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Alibaba vs. Amazon: A business model comparison

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List of abbreviations and acronyms

AMS: Amazon Marketing Service
AWS: Amazon Web Service
BBS: Bulletin Board System
B2B: Business-to-Business
B2C: Business-to-Consumer
C2C: Consumer-to-Consumer
FAQ: Frequently Asked Questions
FBA: Fulfilment By Amazon
FinTech: Financial Technology
FY: Financial Year
ICT: Information and Communication Technology
IPO: Initial Public Offering
M&A: Merger and Acquisition
O2O: Online-to-Offline
P2P: Peer-to-Peer
RTB: Real-Time Bidding
SME: Small and Medium Enterprise
SRE: Seller-Reputation-Escalation
TBO: Tmall Box Office

Introduction

Although still lacking a clear conceptualization, the term “business model” has been an essential element in the vocabulary of consultants, managers and academics for a while. One of the main reasons for this is that a well-engineered business model has been defined as a key factor behind the success of a company that may, often, even beat a better idea or technology (Afuah, 2004; Chesbrough, 2007). The understanding of the concept is not universal among practitioners (see works by George and Bock, 2011; Osterwalder, Pigneur and Tucci, 2005; Nielsen and Bukh, 2011) but these are well aware of the power and necessity of a sound business model. A survey from the Economist Intelligence Unit (2005) revealed that 54% out of more than 4,000 senior executives believed that a company’s competitive advantage would depend on innovation in terms of business model rather than in terms of services (p. 9). In practice, figures from the Boston Consulting Group (2009) showed that business model innovators outperformed their industry peers – with an average premium that was more than four times greater – and the return provided by such innovation tended to be more sustainable, lasting for a decade and more (p. 3).

The business model has also emerged as a new level unit of analysis for scholars (Zott, Amit and Massa, 2011, p. 1020). The importance of adopting a business model perspective has been stressed in the literature, as it assists executives in the task of structuring the activity system of their company and helps them adopt a holistic approach when considering innovation and change (Amit and Zott, 2012, p. 48). A string of success stories have been used in manuals and business reviews to illustrate the benefit of a competitive business model that is able to challenge the way business is done and reinvent the industry (Voelpel, Leibold and Tekie, 2004), as shown by the cases of Wal-Mart, Dell, Southwest Airlines, Apple or IKEA, just to name a few. Furthermore, as business models have the function to define and organize the firm’s activities in the process of executing the strategy (Richardson, 2008, p. 141), they represent powerful tools for analysing, implementing, and communicating these strategic choices (Shafer, Smith and Linder, 2005, p. 200). In such circumstances, the business model could be compared to a story that tells everyone in the firm how to align so as to generate the value desired (Magretta, 2002, p. 92), which is one of the main priorities of a firm that wants to succeed.

For these reasons, the notion of business model is crucial for understanding all aspects of a firm. In this paper, the business models of Alibaba and Amazon in particular will be

examined. Indeed, being both well established in their respective home market, the two technology giants are often compared due to the nature of their core business, the size and richness of their ecosystems, and more importantly their capacity to innovate and create value for their customers. The aim of this thesis is therefore to explore the differences and similarities Alibaba and Amazon hold on these various aspects and the value creation mechanisms they are bringing forward by comparing their business models.

From a more personal standpoint, this subject was appealing because e-commerce has become an integral part of our lives, especially for my generation. Indeed, the Nielsen Company (2014) reported that 52% to 63% of millennials (aged between 21 and 34) intend to buy online (p. 13). Furthermore, various publications from consulting firms (see Wang, Lau and Gong, 2016; Ben-Shabat, Nilforoushan, Yuen and Moriarty, 2015) show that the two largest and most attractive e-commerce markets were China and the USA, i.e. the countries where Alibaba and Amazon are respectively based. This further reinforces their positions as established players for now but also potentially for the years to come. The fact that few are actually aware of all the various other fields Alibaba and Amazon have stakes on besides e-tailing is another reason that motivated a deeper investigation of the overall presence of the two companies. Also, Alibaba being considered as a possible contender for Amazon is a quite recent development that was mainly steered by Alibaba's record-breaking IPO in 2014. In this regard, this topic can be considered as quite current. Finally, the media has generally portrayed the Chinese company in a negative light due to the various counterfeiting scandals that have been exposed over the years. Consequently, the positive achievements that the company has managed to build might have been undermined. This paper therefore wishes to bring an objective comparison of the two technology giants.

As no prior formal comparison of Alibaba and Amazon was made (apart from the few mentions from the business press and websites), this thesis is meant to bring a structured review of the two business models in question. In this sense, it is the first attempt at comparing these two companies in light of a coherent framework. By looking at their respective business models, the stories of the two companies are told in a way that encompasses a snapshot of their strategy, the various businesses they are in, and the developments they are undergoing currently. Furthermore, the business model viewpoint is also important in the sense that it allows us to fathom how these companies have ultimately been able to succeed.

After a review of the literature on business models and a presentation of the background and economics of Alibaba and Amazon, the three dimensions of “matching”, “assembling” and “knowledge management” proposed by Brousseau and Penard (2007) have been selected as analytical framework. As a matter of fact, these three dimensions offer a broad overview of both the general and digital facets of the two companies, and allows us to perform trade-off analyses on a number of aspects. First, the matching dimension looks into the role of intermediary of Alibaba and Amazon as e-commerce platforms and the impact of the measures implemented on transaction costs (through the angle of the buyers). In this case two trade-offs exist, assessing respectively the market structure of the intermediary and the level of specialization of the intermediary platform. Then, the assembling dimension delves into the large array of businesses the two companies have built around their primary function, the articulation of these businesses, and how they bring value to the different players. The two trade-offs relate, at this stage, to the range of the package offered and the marketing methods for valorising digital technologies. Finally, the knowledge management dimension considers how the knowledge created by the participants of the e-commerce platforms is leveraged and converted into value. In this situation, the trade-offs deal with the level of organization of the knowledge management system and the rights management of the knowledge produced.

The findings show that both Alibaba and Amazon, powered by Information and Communication Technology (ICT) and the Internet, were able to lower the overall transaction costs incurred by buyers, by offering them tools and functions that reduce the conditions of small number, uncertainty and information asymmetry. However, it is necessary to recognize that ICTs has also had an impact on the quantity of information that has to be processed, thus the complexity, and on the risk of opportunism caused by the anonymity and lack of accountability brought by ICT. Another reason behind the rise in counterfeit goods and fake reviews is that Alibaba and Amazon are both following a competitive market structure rather than a monopoly one, which makes them more exposed to opportunism because they are not able to monitor who can enter their platforms. A noticeable difference between the two is that Amazon’s model is closer to a commercial intermediary compared to Alibaba, whose various specialized platforms act as pure middlemen. As a consequence, Amazon is more efficient (having integrated more functions such as logistics and after sales service) while Alibaba benefits from higher economies of scale.

