014). After this, the descriptions were organized in units based on instances where either the "business model" or the firm's own chosen archetypal label "hardware plus software" was mentioned. Instances from different sources were used to inform about either internal or external communication about the business model, but were treated as non-convergence evidence (Yin, 2014) for the most part, since their use in the study was to address descriptions of the business model in different communication arenas, rather than confirming validity across data sources.

For the external communication dimension, I collected publicly available data published by the company. The data exemplified how the firm presented itself in external channels such as on the website, in annual reports, at conferences, and in the crowdfunding project description that was originally used to finance the launch of the company's product, most of which did not make explicit mentions of the business model. The public sources were intended to capture different communication arenas. For example, the annual report is a legally mandated document where claims made should account for the firm's past activities and future strategies (Stanton and Stanton, 2002), while the company's online communication on its website and blog might contain more customer-oriented information designed to present the company and its products in a favourable light. The sources were checked for mentions of the business model label (that is,

texts that included the term "business model" or the words adopted as the business model label by the firm, "hardware and software"). Although it can be seen as a limitation that the sample is relatively small, the collected material covers much of the public communication made by the company using its own channels (blog, website, annual report) during the studied time period, which allows for comprehensive coverage of external communication arenas.

Because the archetypal label "hardware and software" was so prominently used by the CFO and CEO, the analysis of the public and non-public material was inspired by Massa and Tucci's (2014) classification of business model perspectives according to the degree of abstraction from reality. In their classification, narratives are the highest level of abstraction of business models, and these, along with the second highest level, archetypes, are more conceptual and therefore difficult to measure and compare since they contain little detailed information (archetype) or an abundance of company-specific un-coded information (narrative). In the business model literature, archetypes are generic labels that describe key elements of the business model (e.g. Linder and Cantrell, 2000; Johnson, 2010), and are one way that practitioners' business models are often identified in business discourse (Purkayastha and Sharma, 2016). Popular examples include the Southwest Airlines business model (Morris, Schindehutte and Allen, 2005; Teece, 2010; Fielt, 2013) and various firms' interpretation of it (Casadesus-Masanell and Ricart, 2010; Aversa et al., 2015), as well as the razorand-blades (Chesbrough and Rosenbloom, 2002; Osterwalder and Pigneur, 2010; Teece, 2010) and freemium business models.

Based on the "archetypal" way of defining business models as outlined above, it was clear that the case firm used mainly one level of abstraction for its business model, the archetype. This is why, in this study, the concept of business model label was operationalized using the case firm's archetype-based label and thus drawing on the archetype perspective to understand the use of the business model term in practice. As a result, the analysis aimed to link the case firm's archetypal label with (1) how the business model was described by the case company and in which communication arenas, and (2) what role the archetypal label played in the firm's various descriptions of the business model.

Business Model Descriptions at Tech Startup

This section provides an overview of the findings of the study in accordance with the purpose of exploring the roles of practitioner-described business models. The empirical case is outlined in the section "descriptions of the business model", in which business model descriptions are introduced and discussed; this corresponds to the principle of abstraction from empirical data to the level of general concepts and theories in interpretive research (Klein and Myers, 1999).

A small Swedish start-up in the technology sector, Tech Startup designed, produced and marketed a tech product in the wearables segment. In addition to the physical hardware, the product also included software (data analysis algorithms) and a storage service for customers to store the data generated by the hardware and software. The integration of hardware and software was seen as integral to the company's competitive advantage: "It's the system as a whole (...) that'll give us a competitive advantage." (CFO, interview 2015). Both elements were crucial for its value proposition, and the company strove to develop both aspects, leading the firm to describe its business model as "hardware and software". For example, when asked to specify whether the company was a hardware company or a software company at a conference in 2013, the CEO maintained that "We are a hardware plus software company." The CFO adopted the same approach to describing the business model in 2015: "The business model is hardware + software, [...] a combination of upfront selling and after-market selling."

