

The Role of Digitalization in Value Creation and Appropriation in Travel &

Tourism: The Case of Booking

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Abstract: The advent of the Internet has revolutionized the way companies create value. Recent studies have been focused on the concept of value creation in order to explain the benefits related to the e-business strategies. However, once the value is created, how the parties involved in the transaction protect this value? In addition, what is the moderation effect of the digitalization in the processes of value creation and value appropriation? I examine Booking, an Online Travel Agency (OTA) operating in the travel & tourism industry with the aim to investigate the impact of digitalization. The implications are drawn to enrich the theory of value creation and appropriation and to provide the managerial community with practical knowledge related to partnership strategies.

Key words: digitalization; business model; value; platforms **JEL codes:** O32O33, Q55, Z32

1. Introduction

Over the previous decades, the advent and development of the Internet has revolutionized organizations and more in general the whole ecosystem (Moore, 1993) through the creation of some threats but also several opportunities. For instance, the so called "e-business" (Amit and Zott, 2001; Applegate, 2001) has grown rapidly between 1999 and 2002 becoming a fundamental medium for market transactions (Bailey & Bakos, 1997); furthermore, the e-business "accounted for 9% of global retail sales in 2016 and that figure is expected to rise to 13% in 2021" (Euromonitor, 2016). Also, the number of worldwide Internet users has increased from 16 million in 1995 to almost 3 billion in 2013 (OpenLearn, 2013) while nowadays they represent more than 50% of the total population (We Are Social, 2018).

The digitalization is generating profound transformations rewriting the way in which businesses innovate, operate, and serve customers. In addition, the growth of the e-business encourages the creation of open business models; in this sense, the increasing use of external complementary resources calls into action the traditional resource-based view (RBV) theory based on the value creation potential deriving from strategic factor markets (Barney, 1986) and on the isolating mechanisms of the internal resources (Lepak, Smith & Taylor, 2007). Speaking of which, recent studies focused on the paradox of openness (Laursen & Salter, 2014; Wadhwa, Wadhwa, Freitas & Sarkar, 2017).

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While several studies emphasized the linkage between value creation and development of the e-business, the analysis of the value appropriation process still represent an unexplored area. According to Adegbesan and Higgins (2010), the appropriation process is useful to explain how the value created can be split among the parties depending on scarcity, degree of complementarity of internal and external resources and the bargaining power of the players. Especially, what is the moderation effect of the digitalization in the balance between the use of internal and external complementary resources? Moreover, once the value is created, how the parties involved in the transaction can protect their value?

To answer these research questions, I select Booking operating in the travel & tourism industry with the aim to explore the increasing use of external complementary resources and to investigate the moderation effect of the digitalization in the processes of value creation and value appropriation. I believe that the travel & tourism industry represents a good example of transformative environment, where the increasing number of online bookings, the deployment of new technologies, and the adoption of business models based on digital platforms create additional value for the industry and, more in general, for the entire society.

My research makes several theoretical contributions. First, I scrutinize the concepts of value creation and business model, and I also explore the strategic role of digitalization and external complementary resources; in this sense, my study adds contributions to the existing theories of value creation and openness. Furthermore, I analyze the process of value appropriation among the parties involved in the transaction in the travel & tourism industry with the aim to evaluate the moderation effect of the digitalization; in this sense, the research extends our knowledge of how the value created is split among the parties and it enriches the theory of value appropriation. Finally, my research has implications for practitioners who want to implement strategic decisions in order to ensure the success of their platforms.

2. Literature Review

In order to build the theoretical framework, I conducted a systematic review. First and foremost, on the basis of the ABS Academic Journal Ranking 2017, I selected the most relevant and prestigious academic journals of categories 3, 4 and the "top" class journals (4*) in the field of "general management" and "strategy" which included the terms "digitalization", "business model", "value", and "platforms" in the title or addressed these issues in order to collect evidence in support of my analysis. In this regard, I searched for articles in journals like Academy of Management Review, Journal of Management, Harvard Business Review, MIT Sloan Management review, Strategic Management Journal, Long Range Planning, California Management Review, Journal of Business Research, and I also concentrated on various papers on Web of Science and Google Scholar. Especially, I decided to focus on these terms in order to understand how the impact of digitalization and the increasing use of e-business could have significant implications for the business models and for the adoption of external resources that rise the openness of organizations and the value created. I found an increasing interest in digital and open innovation-related issues in strategic management studies over the years and, considering the prominence of the phenomenon, I believe that the research in these areas could be developed more.

