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What Is a Business Model – For Products, Platforms, or Ecosystems?

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Abstract

This article suggests that the definition of a business model depends on the application context: products, platforms, or ecosystems. Building on existing literature and illustrative examples, the paper clarifies the business model construct by emphasizing the context of analysis. The article presents three different approaches for evaluating business models in different settings and delineating the context-specific characteristics for each business model. Also, the paper strengthens the explanatory power of the business model concept beyond the boundaries of a focal firm, offering clarity to complex settings without a clear division between a supplier and a customer.

Keywords: business models, platforms, ecosystems

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Introduction

The business model of a firm has become an established concept in management research for describing the activities of firms in the middle ground between their strategies and operations (e.g., Casadesus-Masanell and Ricart, 2010; Massa et al., 2017). The concept has been used to describe a firm's business mainly from the supplier's perspective and intended to outline the focal firm's offering and activities with its customers (Priem et al., 2018). Put differently, the business model has been considered as the manager's or the focal firm's conjecture about who their customers are, what those customers want, and how the firm can deliver value to these customers with a profit (Foss and Saebi, 2017; Teece, 2010).

However, as value creation is taking increasingly networked, dynamic, and complex forms, such approaches that focus on a focal firm's actions are becoming limited (Massa et al., 2018). Consider, for example, the Linux open-source software community, where the customer is not a clearly defined group of actors, nor the provider is a sole organization. Since the community members provide different contributions and have various reasons or incentives for partaking, it is practically impossible to delineate the value proposition for each contributing member or action with the traditional approach, in which the business model is conceived unidirectionally from the provider's perspective. Moreover, novel decentralized technologies have enabled solutions without intermediary actors, offering new premises for economic and social systems (Mas et al., 2020). Thus, managers or firms looking to build a community—or an ecosystem of interdependent partners who contribute toward a shared goal (Adner, 2017; Shipilov and Gawer, 2020)—require a different approach to outline the business model of such complex systems of activities that span the boundaries of the focal organization (Massa et al., 2018).

The purpose of this paper is to amend the current thinking of business models by suggesting a context-specific approach for the conceptualization of the business model. Since a common understanding of the essence of business models is still largely missing (Wirtz and Daiser, 2018), this article highlights how the context of analysis influences the per-

sistent question of “what actually is a business model?” (Belussi et al., 2019). We offer examples of viable conceptualizations of business models for products, platforms, and ecosystems and argue that the exact articulation of the concept should depend on the context of analysis. Building on existing literature and illustrative examples, we show how the different approaches help delineate the typical characteristics of the transactions associated with the various business model elements in distinct contexts. In so doing, we address recent calls to provide a common language for scholars and practitioners addressing the business model concept in different contexts (e.g., Belussi et al., 2019; Massa et al., 2018; Wirtz and Daiser, 2018). We contribute to theory by adding coherence to the dispersed literature. Moreover, as the popularity of different business model definitions builds on essentially distinctive factors, we complement the existing literature by suggesting the most viable setting for the said approach. Next, after a short overview, we will present three approaches to business models suitable for products, platforms, and ecosystems, respectively.

Approach

Despite numerous attempts, the academic literature has been rather far from finding a commonly agreed definition for a business model (Belussi et al., 2019; Foss and Saebi, 2017; Massa et al., 2017; Ritter and Lettl, 2018). For instance, Belussi et al. (2019) noted considerable differences in the level of abstraction in the past research, ranging from models and frameworks to meta-models and activity systems. The more concrete representations outlined different elements and frames for business models, whereas more abstract ones combined micro individual processes with broad themes (e.g., novelty, complementarities, lock-ins). Similarly, Massa et al. (2017) identified three common interpretations of business models: formal descriptions of organization's functions; attributes of real firms impacting the business operations; or cognitive/linguistic schemas held by the managers. Despite the merits of these classifications, a demand to reduce the variety of the presented typologies remains (Belussi et al., 2019). In particular, scholars have rarely instructed how the context of analysis should be accounted for when analyzing business models.

To address this deficiency, our main argument in this paper is that different approaches in the business model literature are suited for delineating the business models in specific analytical contexts. Subsequently, we suggest that the context of analy-

sis should be acknowledged when defining what a business model is. Table 1 summarizes our conceptual arguments, including the context of analysis, the illustrative examples we address in this paper, typical transaction relationships and partners, the

Table 1.