Although at first glance this business model related to the product, the hardware/software also represented an overarching strategy for how the business was supposed to generate revenue, as explained by the CFO:

"[W]e could run them as separate companies. (...) We should think like that in the business model as much as possible, that we don't subsidize one with the other. (...) In this type of company, you need to be able to shift focus, in case it turns out we're not making any money here, we need to shift to this and that." (CFO, interview 2015) The idea of the "hardware/software" divide was closely linked to the revenue model and the profitability of the company. The CFO also commented on the link between customer value, profit and the business model, explaining that customer value was a key aspect when making decisions about future strategic directions for the business model:

"If you ask the sales manager, he'll say: 'It's problematic to sell a product that the customer feels he or she buys completely.' It's like with a mobile phone... the phone costs money, but for it to be valuable, you have to buy additional [services] all the time... You should find a way to charge for what the customer perceives as valuable, and not charge for the rest. So if it turns out that it's the software that's valuable, then you might want to lease the hardware to the customer, and have them pay a monthly fee that's three times as high... and have them return the hardware when they're done... That's why we want to keep them separate, to be able to change our focus." (CFO, interview 2015)

In addition to showing that the role of the business model was closely intertwined with the CFO's reasoning about the future directions of the firm, the quotation demonstrates another role for the archetype. By using a recognizable label that held both generic shared meaning and local meaning within the firm, the CFO could draw on the generic archetypal label to link the firm's business model to similar models in other industries, in this case mobile phones. Based on this, the generic logics could be adapted to the firm's local setting by using these terms to discuss revenue and customer value based on the company's own products.

As indicated in the above quotation, the interviews suggested that the business model archetype was used by Tech Startup to discuss changes now and in the future. In 2015, Tech Startup was in the process of iterating possible approaches to find a viable balance between its hardware and software offerings. The ability to shift from one to the other, depending on which was more profitable, was viewed as a foundation for future strategic change by both the CFO and the HR manager. For example, the HR manager stated that the business model's focus was "... both hardware and software... but in case we don't become profitable, we might have to change our focus somehow." (HR manager, interview 2015). In line with this, the HR manager stressed the developing nature of the business model, explaining that:

"I would say that our business model... if you look at what we actually do, it's to create an innovative product that is revolutionary in the market... And the business model that we are building around that, it's about trying to-first and foremost maybe not about being profitable, but to have alternative financing-but in the long term to become profitable... So I think our business model is very challenging, because right now we don't even know what's going to happen with the second generation [of the product]." (HR manager, interview 2015)

The above quotations from the CFO and the HR Manager show that the business model was seen as developing, and that the developments were framed in terms of the cognitive schema afforded by the archetypal label "hardware and software". Some discussions of the business model were centred around future directions: it was about becoming profitable, and about viewing the two elements (product features) as two sides of the product offering, although that balance was not absolute but rather reconsidered on a continuous basis. Put differently, the archetypal label served as a lens to focus discussions and to pick out key strategic points of interest in relation to the offering, customer value and profitability concerns.

The annual report description was one of the few occasions where a link was made between activities (what the company does) and what products or offerings each activity related to. For example, the 2014/15 annual report stressed that the software and the hard-ware were being developed separately. This created a conceptual link between the business model label at the archetypal level and the setup of activities linked to each part (development and sales). The annual report also stated that the business model was to sell the offerings separately from each other, highlighting separation as a key element of the business model, emphasized in writing by using the word "separate" twice:

"The [hardware] and the software are developed separately and the company's business model is to sell them separately." (Annual report, 2014/15) In the annual report of the following year, the term "business model" was no longer included in the narrative section of the annual report, although the essence of the message remained the same: "The company develops and sells hardware and software" (Annual report, 2015/16), which may suggest that the label "business model" was no longer thought to be necessary to frame the descriptions of the company, and also that the archetype label had come to be seen as equivalent to a business model within the firm. In contrast to the explicit use of the term "business model" externally, internally the idea that the company should be "separated into two parts" was not part of the informants' conceptualizations of operations. On the contrary, the prevailing idea in terms of activities was that that Tech Startup should be perceived as one company from the customer's perspective. For example, the CFO stated that:

"The business model should only be kept separate in the sense of a business model. We're supposed to look like one company. It's the same thing with the American subsidiary, for instance. We want to look like one company. Completely." (CFO, interview 2015)

In the CFO's view, it was important that customers perceive the company as one, rather than as two separate entities delivering the physical product and the software product separately. One way to achieve this perception was to ensure that the support function was fully integrated, and that employees understood the whole value chain from the customer's perspective. The CFO put it the following way:

"The support function is the same throughout the two value chains [of hardware and software]. It's the same support. We want the customer to perceive it the same way. It's separate in the business model so that we can shift focus, but from the customers' perspective, we want it to work the same way, that they should be able to ask the same person." (CFO, interview 2015)

This shows that the CFO was careful to separate the idea of the business model (the strategic description or the idea of the company), and the actual activities taking place such as the support function or the development functions. The strategic label acted at a different level

of abstraction than the operational side of the business, and the CFO argued that these aspects were, in fact, not the same thing, and as a result, it was possible to reason with opposing descriptions (the hardware and software as separate or integrated) of the business model depending on the context it was applied to. Thus, at the activity level (the lowest level of abstraction in Massa and Tucci's (2014) framework), the business model was secondary to the practicalities of running the company, as well as the perceived source of customer value. The goal to be perceived as one company regardless of the overall business model logic, and legal structures in different markets, was also reflected in the internal organization of the company. As shown above, this was reflected in customer support operations, but the approach is also present in the developer team, although the competences and skills of the developers might get in the way of complete integration between the two, as pointed out by the CFO:

"... it's not two separate companies. The developers do a little bit of this and a little bit of that. Though of course, if you do circuit board design one day you won't work with front-end design the next day. [The developers] have their specialized skill sets." (CFO, interview 2015)

One implication of the above descriptions is that there were differences between internal and external communication arenas in the sense that external descriptions treated hardware and software products as separate and complementary, while internal descriptions instead stressed the integration of the two. This idea is in line with the view that business models can exist on many levels of-different but still cohesive-abstractions (Jensen, 2013). In the case of Tech Startup, however, it was not only the representation that differed, but also how the business model was constructed in different communicative arenas. For example, the HR manager raised the issue of unity by stating that: "we are fairly 'undefined' regarding our vision and mission and so on." (HR manager, interview 2015). This quotation highlights that the HR manager saw the business model as a strategic tool, linking it to other strategy concepts such as vision and mission, but also that there was a lack of agreement about the meaning of the business model internally.

Externally, the company communicated about the business model in some communication arenas, such as the annual report, but not in customer-oriented contexts. For example, the blog entries on the website primarily focused on the value proposition to customers, giving numerous examples of customers enjoying the product. In a similar vein, the crowdfunding pitch that was used to support the launch of the product did not mention the term "business model" or the "hardware and software" label, instead focusing on the product development process, collaborations established to develop the product, and, most prominently, the product specifications and value proposition to the customers. Interestingly, these are aspects often interpreted as elements of the business model in business model studies (e.g. Osterwalder and Pigneur, 2010; Zott and Amit, 2010), but the terms were not linked to the business model concept at Tech Startup. The business model was, however, mentioned in the annual report, and was brought up at a technology conference panel attended by the CEO in 2013, where several follow-up questions addressing the nature of the business model were posed by the audience.