2.1 The Concept of Value Creation in E-business

Amit and Zott (2001) have linked the concept of "value creation" to the terms "source of value creation" and "value driver" in order to explain the possible benefits related to the e-business implementation strategies. In fact, there are several factors that enhance the total value created by an e-business; first and foremost, the reduction of

costs due to lower search, procurement, transaction, labor and operational costs (Bakos, 1997; Andal-Ancion, Cartwright & Yip, 2003). Moreover, the advent of Internet facilitates communication and interaction between the users creating a sort of network in which products or actors combined with each other generate more value (Katz & Shapiro, 1994). In addition to gaining competitive advantages (Hamad, Elbeltagi, Jones & El-Gohary, 2015), the convenience of e-business is related to an increased demand due to improved customer satisfaction and loyalty (DeLone & McLean, 2004) and a more user-friendly and easier usage of the online channel (Timmers, 1998). In this sense, the implementation of e-business registers advantages in operational, competitive, and financial performance of the firm.

2.2 Role of the Business Models

As illustrated, the digitalization has proven to be disruptive in different ways resulting in radical transformations although sometimes the firms' adaption can be difficult to reach (Aggarwal, Posen, Workiewicz, 2017; Peruffo, 2017); the so-called digital vortex involves numerous industries in its inevitable movement toward a "digital center" in which business models, offerings, and value chains are digitized to the maximum extent possible (Bradley, Loucks, Macaulay, Noronha, Wade, 2015). Generally, all the innovations pass through the creation and the following re-configuration of the business model which is a combination of value proposition, revenue model and network of relationships (Zott, Amit & Massa, 2010). This fundamental tool has been widely studied and analyzed among the research community over the years (Timmers, 1998; Amit & Zott, 2001; Applegate, 2001; Chesbrough & Rosenbloom, 2002; Magretta, 2002; Zott & Amit, 2008; Demil & Lecocq, 2010; Baden-Fuller & Haefliger, 2013) because it describes the fundamental processes of value creation and value appropriation. Especially, business models explain, once the value is created, how other firms, managers, employees, shareholders and stakeholders protect and capture the surplus (Adegbesan & Higgins, 2010); in this sense, the existence of the dual processes — value creation and value appropriation — represents a crucial element of analysis (Di Gregorio, 2013).

2.3 Resource-based Theory vs Openness

From a value creation perspective, a contrast between the dynamic context that incentives openness (Varian & Shapiro, 1999; Chesbrough, 2003; West, 2003; Laursen & Salter, 2006), intra-firm complementarity (Alexy, West, Klapper, Reitzig, 2017), business model innovation (Amit & Zott, 2001; Magretta, 2002; Teece, 2010; Massa & Tucci, 2013) and the RBV theory built on the protection and control of valuable, rare and imperfectly imitable resources (Barney, 1991; Peteraf, 1993; Barney & Arikan, 2001; Wernerfelt, 2013) emerges.

On the one hand, the RBV theory summarizes that there is a linkage between competitive advantage, more or less accurate expectations about the value creation potential deriving from strategic factor markets (Barney, 1986) and isolating mechanisms that prevent access to one or more internal resources (Lepak, Smith & Taylor, 2007). On the other hand, the organizations are becoming more and more open, complex, agile, flexible (Volberda, 1997), and collaborative (Chesbrough, 2003). Moreover, Adegbesan (2009) argued that the complementarity between firms seems to generate a surplus due to the combination instead of the independent use of resources.

The digitalization process boosts the implementation of openness based on the paradigm of open innovation (Chesbrough, 2003; Chesbrough, 2006; West, Salter, Vanhaverbeke & Chesbrough, 2014). Furthermore, the evolution towards the plat-firms' age (Harvard Business Review Italia, 2016; McIntyre & Srinivasan, 2017) encourages the role of valuable external knowledge (Wadhwa et al., 2017) and resources – not only financial but also human –. Some recent studies explored how to manage this paradox of openness, based on the conflict between openness and appropriability (Laursen & Salter, 2014; Wadhwa et al., 2017).