Context of analysis	Products	Platforms	Ecosystems
Illustrative examples provided	iPhone Traditional value chain Robot vacuum selling idle computing power	iPhone AppStore Apps: Uber, Spotify	Apple Continuity Tracey fishery data Intelligent goods with smart contracts Open-source community (Linux)
Typical transaction relationships and partners	Dyads, firms (e.g., customer-provider)	Triads, sides (e.g., in multisided markets)	Activities, members (e.g., complements & complementors)
Business model elements	Value proposition <hr/> Value constellation	Value creation	Activity system
Key references	(Richardson, 2008; Teece, 2010; Yunus et al., 2010)	(Casadesus-Masanell and Zhu, 2013; Demil et al., 2015; Zhu and Furr, 2016)	(Amit and Zott, 2015; Massa et al., 2018; Zott and Amit, 2010)
Suggested readings	(Bocken et al., 2014; Foss and Saebi, 2017; Osterwalder and Pigneur, 2010; Reim et al., 2015; Teece, 2018)	(Casadesus-Masanell and Ricart, 2010; Choudary, 2015; Parker et al., 2016; Priem et al., 2018; Thomas et al., 2014)	(Adner, 2012, 2017; Jacobides et al., 2018; Kapoor, 2018; Marttila et al., 2019; Rajala et al., 2018; Shipilov and Gawer, 2020)

Table 1: Different approaches for analyzing business models and the suggested business model elements to consider depending on the context of analysis

different business model elements and their interrelation, and some key references and additional readings to support our argumentation. Overall, the three alternative approaches to defining business models have different reasons for their popularity. Thus, these views should be regarded as complementary rather than alternatives, as different analytical perspectives may provide additional insights if applied in the same context of analysis.

First, for analyzing product-centric transactions, it might be useful to identify and differentiate the key elements for a business model. Most commonly, these elements state *“the firm’s value proposition and market segments, the structure of the value chain required for realizing the value proposition, the mechanisms of value capture that the firm deploys, and how these elements are linked together in an architecture”* (Foss and Saebi, 2017, p. 202). More distinctively, this perspective summarizes a business model through three key elements, value proposition, value constellation, and value sharing, in which the value constellation refers to how the value proposition is realized (Yunus et al., 2010), and value sharing refers to how the created value is distributed among the different participants (Svejenova et al., 2010). Thus, value sharing incorporates the aspects of profit and revenue models of the firm (Richardson, 2008) and provides the financial translation of the other two elements, including non-economic measures (Yunus et al., 2010). While there might be slight differences in terminology, many authors share the conceptual model of describing the chosen architecture for value proposition, value creation and delivery, and value capture (e.g., Bocken et al., 2014; Reim et al., 2015; Richardson, 2008; Teece, 2010).

Second, different platforms rely on facilitating value-creating interactions between their members (Choudary, 2015; Parker et al., 2016; Thomas et al., 2014). Such an approach resonates with the stream of business model research that originates back to the rise of e-commerce when the business model became the tool to describe the *“content, structure, and governance of transactions designed to create value,”* accompanied by a revenue model that *“refers to the specific modes in which a business model enables revenue generation”* (Amit and Zott, 2001,

pp. 511–515). Such thinking follows a popular option to describe a business model as the value creation and capture mechanisms of a firm (Demil et al., 2015; Massa et al., 2017; Zhu and Furr, 2016). Platforms leverage network effects by mediating the interactions between their members (Choudary, 2015; Thomas et al., 2014), thus connecting the value proposition (i.e., the suggested benefit) and the means to realize the proposed value (i.e., value constellation) tightly to the interactions facilitated through the platform. In many cases, it is difficult—if not impossible—to separate the value proposition from the value constellation, making it more relevant to address these jointly as the mechanisms for creating value. Furthermore, since the value is created through interactions that are facilitated by the platform and, typically, a part of that value is—directly or indirectly—captured by the platform provider as compensation (Casadesus-Masanell and Zhu, 2013; Choudary, 2015; Zhu and Furr, 2016), such twofold approach to business models lays out a fitting foundation for analyzing platform businesses.

Third, for analyzing the business models in ecosystems, a different perspective may be needed. An ecosystem, often defined as *“a set of actors with varying degrees of multi-lateral, non-generic complementarities that are not fully hierarchically controlled”* (Jacobides et al., 2018, p. 2264), can make the business model analysis challenging, especially if one tries to delineate the different elements or the dyadic transactions that take place in this setting.