At the internal level, this section of the paper has shown that the CFO treated the business model as a framework to describe the company's operations in terms of its two main products (hardware and software). Conversely, the HR manager focused more on the internal perspective and also noted a lack of unity in views on the business model among the managers. However, although the CFO did describe the customer experience in terms of the business model archetype, this was done by downplaying the separation of hardware and software. Similarly, descriptions relating to internal operations did not incorporate the idea of the archetype hardware/software, nor was the business model explicitly mentioned in other ways. Rather, descriptions of the company's internal operations focused on the activity level, which indicates that the firm adhered to the archetype only when addressing audiences which were familiar with term business model, and expected the term to be used. Although the business model archetype was used to communicate with both internal (e.g. other managers, employees) and external audiences (e.g. investors, industry experts and readers of the annual report), the label as such was not necessarily adopted at all levels.

Roles of the Archetype in the New Venture

In this section, I analyse the data presented in the previous section in terms of which roles the business model played at Tech Startup.

At Tech Startup, the archetypal label "hardware and software" served as the main way to conceptualize the business model. Despite not serving as a cognitive schema on all internal levels, nor acting as a key communication device in external communication arenas, the material in the previous section highlights that the business model, expressed as an archetypal label, played a number of roles as a communication device, and more broadly, as a cognitive schema. Based on the discussion in the previous section, I have identified three roles of the archetype, summarized in Table 2 below, and discussed in the following subsections.

Communicating strategy

The first, and perhaps most prominent role in the interviews and external data, was the role of the archetype when communicating the strategy. This was done by adopting the label "hardware and software" when describing the firm to external audiences, thus helping Tech Startup to derive legitimacy from the use of established terminology and meaning. The archetype

Role	Description
Communicating strategy	The archetype provided the terminology for communicating the strategy externally, e.g. to investors and industry professionals. The label became the foundation for theoriz- ing about customer value internally, helping
Learning from others	to frame value creation mechanisms. The archetype helped in identifying similar models in other industries to learn from, in the sense of the archetype acting as a "recipe" to mimic.
Articulating identity	In the logic of "becoming" successful as a new venture, the label helped to articulate a future identity, serving as "scaffolding" for reflect- ing on differences and thus articulating on perceptions of the firm's identity.

Table 2: Roles of the Business Model Archetype in the New Venture

provided the terminology for describing the underlying logic of the business for the hardware and software model, which both acted to enable ways of thinking, and constrained possible strategies based on the current structure. At the internal level, the label also helped to elucidate sources of customer value. Interestingly, depending on which communication arena the label was used to communicate in, different aspects of the business model were highlighted in relation to the archetypal label. Externally, communication focused on the revenue model and offering, i.e. how to generate value with the two products, hardware and software. For instance, the revenue dimension was present in the CEO's description of the company to the external audiences of experts from the tech industry. When discussing the business model from an internal perspective, however, the production logic of the integration of hardware and software was stressed as opposed to the externally conveyed idea of separation.

Learning from others

Second, Tech Startup used the archetypal label to draw inspiration and make comparisons with companies operating similar business models in other industries. This corresponds to the perspective that a business model label transcends firm contexts and that the basic elements of a business model can be generalized, and thus compared, across industries (Baden-Fuller and Morgan, 2010). This study shows how the business model can be used in this manner as a way to both legitimize the local adaptation of the business model idea and draw inspiration from other industries using the same label. The case also adds to business model theory by showing that archetypal labels can be translated from the generic to the specific in a company setting, and that this allows the generic label to play several roles in practice rather than simply as a label, which is one of the criticisms directed against business model conceptualizations at the generic levels of narratives and archetypes (Massa and Tucci, 2014). This corresponds with research that explores the multifaceted and complex processes of translation as business models are adopted and adapted in a sustainability context (Ahlgren Ode and Wadin, 2019).