Second, Alibaba and Amazon were both able to develop a large ecosystem around their primary business. In this regard, Amazon started off as a pure merchant before taking the role

of a marketplace. The following developments undertaken by the company were generally consistent with the initial philosophy, as they pushed for the disintermediation of the logistics, launched their private-label brands and devices, and built their own content creation and selling infrastructures. Alibaba, on the other hand, has mostly maintained its position of intermediary in diverse areas (e.g. wholesaling, retailing, group shopping) and extended its platform services to various third party providers (e.g. carrier services, insurance companies, etc). Alibaba has also been able to establish itself as a solid financial technology (FinTech) solutions provider through its affiliate Ant Financial Services Group. Both companies have also been expanding their services in the cloud computing and content streaming space. In this sense, Amazon's bundle is more integrated but Alibaba offers more functions. Regarding marketing methods, both platforms are alternating between a third party advertising strategy and extracting consumer behaviour data for their own use.

Finally, regarding knowledge management, Alibaba and Amazon companies have been able to encourage their users to actively participate in their respective online communities, and share information and experience among themselves. Furthermore, they also managed to use the data generated by their users (e.g. buying patterns and consumer profiles, transactions amount, and products types) to their advantage, as part of the services they offer to merchants and third parties. A noteworthy difference between the two is that Alibaba has established Taobao University for sharing and aggregating the knowledge, while Amazon actively prompts its users to publish and produce their own creation with Amazon Publishing and Amazon Studios. Both platforms are rather spontaneous in terms of content generation and function as "open knowledge" platforms (unless the content is published in the case of Amazon).

As a whole, the three dimensions explored were able to cover important aspects of the business models of the two companies. More specifically, they are effective for highlighting the ways by which Alibaba and Amazon were able to create value for the different participants of their ecosystems: bringing down transaction costs, setting up complementary businesses and innovative products, and managing a large pool of knowledge generated by the users.

Part 1. Literature review

The concept of business model has been a trending topic these past few years, as evidenced by a keyword search for “business model” on Google that reported a total of 63,300,000 results. Often referred as a “buzzword”, the concept has also been used extensively in various streams of literature, including strategic management, information systems and entrepreneurship. As an illustration, a research of “business model” in the title, subject theme and keyword on EBSCO Business Source Complete – one of the most exhaustive resources for management, business, and finance journals – showed 2,623 publications from peer-reviewed academic journals for the period up to May 2016. In fact, this phenomenon has been gaining more momentum recently as more than half of these articles were published during the past five to six years.

Having become popular with the advent of the Internet and the development of ICT from the 90s and onwards, the term business model has been mainly used to describe phenomena related to the web and e-businesses (e.g. Osterwalder et al., 2005; DaSilva and Trkman, 2014, Zott et al., 2011, Rinfret and Assefsaf, 2014). These are characteristics of the so-called “new economy” (Osterwalder, 2002), wherein companies were pushed to come up with new ways of creating value (Boulton, Libert and Samek, 2000). However, starting from the 2000s, the concept spread to the analysis of brick-and-mortar firms as well, as the use of the Internet and ICT became democratized (DaSilva and Trkman, 2014, p. 381). An example of popularized framework that has been broadly used by corporate practitioners is the business model canvas presented by Osterwalder and Pigneur (2012) in their best-selling book “Business model generation: a handbook for visionaries, game changers, and challengers”.

In the following sections, the concept of business model will be reviewed extensively in order to evidence the main themes that are present in the literature. Then, business model will be differentiated from related concepts, which are often confused and used interchangeably, such as strategy and revenue model. Afterwards, the roles that are often attributed to the business model in the literature will be presented, focusing on the notions of value and competitive advantage creation. Finally, a brief review of the methodology used in previous business model comparison will be performed.

1.1 The business model

1.1.1 Review of the conceptualization, definitions and classifications

Conceptualization	Authors (examples)
Architecture	Dubosson-Torbay, Osterwalder and Pigneur, 2002; Teece, 2010; Timmers, 1998
Abstraction	Betz, 2002; Cavalcante, Kesting and Ulhøi, 2011
Blend	Mahadevan, 2000
Blueprint	Osterwalder, Pigneur and Tucci, 2005
Device	Doganova and Eyquem-Renault, 2009
Concept	Hamel (2000) ; Voelpel, Leibold and Tekie, 2004
Construct	Nenonen and Storbacka, 2010
Design	Amit and Zott, 2001; Teece, 2010
Description	Dahan, Doh, Oetzel and Yaziji, 2010; Moingeon and Lehmann-Orgeta, 2010; Osterwalder and Pigneur, 2002; Richardson, 2008; Weill and Vitale, 2001
Framework	Afuah, 2004; Chesbrough and Rosenbloom, 2002
Method	Afuah and Tucci, 2001; Rappa, 2001
Pattern	Brousseau and Penard, 2007
Rationale	Osterwalder and Pigneur, 2012
Recipe	Afuah, 2014
Representation	Al-Debei and Avison, 2010; Mettler, 2014; Morris, Schindehutte and Allen, 2005; Shafer, Smith and Linder, 2005
Set	Afuah and Tucci, 2001; Casadesus-Masanell and Ricart, 2011; Downing, 2005; Seelos and Mair, 2007
Story	Magretta, 2002
System	Afuah and Tucci, 2001; Morris, Schindehutte, Richardson and Allen, 2006; Peterovic, Kittl and Teksten, 2001; Zott and Amit, 2010
Template	Zott and Amit, 2008, 2010, 2013

Table 1 – Conceptualizations of “business model” used by different authors

Referred as *framework* as much as *architecture*, *method*, *design*, *set*, *concept*, *rationale*, *blueprint*, *pattern*, *system*, *device*, *template*, *representation*, *description* or *story*, a multitude of conceptualizations for business models exist in the literature (see Table 1). The analysis of the literature showed that in some cases, authors use more than one of these conceptualizations in the same publication (e.g. Afuah and Tucci, 2001; Teece, 2010 Zott and Amit, 2010) and some authors do not offer an original definition of the concept of business model, preferring to cite others' works (e.g. Cavalcante, 2014; Nenonen and Storbacka, 2010; Tsai, Lin and Su, 2011) or taking the understanding of the term as granted (e.g. Boulton et al., 2000; Kraemer, Dedrick and Yamashiro, 2000; Markides and Charitou, 2004). Finally, some authors define the concept by listing the components (e.g. Johnson, Christensen and Kagermann, 2008; Verstraete, Kremer and Jouison-Laffitte, 2012) or functions of the business model (e.g. Chesbrough and Rosenbloom, 2002). These findings align with Zott et al. (2011)'s review, which pointed out that more than 37% of the 103 publications examined do

not provide an explicit definition of the concept, 44% define the concept by citing the main components and 19% use definitions coined by other scholars (p. 1022).

