A person in a blue suit is holding a glowing pencil, with a bright light emanating from the tip. The background is a dark blue surface covered in white, hand-drawn business diagrams and icons, including a sun with arrows, a bar chart, a lightbulb, and various flowcharts. The overall scene suggests a creative and strategic business environment.

**How do a startup's business model,
human capital and equity finance
interact to impact firm performance?**

Concept presentation TÖK
Veronika Ruthensteiner
November 27, 2017

The biggest reasons why startups succeed



The resource-based view – A well-established theory within strategic management literature

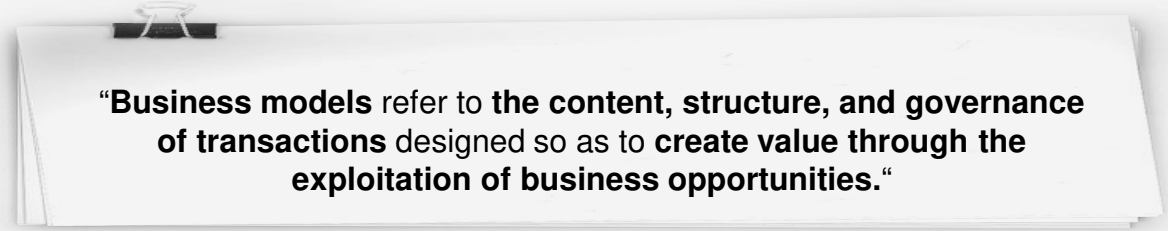
Key points

- ▶ RBV as **well-established theory** within **strategic management literature**
- ▶ Firms must own or control **resources that are valuable, rare, inimitable, and non-substitutable in order to achieve sustained competitive advantage (VRIN)** (Barney, 1991)
- ▶ Theory has reached **maturity status** (Barney, 2011), the question of revitalization or decline currently being open
- ▶ There are **different emerging themes within RBV literature**, one critical emerging theme being the **interaction of the RBV with other theories**
- ▶ **Several points of criticism** (e.g. Priem & Butler, 2001; Kraaijenbrink et al., 2010; Amit & Zott, 2001),
 - e.g. Amit and Zott (2001) revisited the resource-based view in the context of **value creation in e-business** and found it **unable to explain firm performance for multiple reasons**, e.g. higher mobility of information-based resources and capabilities, more difficulties regarding the prospect of value preservation,...
 - Also Barney (2011) states that **the RBV is only valid as long as the “rules of the game” within the boundaries of an industry remain relatively stable**
- ➡ Amit & Zott (2001) propose the **business model** as a **more adequate concept for analysis**

The business model – A highly debated concept within practice and scientific research

Key points

- ▶ Despite the **abundance of literature on the business model concept**, business model research **has not yet reached a common opinion as to what a business model is exactly** (Morris et al., 2005)
- ▶ Still, **the business model concept has gained high popularity**, e.g. in information and technology management, strategy, and organization theory
- ▶ There is a broad **variety of definitions of the term business model available**, among the most frequently used ones being definitions by e.g. **Afuah & Tucci, 2000; Amit & Zott, 2001; Weill & Vitale, 2001; Chesbrough & Rosenbloom, 2002; Magretta, 2002; Morris et al., 2005; Osterwalder et al., 2005; Casadesus-Masanell & Ricart, 2010; Gassmann et al., 2014**
- ▶ The rich set of business model definitions has **lead several authors to summarize and classify the definitions** (e.g. Osterwalder et al., 2005; Zott et al., 2011; George & Bock, 2011; Wirtz et al., 2015; Morris et al., 2015)
- ▶ **Amit and Zott** (2001: 511), two scholars that are very frequently cited in the context of business model literature, describe a business model as follows:



“Business models refer to the content, structure, and governance of transactions designed so as to create value through the exploitation of business opportunities.”