^[1] Luckily, a stream of business model research has been approaching the concept as a set or system of interlinked activities necessary for some value to be realized (Amit and Zott, 2015; Massa et al., 2018; Zott and Amit, 2010). While these activity systems may

¹ While many alternative definitions for the ecosystem exist, all of them are complicated from the business model perspective. Consider, for instance, the descriptions by Adner (2017): “ecosystem is defined by the alignment structure of the multilateral set of partners that need to interact in order for a focal value proposition to materialize” or Kapoor (2018): “an ecosystem encompasses a set of actors that contribute to the focal offer’s user value proposition” and whether it would be possible to identify how the focal firm delivers value to the customers, attracts payments and converts those payments to profits (cf. Teece, 2010). Moreover, different views on ecosystem governance may differentiate between open and closed ecosystems, complicating the issue further (see Jacobides et al., 2018).

vary in the level of complexity, all of them can be described as an integrated whole of different interacting components (Massa et al., 2018). This approach does not differentiate between the various elements or parts of a business model but emphasizes how all the different activities are ultimately interlinked and multilateral. The definition is relatively abstract and may not be practical, for instance, to delineate transactional agreements typical in a product-centric context. However, the growing interest in ecosystems within the business context calls for employing such a holistic view (e.g., Rajala et al., 2018; Shipilov and Gawer, 2020; de Vasconcelos Gomes et al., 2018). Next, we will elaborate on these three contexts of analysis using illustrative examples.

Key Insights

To outline the approaches in detail, we will start from the most concrete product offerings, then discuss multisided transactions in platforms, and end with the most abstract view of interlinked ecosystems. For an illustration of the applicability of the presented definitions, consider Apple. The company illustrates all three approaches in its operation. Moreover, these approaches relate simultaneously to a single offering. We present three examples from the company: iPhone as a product, apps (for iPhone) as platforms, and Apple's Continuity feature that integrates different operating systems as an ecosystem.^[2] Also, we complement our argumentation with other examples, including the widely-known platforms of Uber and Spotify, and perhaps less-known ecosystems for fishery catch and trade data (Marttila et al., 2019) and intelligent goods (Rajala et al., 2018).

Product manufacturing relies on dyadic transactions in supply chains

First, consider the (physical) product perspective—the iPhone. It is a classical representation of supply chain manufacturing. The whole process is very strictly controlled and hierarchically governed. Transaction prices are set with fixed and thin margins. The supply chain aims for zero deviation within the single product class. Despite the different generations (such as iPhone 8, 12, or XS) and specifica-

tions (64, 256, or 512 GB of storage), the whole purpose is that two units with the same specifications are identical. The value that Apple communicates to its potential customers relates heavily to technical aspects. This focus can be seen easily from the company web pages, filled with technological specifications, lists of new features that the current product enables, and so forth. Clearly, the focus is on delineating why the iPhone is a good product.

There are different stages in materializing the offering. The first step is to convince the customer that this is the product to buy (i.e., what is their value proposition to what kind of customers). After that decision has been achieved, the customer is directed to the practicalities, such as where to buy, whether online from Apple or locally from some retailer. This part links to the value constellation. Third, the customer considers and compares the prices, delivery times, or payment agreements between the alternative suppliers, and the value sharing stage initiates. Ultimately, this third step impacts how the created value is distributed among the different participants and defines the value sharing of each product sale (Svejenova et al., 2010). These three business model elements might not always be temporally distinctive phases, but they are different facets that need to be sorted out for making the sale. In addition, such product-centric, dyadic transaction relationships may also be identified as a part of more complex structures, similar to how Apple's iPhone sales feed to the growth of their AppStore platform and the functionality of their Continuity feature.

Platforms facilitate interactions for value creation and capture

Second, consider AppStore for iPhones. The majority of iPhone's success as a market disruptor has been accredited to this solution for developing and distributing the software—or apps—to the end customers' phones (Adner, 2012; Gawer and Cusumano, 2014; Parker et al., 2016). Such an approach, which effectively leverages the available network effects, has been described as "platform thinking" (Choudary, 2015) or even "platform revolution" (Parker et al., 2016). In general, platform business models may not focus on creating tangible products but rather enable value by curating and governing interactions

² Continuity: All your devices. One seamless experience <https://www.apple.com/macOS/continuity/>

between different members (Choudary, 2015; Massa et al., 2017). The platforms offer an architecture for connecting and mediating interactions between different sides, while the providers of those platforms “leverage a shared trading platform to create and appropriate value from both sides of the market” (Thomas et al., 2014, p. 110).