2.4 The Concept of Value Appropriation

According to Adegbesan (2009), the superior level of complementarity ensures the greater amount of value ...toappropriate so that trading in strategic factor markets becomes profitable. As suggested by Adegbesan and Higgins (2010), once the value has been created, the appropriation process is useful to explain how this value can be split among the parties depending on scarcity, degree of complementarity of internal and external resources and the bargaining power of the players. Due to the emergence of the digitalization, the attention is now more on surplus deriving from the higher degree of combination of resources rather than on premium related to their scarcity. In this regard, the analysis of the impact deriving from the insertion of the digitalization phenomenon in the balance between the use of internal and external can be conducted. The "value appropriation" process is measured with the net value contributed to the economy by the existence of the firm.

3. Model Specification

In this study, I am interested in understanding to what extent the digitalization may amplify or hamper the impact of internal and external resources in the value creation and appropriation processes. The following Figure 1 illustrates the potential impact on value creation and appropriation deriving from the insertion of digitalization in the balance between the use of internal and external complementary resources. In order to investigate to what extent, the digitalization may amplify or hamper the impact of internal and external resources in the value creation and appropriation processes.

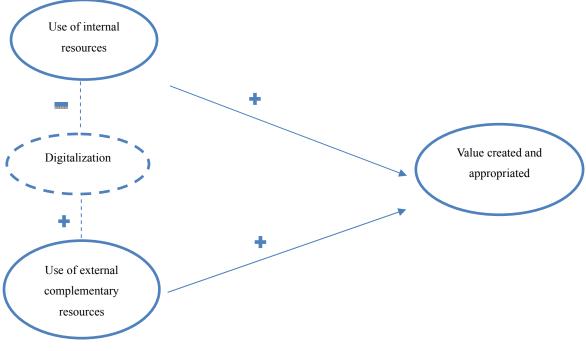


Figure 1 The role of the Digitalization in Value Creation and Appropriation Source: my elaboration

As suggested by Porter in 1985, I measure the value with the amount buyers are willing to pay for what a firm provides them. In this sense, value is measured by total revenues and a firm is profitable if the value it commands exceeds the costs involved in creating the product. I also measure the value creation with the reduction

of costs like lower search, procurement, transaction, labor and operational costs (Bakos, 1997; Andal-Ancion et al., 2003), and with the increased demand due to improved customer satisfaction and loyalty (DeLone & McLean, 2004). As previously said, the "value appropriation" process is measured with the net value contributed to the economy by the existence of the firm. The use of external complementary resources is measured with the number of partnerships or external agreements that are finalized between the parties involved in the transaction (e.g., contract staff, alliances, outsourced services), while the use of internal resources is measured for instance through the amount of investments on R&D or on training programs for employees focused on digital skills development.

The aim of this paper is to investigate the possible interactions between the drivers of value creation and value appropriation (Adegbesan & Higgins, 2010) when the digitalization increases. For this purpose, I focus on Booking that is an Online Travel Agency operating in the travel and tourism industry in order to investigate the digitalization's impact and to understand how the organization appropriate value from external complementary resources through the evolution of its business model.

4. Data Sources and Descriptions

In general, the travel and tourism industry can be divided into airlines, hotels, tour operators, and transportation systems (with all additional or shared services) and it is undergoing significant changes: by 2025, digitalization will create an additional value of \$305 billion for the sector and \$700 billion for the society (World Economic Forum, 2017); furthermore, the mobile travel service bookings are increased rapidly by 230% from 2015 to 2016 (World Economic Forum, 2017).According to the eTravel Report 2019, worldwide, the higher amount of revenue is generated in the US with \$93.7 billion in 2018, followed by Europe with \$92.3 billion of revenue in the same year. By 2023, it is expected that China will surpass the US market. According to the World Tourism Organization (2018), Europe records the highest number of international visitors who were almost 673 million in 2018 while they were more than 210 million in Americas in the same year.

These disruptive changes could impact on the balance between the use of internal and external resources and the processes of value creation and value appropriation. To answer my research questions, I select Booking operating as an Online Travel Agency able to connect several services, activities, and parties. Especially, Booking can be considered a global leader platform in online travel and restaurant reservation and related services.

I achieve secondary data from the 2018 Annual Report and from the Web in order to support my study.