The one-way relationships between the variables under review are relatively well explored

HC	FC	BM	Performance	Findings & literature
x			x	Many existing studies , e.g. Brüderl et al., 1992 Shane & Stuart, 2002 Davidsson & Honig, 2003 Colombo et al., 2004 Colombo & Grilli, 2005 Ganotakis, 2012
	x		x	Many existing studies , e.g. Engel, 2002 Bottazzi & Da Rin, 2002 Davila, Foster, & Gupta, 2003 Busenitz, Fiet, & Moesel, 2004 Engel & Keilbach, 2007 Rosenbusch, Brinckmann, & Muller, 2013
		x	x	Few existing studies , e.g. Zott & Amit, 2007 Zott & Amit, 2008 Weill, Malone, & Apel, 2011 Brettel, Strese, & Flatten, 2012 Brea-Solis, Casadesus-Masanell, R., & Grifell-Tatje, 2014 Spiegel, O., Abbassi, P., Zylka, M. P., Schlagwein, D., Fischbach, K., & Schoder, D., 2016

The one-way relationships between the variables under review are relatively well explored

.... however, as suggested in literature, especially the **relationship between business model design and performance** may be more complex than a simple main-effects only. In fact, the relationship might be **context-specific**, depending on the **characteristics of the underlying resource structure.**



A photograph of two jockeys racing horses on a track. The jockey on the left is wearing a white helmet and a blue and white uniform, while the jockey on the right is wearing a red helmet and a white and red uniform. The horses are in full gallop, and the background shows a blurred racetrack with white railings and green grass.

An old debate among investors...

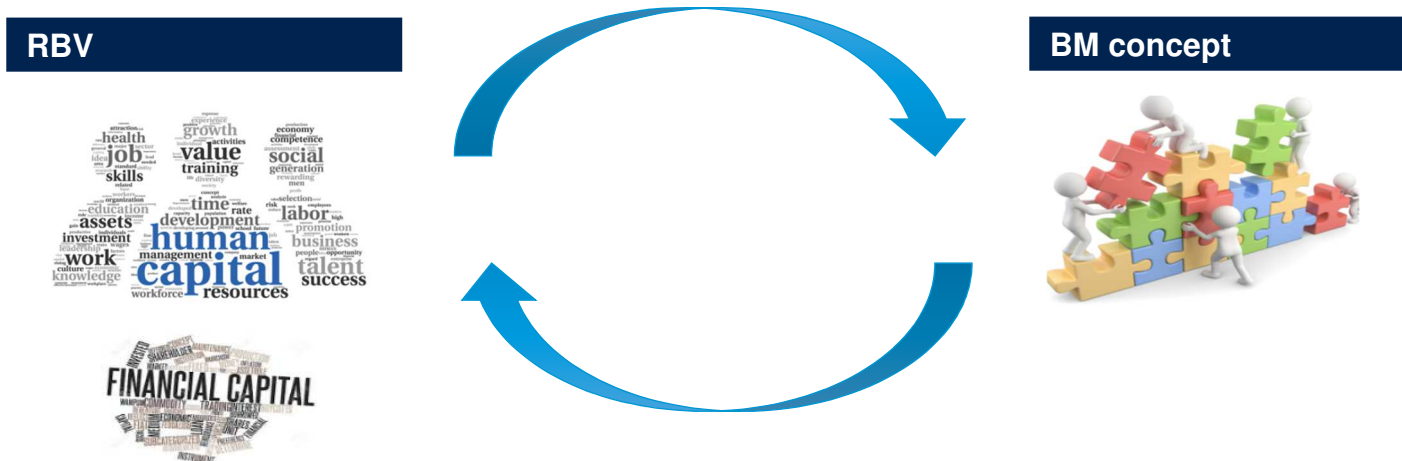
“Some believe that a **company’s business model** is key to success.”

“Some believe it’s about **management, management, management.**”

“Some say, you just put some **money** in it and it will be successful.”

? But are there **configurations of business models, management team and finance** that generate better outcomes than any other combinations ?