Thus, from a business model perspective, a significant change is that, in platforms, value proposition and value constellation have become intertwined. The value that is communicated to potential customers is heavily focused on usage. Therefore, platform thinking is not targeted traditional manufacturing of physical products nor supply chains. The marketing material—or description pages in AppStore—include phrases such as “download now for free” or “you’ll find all the necessary tools to get you started.” The digital content is readily downloadable, and, in many cases, the pricing follows the freemium principle (cf. Teece, 2010) or “sponsor-based business models” (Casadesus-Masanell and Zhu, 2013). For any provider, it is surmountable that the value creation happens by leveraging the resources and infrastructure of the platform (Thomas et al., 2014), feeding to the platform’s scale and growth through positive network effects (Choudary, 2015; Parker et al., 2016)

So, even though the different elements may be inseparable, each offering includes aspects of value creation (i.e., what you can do with the app) and value capture (i.e., download for free, improve with in-app purchases). The platform provider acts as an intermediary between the connected sides and can utilize this position by setting a commission for each transaction. Similar thinking applies to other popular platform companies, such as Uber. As the disruptor of the taxi industry, Uber may be offering their customers cheaper rides, ease of use, or integrated payments. Still, all these benefits are only available through using their proprietary platform if the customers and providers (i.e., riders and drivers) agree on Uber’s pricing policy. Similarly, Spotify provides a clear example of how value creation is tied to its platform. The different subscription plans impact the price of the service (i.e., value capture) and the available value-creating elements.^[3] Thus,

3 Spotify Premium: <https://www.spotify.com/us/premium/>

in platforms, value creation and value capture are ultimately defined by the tools and rules set by the platform provider (Choudary, 2015).^[4]

Ecosystems are based on dynamic systems of interlinked activities

The third perspective is best suited to the current trend of open systems, driven by complementarity in consumption and production. From a business model perspective, when there is a feature that supports and improves the use of other products or services but has no apparent solution for monetizing this benefit, we suggest analyzing that setting from an ecosystem perspective.^[5] As an example, Apple improves the usability of their different products with the “Continuity” feature. Continuity offers seamless integration between Apple’s various operating systems—iOS for handheld devices and macOS for computers—by which the user can, for instance, begin writing an email with their iPhones, but once near their laptop, they can simply click an offered icon to continue writing that same message on a computer. The same philosophy is applied when Apple announces on its web pages how “your favorite apps are even better with iCloud,” thus supporting the overall value proposition of their product line, including the iPhone. In these settings, it may remain ambiguous what is truly offered to the customers or how Apple improves the user experience with these features. Moreover, all of the benefits are offered free of charge.

4 The platform provider has a powerful position in controlling the interaction between the participants. Indeed, Apple’s recent announcement to offer a reduced commission rate of 15% (in contrast to 30%) for small businesses underlines the controlling power of the platform providers: no negotiation was needed; simply an announcement of the new policy was sufficient. <https://developer.apple.com/app-store/small-business-program/>

5 While business model research has acknowledged the role of activities as the base of understanding what a business does, there is often implicit guidance toward efforts that can be monetized, since: “These activities only make economic sense when they follow logics of value creation and value capture” (Ritter and Lettl, 2018, p. 4). Monetization is more straightforward in consumer product markets (Teece, 2018) or in situations where the activities can be decomposed into bilateral relationships, such as in a supplier-provider relationship or when a platform provider acts as an intermediary between the sides (e.g., when Uber conducts transactions separately for drivers and riders). In fact, Adner (2017, p. 53) argues that the ecosystem construct is not needed in these situations: “ecosystems matter when the multilateral relationships that underlie a value proposition are not decomposable into multiple bilateral relationships.”

For a more elaborate example, consider the Tracey ecosystem,^[6] which brings together a company called TX, WWF Philippines, and UnionBank, and utilizes blockchain solutions for documenting and verifying fishery catch and trade data. TX is a consultancy partner of Streamr, which in turn is a distributed open-source software project, an organizational form that is rarely in the focus of business model research. However, since “every organization has some business model” (Casadesus-Masanell and Ricart, 2010, p. 206), we have to conclude that one can be drawn for the Tracey ecosystem as well. The project aims to facilitate reliable and traceable catch and trade data while incentivizing the fisherfolk to provide the data by creating direct and indirect rewarding schemes for their actions (Marttila et al., 2019). The ecosystem brings together various stakeholders, with different objectives and incentives for participation: *for WWF*, the main goal might be to get reliable, timely, and electronic catch and trade data to replace unreliable paper documentation; *for UnionBank*, it may be to explore new technologies and attract new customers to their services; *for the fishers*, it is to secure their livelihood by preventing over-fishing or getting access for bank loans; and *for TX*, it might be to showcase Streamr’s decentralize data marketplace technology or perhaps simply the admin fee for developing the solution. Altogether, the project relies on a complex activity system and utilizes many digital platforms but differs from a platform business model. Since the Tracey app is a decentralized application (DApp), as it builds on Streamr’s decentralized, open-source data ecosystem, there is no focal orchestrator who mediates the interactions between the members, and, subsequently, no one cannot implement complete hierarchical control over other project partners at any stage.