Articulating identity

The third role played by the archetypal label was as "scaffolding" for articulating the firm's current and future identity. The interviews suggest that the label was not merely a generic word used in external communication, but that it had also became a language for describing the firm, i.e. a way to articulate the identity of the firm. The scaffolding function worked both by constraining the number of possible business model interpretations, and as an enabler of different future interpretations based on a single logic. An example of potentially constraining scaffolding was how the CFO, having supported the idea of the business model as the archetype "hardware/ software", instantly dismissed other perspectives on business models in the interviews, such as it being a set of activities, a system, or a network, which are common perspectives on business models among researchers (see e.g. Amit and Zott, 2001; Hedman and Kalling, 2003; Zott and Amit, 2010; Wirtz et al., 2016). This is similar to the way Nokia's top management acted when forced to consider alternative strategic directions in the study by Aspara et al. (2013). For Nokia's management, the difficulty was not in detecting new opportunities, but rather in reaching consensus about how to pursue them. In contrast, Tech Startup's (mainly) external focus on the hardware/software archetype seems to have served as a cognitive constraint in the sense of it becoming a dominant logic (Prahalad and Bettis, 1986) for thinking about the business model in the first place.

In addition to the limiting role outlined above, the archetypal label could also be seen as an enabler, for example to link the present situation to planned future strategic decisions. The idea of "having two legs to stand on" and the dynamic role of the two products in the process of "becoming profitable" recurred throughout the interviews and became the basis upon which to present a future state. Vendelø (1998) studied a software firm's attempts to establish legitimacy as a new venture, finding that reputation narratives (a kind of identity articulation) were future oriented because there was little in the way of present performance that could serve as evidence of performance. Similarly, this study highlights that the archetypal label played a role in providing a legitimating foundation for describing an intended future state since the interviewees' descriptions focused on the future viability of the business model-whether the firm would "become" profitable. For instance, profitability was described as a matter of current and future concern for the interviewees, and one of the determinants of the current strategy

was the perceived ability to change the focus between hardware and software in the future. The perspective of "becoming" is in line with the view of entrepreneurship advocate Steve Blank, who argues that a key difference between new and established ventures is that "while existing companies execute a business model, start-ups look for one" (Blank, 2013, p. 67). The quest described by the informants, of *becoming* a viable firm, largely corresponds with Blank's description of startups looking for a business model. However, in Tech Startup, this search was framed in terms of a generic label, with the "becoming" aspect revolving around operationalizing this label in practice. In line with this, it has been recognized that the business model can play a key role for new ventures by providing a "framework that assists the entrepreneur in assessing consistencies and recognizing trade-offs among decisions" (Malmström and Johansson, 2017, p. 2).

Tech Startup's choice to keep the hardware and software elements separate on a strategic level can be explained as a design strategy to remain flexible in case the company learned that one side of the business was more profitable than the other. In fact, a solidification of the business model seemed difficult precisely because the company was in the process of growing a customer base and developing a new generation of products. In other words, the case describes the difficulty in conceptualizing the business model concretely and consistently in the start-up phase, which may be related to the company's ongoing quest to find a viable business model. One implication of this is that, for new ventures, descriptions of the company or its business model could be descriptions of the intended future state on which to build reputation, rather than an intended representation of the present, but with the downside of different conceptualizations depending on the purpose and audience. For researchers looking to understand business models that are undergoing pressures of change, it is important to consider different levels of abstraction and the dynamism of the business model during the ongoing process of searching for a viable configuration.

Conclusion

This study offers an example of how business models have been conceptualized in a practitioner case. The purpose of this paper is to explore the roles of a

practitioner-described business model by focusing on its role as a business model archetypal label in practice. The literature review indicated that the business model field has yet to show what the business model does in practice when used as a communication device (Massa, Tucci and Afuah, 2017) by firms. In response to this gap, the study shows that the adopted business model archetype can play both an enabling and a constraining role in firms' communication about their business model. The business model label, although not conforming to academics' notion of what a business model should contain, nevertheless helped the case firm to identify similar business models in other contexts to learn from, which is in line with Baden-Fuller and Morgan's (2010) idea of the business model as a recipe to replicate and to learn from. Finally, the business model helped to articulate the current and future strategy of the new venture.