Joint research on the RBV and BM concept has focused on selected aspects



Reviewing business model research related to the resource-based view, **several patterns** can be observed:

- ▶ While some authors explicitly build their concept on the basis of the **resource-based view** (e.g. Amit & Zott, 2001; DaSilva & Trkman, 2014),
- ▶ others link business models to **resource acquisition and allocation** (e.g. Hamel, 1999; Mangematin et al., 2003; Teece, 2010; Baden-Fuller & Morgan, 2010)
- ▶ Further, some focus on the relationship between **knowledge, capabilities and the BM** (Morris et al., 2005; Venkatraman & Henderson 1998; Applegate, 2001; Seelos & Mair, 2007; Gassmann et al., 2014)
- ▶ Additionally, some authors concentrate on the **dynamic aspect** and frame the business model as an evolving bundle of activities (e.g. Winter & Szulanski, 2001; Demil & Lecocq, 2010; Hedmann & Kalling, 2003; Boulton et al., 2000)

The two-and three way relationships between the variables under review need to be further explored

HC	FC	BM	Performance	Findings & literature
x	x		x	Several studies, e.g. Baum & Silverman, 2004 Engel & Keilbach, 2007 Gimmon & Levie, 2010 Cooper et al., 1994 Colombo & Grilli, 2010
x		x	x	One study, Patzelt, Knyphausen-Aufsess, & Nikol, 2008 Related, e.g. Bruderl & Preisendorfer, 1992
	x	x	x	No previous studies, only topic-related studies, e.g. Hellmann & Puri, 2000 see Zott & Amit, 2007 Alexy & George, 2013 (not directly relevant) Gerasymenko, De Clercq, & Sapienza, 2015 Cucculelli & Bettinelli, 2015 Colombo, Cumming, Mohammadi, Rossi-Lamastra, & Wadhwa, 2016
x	x	x	x	No previous studies, only reference studies, e.g. Mangematin, Lemarié, Boissin, Catherine, Corolleur, Coronini, & Trommetter, 2003 Wiklund & Shepherd, 2005

The two-and three way relationships between the variables under review need to be further explored

.... so far, there is **very limited empirical evidence** that has **tested business models jointly with human capital indicators and financing**. While **moderators** to the relationship of business models and performance **have been investigated**, **human capital characteristics and access to equity finance have not previously been investigated together** in a configurational model of business model performance.



Research questions

RQ 1: Does business model design impact startup performance?

RQ 2: To what extent do human capital characteristics moderate the relationship between performance and business model design?

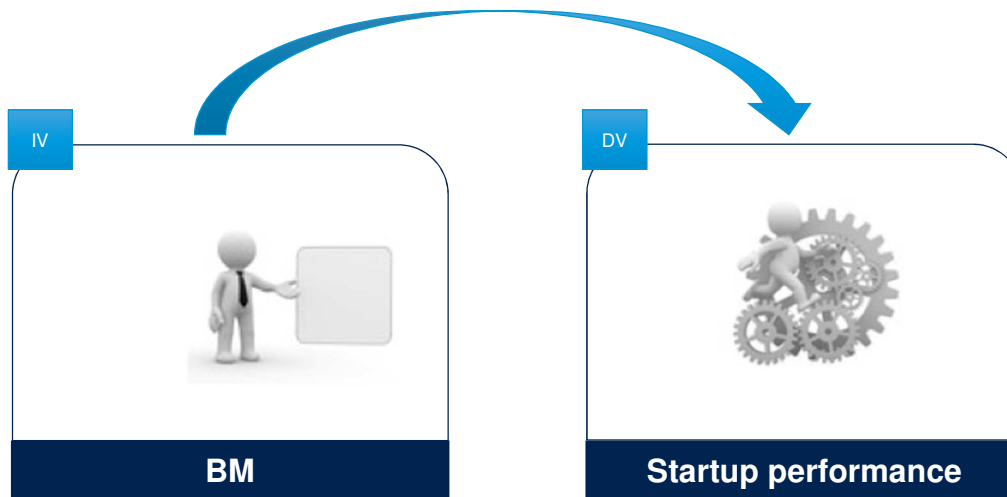
RQ 3: To what extent does equity financing moderate the relationship between performance and business model design?