The concept of business model has travelled a long way since its first emergence. Back then, Porter (2001) criticized the murkiness of the definition and the lack of consistence behind such concept: “the business model approach to management becomes an invitation for a faulty thinking and self-delusion” (p. 73). Today, it is recognized as a key element for the success of a business. Alt and Zimmermann (2001) write that “business models are perhaps the most discussed and least understood terms and aspects in the areas of eBusiness, eCommerce and eMarkets”, raising the existence of a widespread intuitive understanding that is associated to a “confusing and incomplete picture of the dimensions, perspectives and core issues” (p. 3). Almost 20 years later, the concept of business model is still a topical issue and has evolved to incorporate a more general approach, no longer limiting itself to the study of digital businesses. However, despite countless studies and “signs of convergence toward consistent themes” (Zott and Amit, 2013, p. 406), academics are faced with the same problem: the notion of business model still lacks a commonly accepted definition. The academic community has acknowledged this issue, as numerous authors raised similar concerns concerning the fuzziness of the business model concept (see Table 2). Shafer et al. (2005) go as far as to talk about an “identity crisis” (p. 200). They emit the hypothesis that the lack of common ground stems from the existence of a plethora of perspectives adopted: “by peering through different lenses, authors are seeing different things” (p. 200).

Author(s)	Critique
Al-Debei and Avison (2010)	“However, although the concept is instinctively appealing and promises to ‘fill a niche’ (Hawkins, 2004), the IS-related literature reveals a clear lack of consensus regarding its underpinnings. To date, the BM concept is still considered an ill-defined ‘buzzword’ (Seddon et al., 2004; Seppänen & Mäkinen, 2007).” (p. 360) “The newness of sectors within which the BM concept is being investigated. A particular case in point concerns new technological ventures such as telecommunication providers along with their products and services.” (p. 360)
Chesbrough and Rosenbloom (2002)	“While the term ‘business model’ is often used these days, it is seldom defined explicitly.” (p. 532) “One reason why academic scholarship has not focused on the concept may be that it draws from and integrates a variety of academic and functional disciplines, gaining prominence in none.” (p. 533)
DaSilva and Trkman (2014)	“The term’s pervasiveness and use suggest that business models are extremely important; however, no consensus regarding its meaning has been established.” (p. 379)
George and Bock (2011)	“The lack of a convergent, well-defined theoretical construct has led to inconsistent empirical findings in its effect on firm performance and organizational change.” (p. 84) “The immediate finding was the nonaccretive quality of the literature on business models: research has failed to converge on definitions, much less frameworks for normative or predictive findings.” (p. 85)

Janssen, Kuk and Wagenaar (2008)	“However, the concept of business model is intuitively appealing, although there is no universal definition.” (p. 204)
Mahadevan (2000)	“There has been no attempt to provide a consistent definition for a business model in the Internet context.” (p. 56)
Morris, Schindehutte and Allen (2005)	“No generally accepted definition of the term “business model” has emerged. Diversity in the available definitions poses substantive challenges for delimiting the nature and components of a model and determining what constitutes a good model. It also leads to confusion in terminology, as business model, strategy, business concept, revenue model, and economic model are often used interchangeably.” (p. 726)
Morris, Schindehutte, Richardson and Allen (2006)	“As a result, there is neither an agreed upon definition nor a generally accepted framework for capturing the entrepreneur's model. Further, the theoretical foundation for the design and application of business models remains unclear. No single theory captures the varied elements that contribute to a model. These conceptual and theoretical limitations have hindered the ability of researchers to conduct empirical work.” (p. 28)
Nielsen and Bukh (2011)	It is evident that there exists a substantial amount of literature on business models, with varying perspectives, including strategy, value configurations, and components of business models and frameworks of business models. However, there is no generally accepted definition of what a business model is and the theoretical grounding of most business model definitions is rather fragile. Furthermore, business model definitions vary significantly as they are derived from a number of different perspectives. (p. 260)
Osterwalder, Pigneur and Tucci (2005)	“The literature shows that the topic of business models is often discussed superficially and frequently without any understanding of its roots, its role, and its potential.” (p. 3) “Because the business model concept is relatively young, its place and role in the firm is still subject to debate.” (p. 12)
Pateli and Giaglis (2004)	The implicit lack of an underlying common framework of discussion and interpretation of research on business models has motivated the literature review of this paper. (p. 303) Secondly, the literature review has shown that the research community is yet to invent a common language, in terms not only of terminology but basically in terms of conceptualization, for discussing and analysing business models. (p. 312)
Rajala, Rossi, Tuunainen and Kori (2003)	There is no consistent or rigorous definition of a business model, neither in the e-commerce nor in the software business context. The current semantic confusion is further complicated by consultants and practitioners that often resort to using the term “business model” to describe any unique aspect of a particular business venture. (p. 3)
Shafer, Smith and Linder (2005)	None of these definitions, however, appears to have been accepted fully by the business community, and this may be due to emanation from so many different perspectives (i.e., e-business, strategy, technology, and information systems), with the viewpoint of each author driving term definition; by peering through different lenses, authors are seeing different things. (p. 200)
Teece (2010)	The concept of a business model lacks theoretical grounding in economics or in business studies. (p. 175)
Timmers (1998)	The literature about Internet electronic commerce is not consistent in the usage of the term ‘business model’, and, moreover, often authors do not even give a definition of the term. (p. 4)
Zott, Amit and Massa (2011)	“Despite the overall surge in the literature on business models, scholars do not agree on what a business model is. We observe that researchers frequently adopt idiosyncratic definitions that fit the purposes of their studies but that are difficult to reconcile with each other. As a result, cumulative progress is hampered.” (p. 1020) “This lack of definitional activity represents a potential source of confusion, promoting dispersion rather than convergence of perspectives and obstructing cumulative research progress on business models” (p. 1023)

Table 2 – Criticisms addressed to the fuzziness surrounding the definition of business model

A selection of definitions has been collected to illustrate the rich literature that exists on the topic (see Table 3). Labelled depending on their application (“E” standing for e-business and “G” for general use), the definitions were categorized according to the type of interrogation they aim to provide answer to. As shown by the analysis, authors built their definitions around three key dimensions: describing the content (what?), clarifying the goal and strategic incentives (why?) or explaining the way things are done, i.e. the logic of the business (how?). These three categories of definitions could be respectfully referred to content-oriented, goal-oriented and process-oriented definitions. However, these categories are not mutually exclusive, as some of the definitions found in the literature provided information on more than one dimension. For instance, Rappa (2001) defined business model as “the method of doing business by which a company can sustain itself – that is, generate revenue. The business model spells out how a company makes money by specifying where it is positioned in the value chain.” This rationale is built around both the notion of process, i.e. how things are done, and goal which is for the company to be able to generate revenue and be sustainable. Similarly, Morris, Schindehutte and Allen (2005)’s definition also cover the two dimension of “how” and “why”: “A business model is 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” (p. 727). As for Afuah (2004)’s definition, “A business model is the set of which activities a firm performs, how it performs them, and when it performs them, as it uses its resources to perform activities, given its industry to create a superior customer value and put itself in a position to appropriate that value.” (p. 9), it provides answer to the three types of interrogations.