This study expands the theoretical knowledge of business models by showing how archetypal business model labels can be interpreted and enacted in practice, and how the business model concept can be understood as a communication device that contributes to constructing the idea of the firm, e.g. as part of articulating the firm's identity. Through the case explored in this paper, I have exemplified how business models help to construct reality through labels as discussed by Hines (1988). As opposed to previous studies, which have described archetypal labels as parsimonious at the expense of practical usefulness (Massa and Tucci, 2014), this study shows that the translation of generic ideas from an archetype to a company setting is possible once the label is integrated as a communication device that guides communication, learning and identity articulation. The findings could inspire new practice-based research and business model teaching, taking practitioners' business model conceptualisations and business model label use as a point of departure.

Considering the current popularity of practice-oriented research, a key contribution of this study is to exemplify the number of roles that business models can play when used as a communication device in firms, and that there may be different interpretations of the business model within a single firm. It is important to try to capture the hitherto neglected diversity of the term on the practitioner side both across and within firms, especially with the growing academic interest in business models, and the trend that regulatory bodies encourage reporting on business models (e.g. FRC, 2014), but often in divergent ways (Michalak *et al.*, 2017). For instance, this study shows that there seems to be a difference in how the business model is described depending on the informant's role in the firm—the HR manager's perspective was more internally focused, while the CFO, whose job involved pitching the idea to investors, tended to adopt an archetypal label as a means to describe the business model.

Finally, this study also challenges the often present, but rarely explicated, assumption that a firm has a single, clearly stated, and effectively shared, business model. The "one firm, one business model" motto is often an implicit assumption; in the financial reporting literature, for example, it is suggested that the firm's business model could serve as a holistic framework in reporting, indicating that there is only one business model. Similarly, in the business model literature, studies often imply the existence of a single model, e.g. Zott and Amit (2007), who coded firms according to two business model design parameters, efficiency and novelty. In contrast to this finding, this study instead implies that there can be more complexity in business models than the "one firm, one business model" assumption implies. Multiple ideas, complementary and contradictive, may exist at once. This is something which might change how we investigate business models in firms: rather than discussing the business model of the firm, research will need to consider which multiple business logics are at play, and how these are interrelated-for example, are they nested logically from a shared overarching business logic but at different levels of abstraction, are they related but not directly connected (e.g. focusing on different product categories, or markets), or, as this study shows, do they cover multiple, sometimes contradictory, meanings? The interpretation and description of business models in firms would differ depending on each, and an awareness of the logic at play when investigating firms that claim to have business models is needed.

References

Ahlgren Ode, K. and Wadin, J. (2019) 'Business model translation: The case of spreading a business model for solar energy', *Renewable Energy*, 133, pp. 23–31.

Amit, R. and Zott, C. (2001) 'Value Creation in E-Business', *Strategic Management Journal*, 22(6–7), pp. 493–520.

Aspara, J. *et al.* (2013) 'Corporate Business Model Transformation and Inter-Organizational Cognition: The Case of Nokia', *Long Range Planning*, 46(6), pp. 459–474.

Aversa, P. *et al.* (2015) 'From Business Model to Business Modelling: Modularity and Manipulation', in Baden-Fuller, C. and Mangematin, V. (eds) *Advances in Strategic Management*, pp. 151–185.

Baden-Fuller, C. and Mangematin, V. (2013) 'Business models: A challenging agenda', *Strategic Organization*, 11(4), pp. 418–427.

Baden-Fuller, C. and Morgan, M. S. (2010) 'Business Models as Models', *Long Range Planning*, 43(2–3), pp. 156–171.

Beattie, V. A. and Smith, S. J. (2013) 'Value creation and business models: Refocusing the intellectual capital debate', *The British Accounting Review*, 45(4), pp. 243–254.

Bini, L., Dainelli, F. and Giunta, F. (2016) 'Business model disclosure in the Strategic Report: Entangling intellectual capital in value creation process', *Journal of Intellectual Capital*, 17(1), pp. 83–102.