RQ 4: What is the relative impact of human capital characteristics and equity financing on business model performance?

Hypothesis 1 – Single effects between BM and startup performance



H1: “The business model matters to firm performance. The more novelty-centered an entrepreneurial firm's business model design, the higher the firm's performance.”



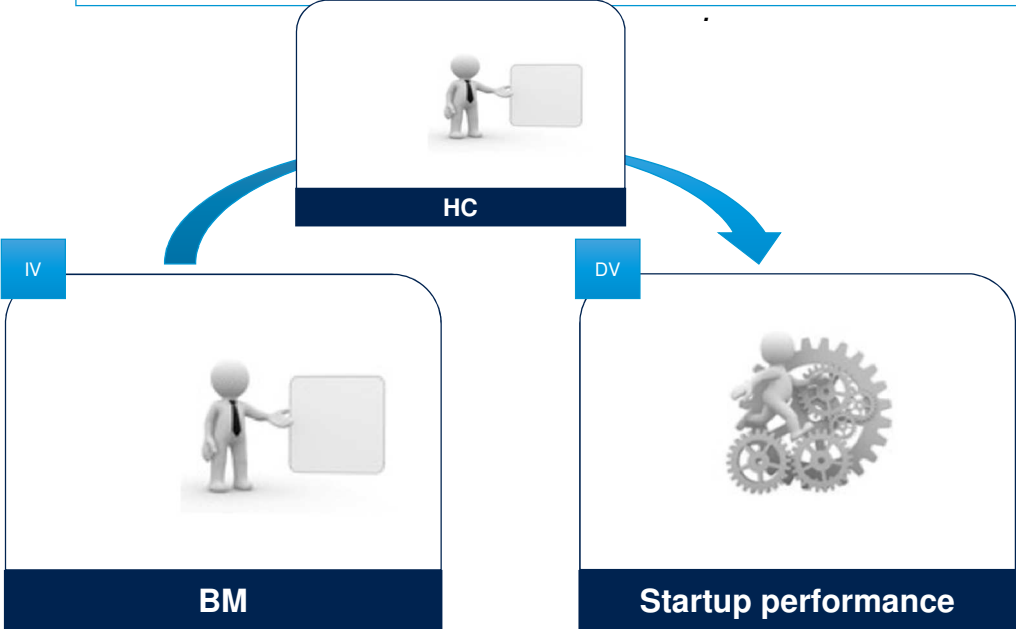
- ▶ Differentiation between novelty and efficiency-centered startups (Amit & Zott, 2002)
- ▶ Performance measured as e.g. employee growth rate

IV – Independent Variable, DV = Dependent Variable

Hypothesis 2 – Joint effects between HC, BM and startup performance



H2: The relationship between the business model and performance is moderated by human capital characteristics. The relationship between industry experience of the founding team and performance is more positive for more novelty-based startups than for more efficiency-based startups.