Authors (examples)	Content-oriented (What?)	General or e-business
Casadesus-Masanell and Ricart (2011)	“A business model consists of a set of managerial choice and the consequences of these choices.” (p. 103)	G
Johnson, Christensen and Kagermann (2008)	“A business model, from our point of view, consists of four interlocking elements that, taken together, create and deliver value.” (p. 52)	G
Teece (2010)	“A business model describes the design or architecture of the value creation, delivery and capture mechanisms employed.” (p. 191)	G
Timmers (1998)	“Definition of a business model • An architecture for the product, service and information flows, including a description of the various business actors and their roles; and • A description of the potential benefits for the various business actors; and • A description of the sources of revenues” (p. 4)	E

Zott and Amit (2008)	“The business model is a structural template that describes the organization of a focal firm’s transactions with all of its external constituents in factor and product markets.” (p. 1)	G
Goal-oriented definitions (Why?)		
Afuah (2014)	“A business model is a framework or recipe for creating and capturing value by doing things differently.” (p. 4)	G
Demil and Lecocq (2010)	“The business model concept generally refers to the articulation between different areas of a firm’s activity designed to produce a proposition of value to customers.” (p. 227)	G
Dubosson-Torbay, Osterwalder and Pigneur (2002)	A business model is nothing else than the architecture of a firm and its network of partners for creating, marketing and delivering value and relationship capital to one or several segments of customers in order to generate profitable and sustainable revenue streams. (p. 7)	E
Seelos and Mair (2007)	[...] we refer to the term business model as a set of capabilities that is configured to enable value creation consistent with either economic or social strategic objectives. (p. 2007)	G
Shafer, Smith and Linder (2005)	[...] we define a business model as a representation of a firm’s underlying core logic and strategic choices for creating and capturing value within a value network. (p. 202)	G
Process-oriented definitions (How?)		
Bonaccorsi, Giannangeli and Rossi (2006)	[...] the business model, or the way products /services are sold to customers, cash is generated, and income is produced (p. 1086)	G
Magretta (2002)	“Business models, though, are anything but arcane. They are, at heart, stories – stories that explain how enterprises work.” (p. 87)	G
Osterwalder, Pigneur and Tucci (2005)	In this paper, we describe the business model in the firm as the blueprint of how a company does business (p. 4)	E
Richardson (2008)	It is simply a description of how a firm does business (p. 136)	G
Zott and Amit (2010)	A business model can be viewed as a template of how a firm conducts business, how it delivers value to stakeholders (e.g. the focal firms, customers, partners, etc.) and how it links factor and products markets (p. 222)	G

Table 3 – Definitions categorized by dimensions

As each one of the multitudes of existing business model definitions focuses on different characteristics, different set of classes have appeared (Baden-Fuller and Morgan, p. 160). As a consequence, many classifications and typologies have been developed to categorize the business models over the years (see Appendix 1). Analysing the existing literature on the subject, it appeared that the majority of the earliest works on typologies and classifications were aimed at understanding e-business models, instead of taking a general approach, which makes sense as the study of business models was at first focusing on e-businesses only. A second observation is that a string of the earliest typologies are not based on any explicit criteria (e.g. Applegate, 2001; Rappa, 2001; Bambury, 1998). Third, authors that do use explicit criteria typically chose a set of differentiation criteria ranging from 2 to 4 to build their typologies (e.g. Afuah and Tucci, 2001; Betz, 2002; Lam and Harrison-Walker, 2003; Linder and Cantrell, 2000; Tapscott, Ticoll and Lowy, 2001; Timmers, 1998; Zhang,

Williams and Polychronakis, 2012). Fourth, the classification offered by Weill and Vitale (2001) is a little bit different compared to the others therefore it does not appear in Appendix 1. Indeed, instead of identifying specific types of business models, they have provided a typology of 8 “atomic” e-business models, which serve as the building blocks for all e-business initiatives, using four criteria of differentiation (strategic objectives, source of value, critical success factors and core competencies).

Nonetheless, despite the extent of existing typologies, the literature is lacking a general classification (Janssen et al., 2008, p. 205). Barnes and Hinton (2007) pointed out the inability of the actual typologies to grasp the ever-changing landscape of business models enhanced by the rapid evolution of ICT, which leads to additional practices and intermediaries (p. 73). Another critique that is addressed to the classification of business models is the lack of justification of many approaches, often designed specifically to meet the needs of the researcher (Lambert, 2015, p. 50). Lambert (2006) argues that for a commonly accepted nomenclature to emerge, a certain consensus on the constituents of the business model has to be reached (p. 9). This could be achieved through the development of ontologies, which “can be understood as an explicit specification of a conceptualization and would define the terms, concepts, and relationships of business models” (Osterwalder, 2005, pp. 18-19). Several authors have brought their own contribution to the literature, in the form of architectures centred on different core elements and goals. For instance, the e3-value method of Gordijn, Akkermans and Van Vliet (2000) focuses on the construct of economic value, including its creation, interpretation and exchange amongst a network of enterprises and customers, and aims at enabling a better understanding and communication of the essentials of the business model (Gordijn et al., 2000; p. 2; Gordijn, Akkermans and Van Vliet, 2001; p. 11). The e3-value method consists of 9 concepts (actors, market segment, value object, value port, value interface, value exchange, value offering, value transaction and value activity) and “entails defining, deriving, and analysing multi-enterprise relationships, e-business scenarios, and operations requirements in both qualitative and quantitative ways (p. 11). On the other hand, Osterwalder and Pigneur (2002)’s e-business model ontology (e-BMO) is a “building-block-like methodology” that identifies and relates the key concepts of e-business models (p. 79). The e-BMO encompasses four main pillars – product innovation, customer relationship, infrastructure management and financials – that are then decomposed into more detailed and complex constructs (p. 80). Osterwalder (2004) later generalizes his e-BMO to BMO to incorporate businesses in a broad sense and he formalizes the method by splitting the four

initial pillars into a total number of nine building blocks that he also calls “business model elements” (p. 43). Andersson et al. (2006) have established a more widely applicable “reference ontology” on the basis of three existing ones, including the two aforementioned e3-value and BMO.