Blank, S. (2013) "Lean" Is Shaking Up the Entrepreneurial Landscape', *Harvard Business Review*, 91(5), pp. 63–72.

Bukh, P. N. (2003) 'The relevance of intellectual capital disclosure: a paradox?', *Accounting, Auditing & Accountabil-ity Journal*, 16(1), pp. 49–56.

Casadesus-Masanell, R. and Ricart, J. E. (2010) 'From Strategy to Business Models and onto Tactics', *Long Range Planning*, 43(2–3), pp. 195–215.

Chesbrough, H. W. and Rosenbloom, R. S. (2002) 'The role of the business model in capturing value from innovation: evidence from Xerox Corporation's technology spin-off companies', *Industrial and Corporate Change*, 11(3), pp. 529–555.

DaSilva, C. M. and Trkman, P. (2014) 'Business Model: What It Is and What It Is Not', *Long Range Planning*, 47(6), pp. 379–389.

Demil, B. and Lecocq, X. (2010) 'Business Model Evolution: In Search of Dynamic Consistency', *Long Range Planning*, 43(2–3), pp. 227–246.

Doganova, L. and Eyquem-Renault, M. (2009) 'What do business models do? Innovation devices in technology entrepreneurship', *Research Policy*, 38(10), pp. 1559–1570.

Fielt, E. (2013) 'Conceptualising Business Models: Definitions, Frameworks and Classifications', *Journal of Business Models*, 1(1), pp. 85–104.

FRC (2014) 'Guidance on the Strategic Report'. London: Financial Reporting Council.

George, G. and Bock, A. J. (2011) 'The Business Model in Practice and its Implications for Entrepreneurship Research', Entrepreneurship Theory & Practice, 35(1), pp. 83–111.

Giunta, F., Bambagiotti-Alberti, L. and Verrucchi, F. (2013) 'Business Model Disclosure: Evidence from Annual Reports of Italian Listed Companies', *Oxford Journal: An International Journal of Business & Economics*, 8(1), pp. 27–39.

Haslam, C. *et al.* (2015) 'Accounting for Business Models: Increasing the Visibility of Stakeholders', *Journal of Business Models*, 3(1), pp. 62–80.

Havemo, E. (2018) 'A visual perspective on value creation: Exploring patterns in business model diagrams', *European Management Journal*, 36(4), pp. 441–452.

Hedman, J. and Kalling, T. (2003) 'The business model concept: theoretical underpinnings and empirical illustrations', *European Journal of Information Systems*, 12(1), pp. 49–59.

Hines, R. D. (1988) 'Financial Accounting: In Communicating Reality, We Construct Reality', *Accounting, Organizations and Society*, 13(3), pp. 251–261.

ICAEW (2010) *Business Models in Accounting: The Theory of the Firm and Financial Reporting*. The Institute of Chartered Accountants in England and Wales. Available at: icaew.com/frf.

Jensen, A. B. (2013) 'Do we need one business model definition?', *Journal of Business Models*, 1(1), pp. 61–84.

Johnson, M. W. (2010) *Seizing the White Space: Business Model Innovation for Growth and Renewal.* Boston: Harvard Business Press.

Klein, H. K. and Myers, M. D. (1999) 'A Set of Principles for Conducting and Evaluating Interpretive Field Studies in Information Systems', *MIS Quarterly*, 23(1), pp. 67–93.

Linder, J. and Cantrell, S. (2000) 'Changing Business Models: Surveying the Landscape'. Accenture Institute for Strategic Change.

Magretta, J. (2002) 'Why Business Models Matter', *Harvard Business Review*, 80(5), pp. 86–92.

Malmström, M. and Johansson, J. (2017) 'Practicing Business Model Management in New Ventures', *Journal of Business Models*, 5(1), pp. 1–13.

Martins, L. L., Rindova, V. P. and Greenbaum, B. E. (2015) 'Unlocking the Hidden Value of Concepts: A Cognitive Approach to Business Model Innovation', *Strategic Entrepreneurship Journal*, 9(1), pp. 99–117.