Discussion and Conclusions

This paper offered three perspectives to business models to analyze products, platforms, or ecosystems. To illustrate our main arguments, we provided several examples to support our argumentation. In addition, we emphasized how the three alternative approaches to defining business models all draw

from a long tradition of research and have different reasons for their popularity. We sought to increase coherence between the differing views among business model scholars by suggesting a contextual setting most applicable for each business model definition. Most importantly, as the different analytical perspectives complement one another, it might be valuable to apply multiple views in a single context of analysis.

Acknowledging the context of analysis is particularly important in complex settings with multilateral interdependencies and nested hierarchies (Massa et al., 2018). With new technological solutions, such as the blockchain and smart contracts (Dal Mas et al., 2020), we face more and more situations where the different approaches to business models become tightly intertwined. For example, Rajala et al. (2018) presented an ecosystem based on interchangeable electric vehicle battery packs as intelligent goods utilizing smart contracts. The battery pack could perform a trend analysis on electricity market price, utilize additional computing power from nearby smart devices (e.g., other vehicles or a robot vacuum cleaner), and pay for these resources in cryptocurrencies. Each member in this setting will have their own goals, incentives, and justifications for partaking. The underlying, complex activity system relies on a new infrastructure for transactions and illustrates a business model in an ecosystem context: each participant can flexibly contribute to the system as they see fit, assuming different roles and interacting with other members, ultimately strengthening the emerging ecosystem (Adner, 2017; Jacobides et al., 2018; Shipilov and Gawer, 2020). Yet, many of the activities can be regarded as dyadic transactions, for which a more specific product-centric business model can be defined. For instance, the smart contract between the battery pack and a robot vacuum cleaner may outline what is offered (computing power), how the offering will be delivered (granting access through an API), and how much it will cost (payable in cryptocurrency). Nevertheless, this one transaction is only part of a much larger, encompassing ecosystem and needs a vibrant community to make it relevant or worthwhile. Similarly, the Tracey ecosystem may contain dyadic agreements, for instance, when the data is sold or bought in the

⁶ TX Project: Tracey: “How the Tracey ecosystem works” <https://tx.company/projects/tracey/>

Streamr data marketplace. As these examples illustrate, the different aspects of the larger ecosystem build on various activities that are easier to understand when dissected at the proper level of analysis.

Another reason why the context of analysis may become increasingly relevant is when value creation and value capture become decoupled. In particular, ecosystems may exhibit such decoupling, complicating the business model analysis and also differentiating ecosystems from platforms. Such distinction can also be seen in the ecosystem literature, as “business ecosystem” research has focused on value capture, whereas “innovation ecosystem” has emphasized value creation (de Vasconcelos Gomes et al., 2018). The Tracey ecosystem illustrated this decoupling, as it comprised many vital activities for value creation in the ecosystem (e.g., facilitating the data flows) that did not directly link to a financial reward (or other means of compensation).^[7] Instead, the Tracey ecosystem illustrated how value capture might often rely on indirect mechanisms, without the possibility to ensure the size of the reward for a member’s contribution to the ecosystem. The defining features of ecosystems—interdependence, com-

plementarity, and modularity (Adner, 2012; Jacobides et al., 2018; Kapoor, 2018; Shipilov and Gawer, 2020)—explain how a system of interlinked activities can help to create more value. However, there is no guarantee that an entity that helps to create a flourishing ecosystem will benefit financially from doing that (Teece, 2018). This dilemma may explain the highly expected benefits of collaborative ecosystems, including in the traditional fields such as manufacturing supply chains (Rajala et al., 2018), but the relatively slow pace for realizing these possibilities. In conclusion, we suggest that scholars and practitioners should pay closer attention to the context of analysis when defining business models. Such an approach allows us to study various business models with higher distinction and better acknowledge the unique elements for each setting. In particular, Table 1 and the suggestion to focus on the said context (a product, a platform, or an ecosystem) may prove highly valuable to managers who wish for support in understanding the business models as they face the transition from linear value chains to complex ecosystems. It also helps to extend the explanatory power of the business model concept outside the boundaries of a focal firm, offering clarity to complex settings with no clear division between a supplier and a customer or where value creation is fundamentally decoupled from value capture.

7 See also “Data and revenue flows for the Tracey project” <https://streamr.network/case-studies/tracey/>

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