The academic community is also conflicted on the constituents of business models, which resulted in a variety of frameworks. The exploration of business model components has traditionally been dealt with in three different ways: (1) as a task in itself, (2) as a part of the definition design or (3) as part of the conceptual model, whose purpose as defined by Pateli and Giaglis (2004) “is to specify dimensions of business model analysis, identify the main components that are relevant to each dimension, and provide an illustration for each level” (p. 309). Pateli and Giaglis’s delimitation includes ontologies, but as these have already been discussed above and tackle a different level of depth, they will not be taken into account in the following review. So far, no consensus has been reached and the number of components varies greatly from one publication to another. Out of the 30 publications analysed, the number of components typically ranges from 2 to 10 (see Appendix 2 for details). As Richardson (2008) notes, a number of common themes emerge but the different models do present large variations (p. 136). Three key observations emanate from the analysis. First, the notion of value is central to the majority of these frameworks, having appeared in 2/3 of the instances. Second, the resources and/or capabilities of the business consist of the second most common dimension that has appeared in the frameworks. Third, the dimension of financial and economics is also a key component that has to be tackled in order to understand the business model of a company. In light of these findings, a parallel could be drawn with the framework proposed by Morris et al. (2006), which differentiates between the strategic domain, operational domain and economic domain (p. 30). Indeed, the three common themes identified fit in this particular framework in terms of content.

Year	Source	Type	#	Components
2002	Magretta	G	2	Activities associated with making something and activities associated with selling something
2010	McGrath	G	2	Unit of business, key metrics of process or operational advantages
2011	Casadesus-Masanell and Ricart	G	2	Choice (regarding policy, asset and governance) and consequences
2000	Mahadevan	E	3	Value stream, revenue stream and logistical stream
2001	Applegate	E	3	Concept, capabilities, value
2001	Amit and Zott	E	3	Transaction content, transaction structure, transaction governance
2004	Voelpel, Leibold and	G	3	New customer value proposition, value network, leadership capabilities

	Tekie			
2008	Richardson	G	3	Value proposition (offering, target customer, basic strategy), value creation and delivery system (resources and capabilities, organization, position in the value network), value capture (revenue sources, economics of the business)
2010	Demil and Lecocq	G	3	Resources and competences, organizational structure, proposition for value delivery
2012	Verstraete et al.	G	3	Value creation, value remuneration, value sharing
2010	Moingeon and Lehmann-Ortega (2010)	G	3	Value proposition, Value architecture, Profit equation
2010	Nenonen and Storbacka	G	3	Design principles, resources, capabilities
2014	Cavalcante	G	3	Value creation, modus operandi of the firm, value capture
2005	Shafer et al.	G	4	Strategic choices, value network, create value, capture value
2001	Rayport and Jaworski	E	4	Value cluster, marketplace offering, resource system, financial model
2003	Rajala, Rossi, Tuunainen and Kori	G	4	Product strategy, revenue logic, distribution model, service and implementation model
2008	Christensen and Kagermann	G	4	Customer value proposition, profit formula, key resources, key processes
2010	Al-Debei and Avison	G	4	Value proposition, value architecture, value finance, value network
2014	Afuah	G	5	Customer value proposition, market segments, revenue models, growth model, capabilities
2001	Alt and Zimmermann	E	6	Mission, structure, processes, revenues, legal issues, technology
2005	Morris, Schindehutte and Allen	G	6	Factors related to the offering, market factors, internal capability factors, competitive strategy factors, economic factors, personal/investor factors
2007	Chesbrough	G	6	Value proposition, target market, value-chain, revenue mechanisms, value network or ecosystem, competitive strategy
2013	Wei, Zhu and Lin	G	6	Business system, positioning, profit model, key resources and capabilities, cash flow structure, corporate value
2000	Hamel	G	7	Core strategy, strategic resources, customer interface and value network, customer benefits, configuration, company boundaries
2000	Linder and Cantrell	G	7	Pricing model, revenue model, channel model, commerce process model, Internet-enabled commerce relationship, organizational form, value proposition
2002	Hedman and Kalling	G	7	Customers, competitors, offering, activities and organizations, resources, factor and production inputs, scope of management
2001	Peterovic et al.	E	7	Value model, resource model, production model, customer relations model, revenue model, capital model, market model
2012	Osterwalder and Pigneur	G	9	Key partners, key activities, key resources, value proposition, customer relationship, channels, customers segments, cost structure, revenue structure
2001	Afuah and Tucci	E	10	Profit site, customer value, scope, price, revenue sources, connected activities, implementation, capabilities, sustainability, cost structure
2011	Tsai, Lin and Su	G	10	Value proposition, wealth potential, revenue mechanisms, product/service design, organization design, resource deployment, technology, core strategy, value network, externality

Table 4 – Different interpretation of e-business (E) and general (G) business models' components

1.1.2 Commonalities across studies

Although scholars struggle to come up with a common agreement on the definition and components of a business model, the concept has been generally associated with the notion of value, both in terms of value creation and value capture (see Table 5). This aspect is also reflected in the fact that the majority of the classifications examined contain the idea of “value”. In short, the business model’s core focus is to create value for all the parties involved and to capture the value created (Zott and Amit, 2010, p. 218; Chesbrough, 2007, p. 12; Shafer et al., 2005, p. 202). These two functions are a must for all organizations desiring to sustain a long-term viability, as these are closely tied to the ability of a firm to generate profit (Shafer et al., p. 202).