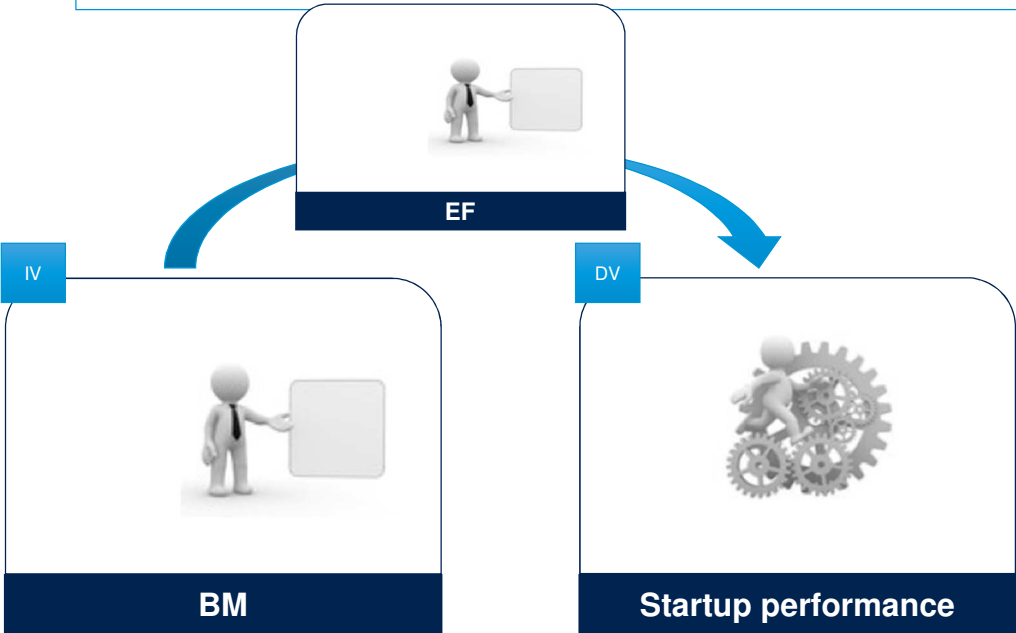


IV – Independent Variable, DV = Dependent Variable

Hypothesis 3 – Joint effects between EF, BM and startup performance



H3: The relationship between the business model and performance is moderated by equity finance. Equity finance has a stronger impact on the performance of more novelty-centered business models than of more efficiency-centered business models.



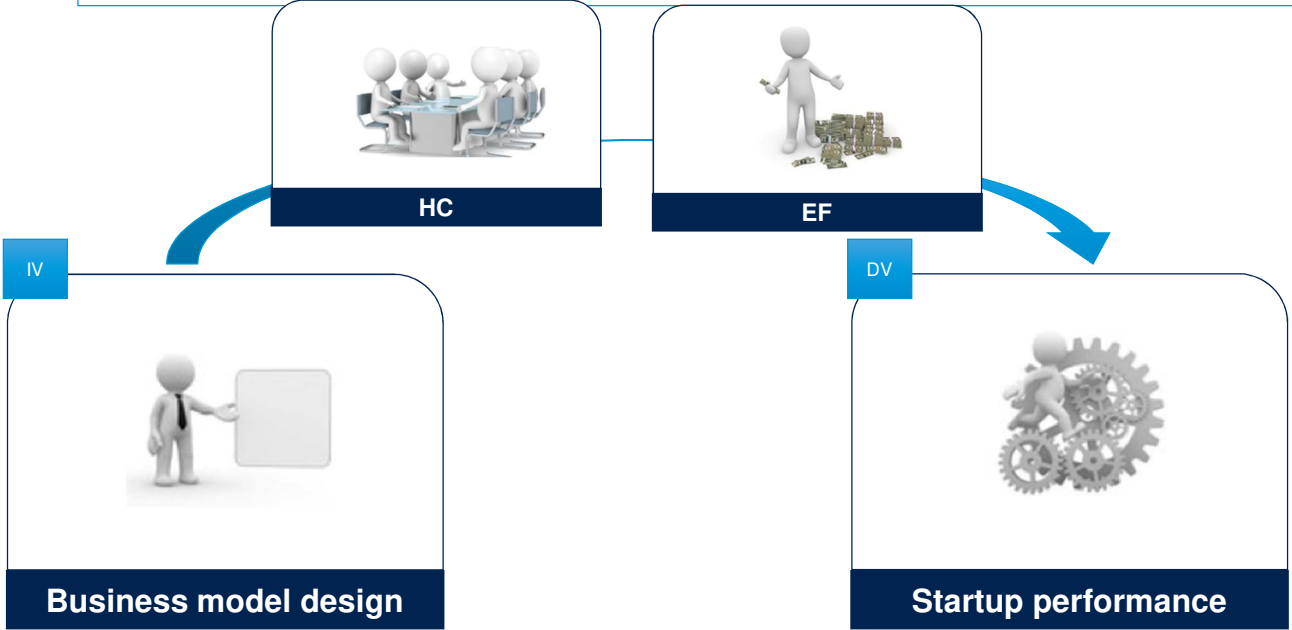
► Equity finance as binary variable (funding yes / no)

IV – Independent Variable, DV = Dependent Variable

Hypothesis 4 – Joint effects between HC, EF, BM and startup performance



H4: Startup performance is explained by configurations of business models, human capital characteristics, and access to financial capital. Startup performance is highest among firms with a more novelty-centered business model, access to equity financing, and industry experience than for other configurations.