Massa, L. and Tucci, C. L. (2014) 'Business Model Innovation', in Dodgson, M., Gann, D. M., and Phillips, N. (eds) *The Oxford Handbook of Innovation Management*. Oxford: Oxford University Press, pp. 420–441.

Massa, L., Tucci, C. L. and Afuah, A. (2017) 'A Critical Assessment of Business Model Research', *Academy of Management Annals*, 11(1), pp. 73–104.

Melloni, G., Stacchezzini, R. and Lai, A. (2016) 'The tone of business model disclosure: an impression management analysis of the integrated reports', *Journal of Management & Governance*, 20(2), pp. 295-320.

Michalak, J. et al. (2017) 'Business Model Disclosures in Corporate Reports', Journal of Business Models, 5(1), pp. 51–73.

Miles, M. B., Huberman, A. M. and Saldaña, J. (2014) *Qualitative Data Analysis: A Methods Sourcebook*. 3rd edn. Los Angeles: Sage.

Morris, M., Schindehutte, M. and Allen, J. (2005) 'The entrepreneur's business model: toward a unified perspective', *Journal of Business Research*, 58(6), pp. 726–735.

Nielsen, C. and Bukh, P. N. (2011) 'What constitutes a business model: the perception of financial analysts', *International Journal of Learning and Intellectual Capital*, 8(3), pp. 256–271.

Nielsen, C. and Roslender, R. (2015) 'Enhancing financial reporting: The contribution of business models', *The British Accounting Review*, 47(3), pp. 262–274.

Olve, N.-G. et al. (2013) Prissättning: Affärsekologier, affärsmodeller, prismodeller. Lund: Studentlitteratur.

Osterwalder, A. and Pigneur, Y. (2010) *Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers.* Hoboken: Wiley & Sons.

Osterwalder, A., Pigneur, Y. and Tucci, C. L. (2005) 'Clarifying Business Models: Origins, Present, and Future of the Concept', *Communications of the Association for Information Systems*, 16(1), pp. 1–38.

Petri, C.-J. (2014) 'Using an innovative price model to leverage the business model: The case of a price model innovation in the largest Swedish taxi company', *Journal of Business Models*, 2(1), pp. 56–69.

Prahalad, C. K. and Bettis, R. A. (1986) 'The Dominant Logic: A New Linkage Between Diversity and Performance', *Strategic Management Journal*, 7(6), pp. 485–501.

Purkayastha, N. and Sharma, S. (2016) 'Gaining competitive advantage through the right business model: analysis based on case studies', *Journal of Strategy and Management*, 9(2), pp. 138–155.

Täuscher, K. and Abdelkafi, N. (2017) 'Visual tools for business model innovation: Recommendations from a cognitive perspective', *Creativity and Innovation Management*, 26(2), pp. 160–174.

Teece, D. J. (2010) 'Business Models, Business Strategy and Innovation', *Long Range Planning*, 43(2–3), pp. 172–194.

Vendelø, M. T. (1998) 'Narrating Corporate Reputation', *International Studies of Management & Organization*, 28(3), pp. 120–137.

Wirtz, B. W. *et al.* (2016) 'Business Models: Origin, Development and Future Research Perspectives', *Long Range Planning*, 49(1), pp. 36–54.

Yin, R. (2014) Case study research: Design and methods. 5th edn. Los Angeles: Sage.

Zott, C. and Amit, R. (2007) 'Business Model Design and the Performance of Entrepreneurial Firms', *Organization Science*, 18(2), pp. 181–199.

Zott, C. and Amit, R. (2010) 'Business Model Design: An Activity System Perspective', *Long Range Planning*, 43(2–3), pp. 216–226.

Zott, C., Amit, R. and Massa, L. (2011) 'The Business Model : Recent Developments and Future Research', *Journal of Management*, 37(4), pp. 1019–1042.

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