Authors	Contribution
Ghaziani and Ventresca (2005)	“Of the cases we coded for analysis, Value Creation , Tacit Conception, Revenue Model, Electronic Commerce, and Computer/Systems Modeling appear to be the top five dominant frames, accounting for nearly three-quarters of all public talk over the 25-year observation period.” (p. 543)
Voelpel, Leibold and Tekie (2004)	“As indicated above, it seems to be generally accepted that the model should enable the creation of value for customers and the various participants in its value chain.” (p. 261)
Shafer, Smith and Linder (2005)	“[...] regarding their company’s core logic for creating and capturing value : the basis of a business model.” (p. 200)
Morris, Schindehutte, Richardson and Allen (2005)	“A theory that guides attempts to model a firm must address the combinations of core elements that create value and sustainable advantage in the marketplace.” (p. 38)
Chesbrough (2007)	At its heart, the business model performs two important functions: value creation and value capture (p. 12)
Nenonen and Storbacka (2010)	“First, the majority of the business model definitions include customer value creation as one of the core elements.” (p. 45)
Teece (2010)	“Figuring out how to deliver value to the customer – and to capture value while doing so – are the key issues in designing a business model: it is not enough to do the first without the second.” (p. 184)
Zott and Amit (2010)	A business model is geared toward total value creation for all parties involved. (p. 218)
Zott, Amit and Massa (2011)	“Despite conceptual differences among researchers in different silos (and within the same silo), there are some emerging themes. [...] (4) business models seek to explain both value creation and value capture ” (p. 1020)
Verstraete, Kremer and Jouison-Laffite (2012)	“Ce qui ressort de la littérature comme point de convergence et qui s’accorde avec ce que la pratique exige du concept, c’est la place centrale accordée à la « valeur ». ” (p. 10) ¹
Klang, Wallnöfer and Hacklin (2014)	“Second, most contributions relate the business model concept to the notion of value . ” (p. 466)

Table 5 – Various references to the notion of “value” as a core of the concept of business model

¹ Translation: What emerges from the literature as a focal point, which goes in line with what the practice requires from the concept, is the central position given to the “value”.

1.1.3 Differences between business model and strategy

Some argue that the confusion surrounding business model and business strategy, associated to the lack of management experience and naivety of the early web pioneers, may have been the cause of the failure of some dot.com ventures (Mansfield and Fourie, 2004, p. 40). The various views emanating from the literature converge in the sense that strategy and business models are related and complement each other. According to Shafer et al. (2005), “while a business model does facilitate analysis, testing, and validation of a firm’s strategic choices, it is not in itself a strategy”. Morris et al. (2005) also consider strategy and business model as distinct concepts. However, they believe that a business model includes a number of elements issued from strategy (p. 727). Chesbrough and Rosenbloom (2002) highlight three main differences between business model and strategy: value creation is at the core of the business model while strategy focuses more on value capture and sustainability, value creation from the business model perspective is aimed at the business rather than the stakeholders, and the two concepts have a different assumption of the knowledge available from the firm’s perspective (p. 535).

For some authors, business model has to be supported by strategy and vice-versa. According to Magretta (2002), strategy and business model differ in the sense that the latter does not take competition into account (p. 91). In her view, having a good business model is not enough if it is not supported by a strategy that sets the firm apart from its competitors (p. 92). Similarly, Teece (2010) argues that business model and strategy have to be coupled in order to sustain the competitive advantage and protect the latter from new business model designs because business model has a more generic character compared to strategy (p. 180). Likewise, Richardson (2008) believes that the business model serves not only to link the strategy with the firm’s activities but also to complete the description of the strategy (p. 143).

Another perspective is that business model mirrors the strategy pursued by the firm. According to Flouris and Walker (2005), “business models create a simplified description of the strategy of a profit-oriented enterprise” (p. 5). In a related vein, Shafer et al. (2005) maintain that the business model reflects the strategic choices and operating implications of a firm’s strategy (p. 203). This goes in line with the perspective of Casadesus-Masanell and Ricart (2010), who define a firm’s business model as a reflection of its realized strategy – understood as a “plan of action for different contingencies that may arise” (p. 206). Building upon this, DaSilva and Trkman (2014) add a notion of time by arguing that strategy (long-term perspective) is enabled by dynamic capabilities (medium-term perspective), which act in

turn as constraints for the business model (short-term perspective) (p. 383). In similar fashion, Dahan, Doh, Oetzel and Yaziji (2010) contend that a strategy is a “plan or process for how to move from the current situation to a desired future state”, whereas a business model is a “description of a state” (p. 328).

As a consequence, the business model could be conceptualized as snapshots of the realized strategy of the firm. In this way, the business model has the ability to facilitate the communication of the company’s strategy. This function of business model as a communication tool is supported by Shafer et al. (2005), who affirm that “business models provide a powerful way for executives to analyse and communicate their strategic choices” (p. 207). Verstrate, Kremer and Jouison-Laffite (2012) also recognize the function of the business model in clarifying and giving meaning to the project of a firm (p. 10). Therefore, being able to articulate the business model of the firm is a key task for executives, as the classic strategic framework taught in business schools is unable to encompass the large array of choices that managers have to face, yet the smallest details could greatly impact the profitability of the business (Linder and Cantrell, 2000, p. 2).

1.1.4 Other common misconceptions

Content and container being mistaken for one another is a common occurrence in the study of business model. Indeed, Linder and Cantrell (2000) argue that the components of the business model such as revenue models and value propositions are often erroneously called business models (p. 2). In their delimitation of the main problems associated with the creation and use of the business model, Shafer et al. (2005) have categorized this kind of pitfall as “limitations in the strategic choices considered”, which consists of addressing only a portion of the business model instead of adopting a holistic approach (pp. 204-205). In their view, this kind of short-sighted assumption could ultimately lead to the failure of the firm.

For example, the concepts of revenue model and business model are often used interchangeably, despite the revenue model being only one of the components of the whole picture. Amit and Zott (2001) argue that the two concepts are complementary yet distinct: a business model’s primary focus is value creation whereas the revenue model focuses on value appropriation (p. 515). According to Teece (2010), the notion of business model is a conceptual notion, rather than a financial one. He bases his argumentation on the work of Chesbrough (2002) who characterizes the business model as an “architecture” that encompasses both organizational and financial variables. Therefore, as suggested by Zott et

al. (2011), “the business model is not a value proposition, a revenue model, or a network of relationships by itself; it is all of these elements together” (p. 1028). Osterwalder (2004) believes that the concept of business model has to be considered holistically; in such a way that it embraces all the elements “such as pricing, mechanisms, customer relationships, partnering and revenue sharing” (p. 15).

Finally, business models are also frequently getting mixed up with related concepts such as business plan (Verstraete et al., 2012; Morris et al., 2005; Doganova and Eyquem-Renault, 2009), marketing model (Timmers, 1998), activity set (Morris et al., 2005), business idea (McGrath, 2010), product market strategy (Zott and Amit, 2008), economic model (DaSilva and Trkman, 2014), business process model (Gordijn et al., 2001; Osterwalder et al., 2005) and enterprise model (Osterwalder et al., 2005).

1.1.5 The business model as value driver and source of competitive advantage

Chesbrough (2010) argues that technological innovation alone would not be valuable if it lacks the support of a robust business model. In a similar vein, Teece (2010) state that without a well-developed business model, firms would have a hard time delivering and capturing the value from their innovation (p. 172). He suggests that a good business model design is likely to engage iterative processes, which aligns with Casadesus-Masanell and Ricart’s vision (2011). The authors believe, indeed, that a good business model creates virtuous circles, which would lead to competitive advantage in the long term (p. 102). In addition, Zott and Amit (2010) claim that the bargaining power of the firm would grow proportionally to its value creation ability (p. 218). The business model is therefore key for creating and capturing the value behind a firm’s innovative efforts, which will in turn create a sustainable competitive advantage and improve the bargaining power of the firm. The literature has touched upon the different factors needed to ensure that both these effects materialize.