IV – Independent Variable, DV = Dependent Variable

27.03.2017

Erste Vision Capital: Fund of Excellence Invests in Dedicated Founders

Effective immediately, Erste Group provides financial assistance to persons who want to start their own business through a new form of investment. Erste Vision Capital invests in founders of start-ups with promising business models, and makes up to 60,000 euro per person available. In return the fund receives a share in the company's future earnings. Important criteria for the investment decision: Personality and professional expertise. Collateral or one's financial situation do not play a role.

Research design

Data	N=150 startups captured in the “Austrian Startup Monitor”; data from patent databases, the commercial register, complementary data from related AIT projects, web research, personal interviews/survey to be used		
Methods	Multivariate statistical testing		
Variables	Independent variable	Dependent variable	Control variable
	Human capital Industry experience Access to equity finance Business model Novelty-centered Efficiency-centered	Growth e.g. employee growth, financial KPIs	e.g. Firm size Firm age

$$\frac{ds}{dt} = T_{\text{open}}(N - N_{\text{eff}})(1 - \epsilon S)S + \frac{P_{\text{in}} N}{T_{\text{in}}} - \frac{c}{T_{\text{p}}}$$


$$\frac{S}{P_{\text{in}}} = \frac{T_{\text{p}} \times 0}{T_{\text{in}} \times 0} = 0$$

$$S \leq \frac{1}{\epsilon}$$

$$\left. \begin{aligned} N &= N \\ P_{\text{in}} &= (N) \end{aligned} \right\}$$

Thank you.

The resource-based view – A well-established theory within strategic management literature



Key contribution	Author, year
<ul style="list-style-type: none"> ▶ Proposed that referring to a firm’s resource position rather than its products can provide an alternative on the strategic options a firm is able pursue 	Wernerfelt, 1984
<ul style="list-style-type: none"> ▶ Found that critical resources are accumulated rather than acquired in strategic factor markets 	Dierickx & Cool, 1989
<ul style="list-style-type: none"> ▶ Outlined the core tenets of the resource-based view by elaborating the characteristics that make a firm realize sustained competitive advantage ▶ Firms must own or control resources that are valuable, rare, inimitable, and non-substitutable in order to achieve sustained competitive advantage (VRIN) 	Barney, 1991
<ul style="list-style-type: none"> ▶ Categorized the overall construct of resources into resources and capabilities 	Amit & Schoemaker, 1993
<ul style="list-style-type: none"> ▶ Extended the resource-based view to the natural-based view ▶ Stated that firms can create competitive advantage based upon the firm’s relationship to the natural environment 	Hart, 1995
<ul style="list-style-type: none"> ▶ Introduced the knowledge-based view ▶ Stated that the primary role of the organization as institution for integrating knowledge 	Grant, 1996

The resource-based view – A well-established theory within strategic management literature

Time ↓

Key contribution	Author, year
<ul style="list-style-type: none"> ▶ Introduced the concept of dynamic capabilities ▶ Explained that competitive advantage stems from the confluence of assets, processes, and evolutionary paths 	Teece et al., 1997
<ul style="list-style-type: none"> ▶ Introduced the relational view ▶ Coined the term “relational view” by applying the resource-based view to inter-organizational relationships, stating that “a firm’s critical resources may span firm boundaries and may be embedded in interfirm resources and routines 	Dyer & Singh, 1998
<ul style="list-style-type: none"> ▶ Positioned the resource-based view with regard to various other research fields 	Makadok, 2001

Emerging themes (Barney, 2011)