5. Empirical Analysis

Booking has a market cap of \$80.52 billion as of April, 2019 and over 28,400,000 hotel and property listings worldwide. Moreover, with \$14.527 billion of revenues in 2018 vs \$7.1 billion euro of revenues in 2016, Booking records a net income of \$3,998 billion in 2018 vs \$2,135 in 2016. The following table 1 summarizes the revenue and net income trends of Booking over the years of analysis. I select 2008 as the starting point for this observation with the aim to investigate if the presence of digitalization positively moderates the relationship between the use of internal and external complementary resources and the value creation and appropriation movements over a period of ten years:

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Revenues	1,885	2,338	3,085	4,356	5,261	6,793	8,442	9,224	10,743	12,681	14,527
Net income	186	489	528	1,059	1,424	1,893	2,422	2,551	2,135	2,341	3,998

Table 1 Revenues and Net Income Trends 2008-2018, in millions

Source: Booking's Annual Reports

Among the others, revenues derive primarily from the advertising earned by KAYAK from sending referrals to online travel companies and travel service providers, as well as from advertising placements on KAYAK's websites and mobile apps. In fact, Booking offers services through online platforms like booking.com and rentalcars.com, priceline.com, KAYAK, agoda.com and OpenTable. Moreover, the Booking strategy focuses on the development of partnerships with travel service providers and restaurants in order to establish mutually beneficial relationships. Booking finalized the acquisitions of the Momondo Group in 2017 and of the HotelsCombined in 2018 with the aim to expand the KAYAK meta-search business; in addition, the acquisition of FareHarbor, a leading provider of business-to-business activity distribution services, completed in 2018 strengthened the ability to offer in-destination activities. According to Crunchbase, the number of acquisitions has increased over the years, starting from 2004 as illustrated in the following table 2.

1														
2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Travelweb	-	-	-	-	-	-	-	-	KAYAK	OpenTable	Rocketmiles	-	Momondo Group	FareHarbor
Booking.com	-	-	-	-	-	-	-	-	-	-	PriceMatch	-		HotelsCombined
	-	-	-	-	-	-	-	-	-	-	Analytical Systems	-		

Table 2Number of Acquisitions

Source: Crunchbase.

Basically, the main driver for creating and appropriating value is the advertising efficiency expressed as performance advertising expense as a percentage of gross profit. The online advertising efficiency is impacted by factors like costs per click, cancellation rates, and the extent to which consumers come directly to the websites or mobile apps for bookings. During 2014, the total online advertising expense was around \$2.4 billion and over \$4 billion only three years later. Typically, the accommodation reservations made on mobile devices are related to shorter lengths of stay. The room night reservations increased by 14% in 2018 compared to 2017 and this growing trend is also linked to the decrease in cancellation rates. Recently, Glenn Fogel, Chief Executive Officer of Booking Holdings, declared that "Booking Holdings finished 2017 with a strong 4th quarter, reporting year-over-year growth in room nights booked of 17% and adjusted EBITDA growth of 23%".

I find an increasing role of the complementary external resources over the years and a relevant impact on both revenues and net income over the years; in addition, a growing use of online booking, travel apps, customized services, and sharing economy business models has been found. I also observe that mobile technology, connected devices, and social media channels are gaining importance even though Booking itself declares that it may not be able to keep up with these rapid technological changes.

6. Conclusions

I find that the use of OTAs is becoming an extremely important touchpoint for consumers during the reservation phase. Benefits are registered in terms of customers, e.g., tailored journeys, improved travel

experience, time savings, and faster connections – industry, e.g., improved efficiency, cost reduction, and data integration - and society, e.g., more efficient processes, lower need to print, and data sharing -. The use of external complementary resources can be considered a relevant source of value and the digitalization results in overall greater satisfaction. The role of digitalization in relation to the touristic destinations' development is really beneficial to investigate the role and the adoption of technology in the balance between the use of internal and external complementary resources. Considering that little research has been conducted in these areas, I believe that my study makes several contributions to the management studies in terms of investigation of the potential impact on value creation and appropriation.

Researchers may further extend this empirical analysis to a wider range of OTAs and services offered in the travel and tourism sector in order to collect a broad set of data. Furthermore, information about the modifications of net value deriving from the percentage of online bookings on the total of reservations and the comparison between the average cost of online and offline bookings can be explored. Moreover, the average cost of the stay booked through the online channels and the number of integrated packages that comprise a combination of transport and accommodation cane be evaluated.

The implications are drawn to enrich the theory of value creation and appropriation and to provide the managerial community with practical knowledge related to the net performance deriving from the adoption of partnership strategies. In this sense, the analysis of the managerial aspects of the partnership strategies can be useful to evaluate the strategic decisions about the use of external complementary resources and their potential impact on value creation and appropriation.

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