Regarding the sources of value creation, Amit and Zott (2001) identify novelty, lock-in, complementarity and efficiency as drivers, referred as “design themes” in their later works (Zott and Amit, 2010). Their research is part of a few exceptions that are based on prior studies within a coherent framework (George and Bock, 2011, p. 85) and relies on an extended range of theories, i.e. virtual markets, value chain analysis, Schumpeterian innovation, resource-based view of the firm, strategic networks, and transaction cost economics. The dimension of efficiency is closely related to the lowering of transaction costs, which increases the value created. Businesses may also create value through

complementarities of products and services or even activities and technologies. Lock-in, which refers to the potential of a business motivate their customers to engage in repeat transactions and to incentivize their strategic partners to continue their cooperation, also consists of a value driver, as it prevent customers and partners to switch to a competitor (Amit and Zott, 2001, pp. 505-506). This can be achieved through loyalty programs, proprietary standards for business processes, products and services, trust, familiarization with the interface, virtual communities etc. (Amit and Zott, 2001, p. 506). Finally, businesses may also generate value through innovation by, among others, establishing new connections or connecting in a new way, creating new business processes and methods, and forming new markets or innovating transactions in existing markets (Amit and Zott, 2001, p. 508; Zott and Amit, 2007, p. 184). The authors insist, however, on the need for these drivers to be weighted equally in terms of importance and to be analysed as interdependent concepts.

For the business model to be able to assure a sustainable competitive advantage, it has to be differentiated and efficient at the same time (Teece, 2010, p. 173). Magretta (2002) also insists on the need for new business models to be hard to replicate, in addition to modifying the economics of the focal industry (p. 92). According to Casadesus-Masanell and Ricart (2011), the three ingredients for an efficient business model are: alignment with the company's goal, self-reinforcement and robustness (p. 102). Voelpel et al. (2004) add the need of not only improving the business model continuously but also reinvent it in order to survive in a fast-moving environment of most industries and companies and maintain the competitive advantage (p. 260). A whole segment of the business model literature focuses on the topic of business model innovation and business model change (e.g. Cavalcante, 2014; Johnson et al., 2008; McGrath, 2010), which shows the importance of such approach. Finally, as already mentioned, the business model needs the support of a consistent strategy to be able to sustain the competitive advantage (Teece, 2010, p. 180).

1.2 Comparison of business models

Most often, authors have been using existing conceptual frameworks as a tool for comparison and adapting them when needed. As an illustration, Amanullah, Ab Aziz, Hadi and Ibrahim (2015) use the nine building blocks of Osterwalder and Pigneur (2010)'s business model canvas to compare three consulting firms. On the other hand, Kallio, Tinnilä and Tseng (2006) adapt the four dimensions framework of Rajala, Rossi, Tuunainen and Kori (2003)'s in order to confront the business models of mobile operators in Japan, South Korea, China,

Europe and the USA. For this purpose, they have customized the framework by adding elements from Osterwalder et al (2002), such as replacing the dimension of “revenue logic” by the dimension of “value creation”. Likewise, Lange, Geppert, Saka-Helmhout and Becker-Ritterspach (2015) also choose to use an existing framework in association with the definition of business model of Zott and Amit (2013) that supposes the consideration of the partners, vendors and customers when analysing the focal firm. Using as basis the framework of Casadesus-Masanell and Ricart (2011), they established subcategories describing the key features of a ‘pure’ low-cost carriers model. This adapted framework allowed the authors to evaluate the extent to which the business models of British Airways and Lufthansa have adopted elements of low-cost carriers, and contrast them to each other.

The review of the literature on business models showed that there are few business model frameworks that are designed specifically for comparison purpose. One exception is the triangular analytical framework developed by Brousseau and Penard (2007). In their paper, the authors suggest to consider three dimensions when comparing digital business models: matching, assembling and knowledge management. These dimensions, which build on three different streams of the literature, have the merit to cover the main characteristics of the business model. The specifics of this framework will be detailed more explicitly in the next section.

1.3 Concluding remarks and observations

The examination of the current state of development of the literature showed that the study of business models is still lacking a general agreement on fundamental elements. Regarding the definition of the concept of business model and the delimitation of its scope, there seems to be a stronger consensus on what a business model *is not* (e.g. strategy, revenue model) than what it really is. However, the analysis has also evidenced that many authors are conscious of this shortcoming and have addressed similar criticisms. Such realization is positive because it might be a first step toward more uniformity. The same blurriness also surrounds the typologies and components of the business model, which may be an indirect consequence of the divergence in definition. In fact, the existence of such heterogeneous conceptualizations is, as many scholars have pointed out, a brake for the proper development of this field of study. Therefore, it is essential that future researches build on what predecessors have already established in order to generate a more comprehensive framework for the business model.

Nevertheless, the fact that the business model is still a relatively new concept has also to be taken into consideration. As evidenced by this literature review, some general themes do have emerged and more credit has been given to the role that the business model plays as value driver and source of competitive advantage. For now, the literature may simply not be mature enough to have a distinct and agreed upon formalization. This task is further complicated by the fact that ICT and the Internet have induced a faster apparition of new forms of business models, which may be hard to keep up with. As a consequence, the formalizations have to be broad enough to encompass forthcoming developments yet precise enough to give an accurate depiction of the concept. Lastly, another factor that may be hindering a more homogeneous development is the fact that the study of the business model has been performed under the lenses of various literature streams (e.g. entrepreneurship, information system, strategy).

Part 2. Methodology

In this part, the methodology of the analysis will be explained in details. First, the transaction costs theory will be described. Indeed, it is important to lay the theoretical foundations before going further into the justification of the analytical framework. Second, the analytical framework will be discussed along with the reasons for choosing this specific tool. Finally, before diving into the analysis, the choice of the comparison targets as well as the data collection process will be laid out.

2.1 Theoretical foundations

2.1.1 Transaction costs economics

While John R. Commons recommended using the transaction as unit of analysis in a paper published in 1932, Ronald Coase is known to have introduced the concept of transaction costs in order to bridge the gap that appeared in economic theory relative to the organizational structure (Williamson, 1999). The current form of the transaction costs theory is, however, attributed to Oliver E. Williamson, who earned a Nobel Prize for his researches on the matter in 2009 (Verbeke and Kano, 2013, p. 411). In the words of Williamson (1999), “a transaction occurs when a good or service is transferred between technologically separable stages” (p. 1089). Put another way, a transaction is characterized by the transfer of a good or a service between two parties (or more). Considered as a foundation of the management and organizational studies, the transaction cost theory reduces human interactions in its simplest form by taking the transaction as unit of study (Picot, Bortenlänger and Röhl, 1997, p. 108).