Processes of resource acquisition & development

Micro-foundations of RBV

Resource-based theory and sustainability

Method and measurement issues

Interlinkages with other perspectives

Definitions of the term business model are manifold

Selected examples

Business model definition	Author, year
▶ "The method by which a firm builds and uses its resources to offer its customer better value and to make money in doing so."	Afuah & Tucci, 2000
▶ "A description of the roles and relations among a firm's consumers, customers, allies, and suppliers that identifies the major flows of product, information, and money, and the major benefits to participants."	Weill & Vitale, 2001
▶ The business model is "the heuristic logic that connects technical potential with the realization of economic value."	Chesbrough & Rosenbloom
▶ Business models are "stories that explain how enterprises work."	Magretta, 2002
▶ "A concise representation of how an interrelated set of decision variables in the areas of venture strategy, architecture, and economics are addressed to create sustainable competitive advantage in defined markets."	Morris et al., 2005
▶ "A conceptual tool that contains a set of elements and their relationships and allows expressing the business logic of a specific firm. It is a description of the value a company offers to one or several segments of customers and of the architecture of the firm and its network of partners for creating, marketing, and delivering this value relationship capital, to generate profitable and sustainable revenue streams."	Osterwalder et al., 2005
▶ "A business model describes the logic of the firm, the way it operates and how it creates value for its stakeholder."	Casadesus-Masanell & Ricart, 2010
▶ "In general, the business model can be defined as a unit of analysis to describe how the business of a firm works. More specifically, the business model is often depicted as an overarching concept that takes notice of the different components a business is constituted of and puts them together as a whole."	Gassmann et al., 2014

Questionnaire novelty versus efficiency based business models

Survey item	Scale													
Efficiency-centered business model design														
Inventory costs for participants in the business model are reduced	SA. A. D. SD													
Transactions are simple from the user's point of view	SA. A. D. SD													
The business model enables a low number of errors in the execution of transactions	SA. A. D. SD													
Costs other than those already mentioned for participants in the business model are reduced (i.e. marketi	SA. A. D. SD													
The business model is scalable (i.e. can handle small as well as large number of transactions)	SA. A. D. SD													
The business model enables participants to make informed decisions	SA. A. D. SD													
Transactions are transparent: Flows and use of information, services, goods can be verified	SA. A. D. SD													
As part of transactions, information is provided to participants to reduce asymmetric degree of knowledge	SA. A. D. SD													
As part of transactions, information is provided to participants about each other	SA. A. D. SD													
Access to a larger range of products, services, information and other participants is provided	SA. A. D. SD													
The business model enables demand aggregation	SA. A. D. SD													
The business model enables fast transactions	SA. A. D. SD													
The business model, overall, offers high transaction efficiency	SA. A. D. SD													
Novelty-centered business model design														
The business model offers new combinations of products, services and information	SA. A. D. SD													
The business model brings together new participants	SA. A. D. SD													
Incentives offered to participants in transactions are moved	SA. A. D. SD													
The business model gives access to an unprecedented variety and number of participants and/or goods	SA. A. D. SD													
The business model links participants to transactions in novel ways	SA. A. D. SD													
The richness (i.e. quality and depth) of some of the links between participants is novel	SA. A. D. SD													
Number of patents that the focal firm has been awarded for aspects of its business model	0, 1-2, 3-4, <4													
Extent to which the business model relies on trade secrets and/or copyrights	R. S. B. N.													
Does the focal firm claim to be a pioneer with its business model?	Y. N.													
The focal firm has continuously introduced innovations in its business model	SA. A. D. SD													
There are competing business models with the potential to leapfrog the firm's business model	SA. A. D. SD													
There are other important aspects of the business model that make it novel.	SA. A. D. SD													
Overall, the company's business model is novel.	SA. A. D. SD													
SA - Strongly Agree (coded as 1); a - Agree (0,75); D - Disagree (0,25); SD - Strongly Disagree (0); Y - Yes (1); N - NO (0); R - Radically (1); S - Substantially (0,66); B - a bit (0,33); N - not at all (0); 0 (0); 0 (0), 1 - 2 (0,33); 3 - 4 (0,66); > 4 (1)														