In a nutshell, the transaction costs theory allows us to open the metaphorical “black box” that is the neoclassical view of the firm and explains the decision to organize the firm under a certain governance structure. This decision of structuring as hierarchy or market, the two extremes of the organizational spectrum, is principally influenced by the total costs involved, i.e. the sum of production costs and transaction costs. In this context, “transaction costs, which are synonymous with coordination costs, consist of the costs of monitoring, controlling and managing transactions” (Lacity and Willcocks, 1995, p. 205). In a hierarchic organization, the activities of the firm are internalized, while a market-based organization leads to the outsourcing of the activities therefore incurring higher transaction costs (Benslimane, Plaisent and Bernard, 2005, p. 214). Jones and Hill (1988) have summarized the

six main factors that produce transaction difficulties as: (1) bounded rationality, (2) opportunism, (3) uncertainty and complexity, (4) small numbers, (5) information impactedness, and (6) asset specificity. All these externalities will be explained in the following paragraphs.

Williamson's theorization relies on two main assumptions that differentiate such approach from the neoclassical view of the firm (Williamson, 1981, p. 553). First, he recognizes that humans are subject to **bounded rationality**. This refers to the limited capacity to compute information, address complexity, and make optimal choices, which are constrained by the shortfall of the information available and the natural boundaries of the human mind (Verbeke and Kano, 2012, p. 412). Second, he assumes that at least some agents are prone to **opportunism**, also defined as "self-interest seeking with guile" (Williamson, 1981, pp. 553-554). This includes deceitful actions such as lying, stealing, and cheating (Williamson, 1985, p. 47). In a situation of opportunism, the economic actors behave cooperatively but often attempt to realize their own interests in a strategic way generally at others' expenses, which increases transaction costs (Picot et al., 1997, p. 109). Under the assumption of bounded rationality, contracts drawn are bound to be incomplete because it is difficult to deal with the **complexity** surrounding all the relevant facets (Williamson, 1981, p. 553). However, as some economic actors are not indifferent to opportunism and tend to act in a dishonest way, e.g. "disguise attributes or preferences, distort data, obfuscate issues, and otherwise confuse transactions", the transaction costs are further raised (Williamson, 1981, p. 554).

In addition, Williamson (1999) supposes that **uncertainty** and **asset specificity** play a role as well as transaction properties, and these would encourage collaborative adaptation that can be found in a firm structure. Picot et al. (1997) define uncertainty as the "number and extent to which unforeseeable task modification occur" (p. 109). Under the assumption of uncertainty and assuming that economic actors are rationally bounded, the terms of a contract are more likely to be subject to recurrent changes in terms of prices, schedules, quantities and conditions, resulting in higher transactions costs (Picot et al., 1997, p. 109). The concept of asset specificity, which includes site specificity, physical asset specificity, human asset specificity and dedicated assets, refers to how specialized a certain investment is relative to the transaction (Williamson, 1981, p. 555). In such way, a highly specific investment would involve higher transaction costs because it is difficult to redeploy it without sacrificing productive value (Williamson, 1985, p. 54).

A condition of **information impactedness** or **information asymmetry** has also to be assumed, which is essentially a situation wherein the different parties have knowledge of distinct private information (Williamson, 1985, p. 51). This condition is further reinforced by the assumption of opportunism and uncertainty because the actors would tend to act strategically, which may involve keeping relevant information to themselves. Finally, transaction costs are increased in a situation where only a **small number** of players exist (e.g. an oligopoly). Indeed, in such situations only a few trading relationships are formed and actors are more prone to behave opportunistically (Jones and Hill, 1988, pp. 159-160). On the opposite, the existence of a larger number of actors would reduce the risk of opportunism because “rivalry among large numbers of bidders will render opportunistic inclinations ineffectual” (Williamson, 1975, p. 27).

Authors have delimited transaction costs in different categories. Williamson (1985) considered *ex ante* costs that take place before contracting (e.g. drafting, negotiating and safeguarding an agreement) and *ex post* types that cover the costs after the contracting (e.g. efforts in case of misalignment or disputes). As for Benslimane et al. (2005), they have chosen to identify search costs, coordination costs and contractual costs. In this paper, the delimitation of Cordella (2006) will be privileged, i.e. search costs, negotiation costs and enforcement costs. They refer respectfully to the “costs of locating information on the opportunities for exchange”, “costs of executing the transaction and may include commission costs, the costs of physically negotiating the terms of an exchange, the costs of formally drawing up contracts, and others”, and “those incurred by the buyers and sellers in order to ensure that the virtual goods and services they transact, and the terms under which the transaction is made, are translated into physical goods and services” (Cordella, 2006, pp. 196, 200).

2.1.2 The impact of ICT

Innovation in terms of technology has greatly revolutionized the way business is conducted. Even though ICTs affect all organizational structures positively, it has been suggested that the move to market coordination in particular would be predominant (e.g. Malone, Yates and Benjamin, 1987; Picot et al., 1997). Indeed, the use of ICT has been generally associated with more efficient communication, lower transaction and information processing costs, as well as broadened possibilities for rational behaviour (Picot et al., 1997, p. 110). As a consequence, organizational new forms have taken place powered by the Internet.

More specifically, Malone et al. (1987) have identified three effects of ICT: the electronic communication, electronic brokerage and electronic integration effect. The first effect is related to information being able to be communicated more efficiently and at lower cost. The second effect refers to the larger pool of choices that are made available thanks to an increased number of suppliers and offers, the increased quality of the eventual choice and the decreased cost of the selection process (Malone et al., 1987, p. 488). Finally, the electronic integration effect is linked to the efficiency gain of the diverse processes that create and use information as a result of the modernized ICT. The conclusion is that a move to market will be encouraged by the use of ICT, leading to the creation of electronic marketplaces. Indeed, Benslimane et al. (2005)'s finding show that the first two effects would lead to reduced search costs for buyers who use the Internet to identify and select tasks, whereas the third effect would encourage organizations to integrate their respective value chains. In his analysis of electronic marketplaces, Bakos (1997) presents support to the reduction of search costs from the buyers' side. As a matter of fact, he contends that, in a commodity market, the benefits of ICT presented previously favour information transfer on the pricing, which will reduce sellers' market power and increase competition. For more differentiated goods, the assumption of lower transaction costs is also true as it is easier for buyers to locate sellers that match their needs (Bakos, 1997, p. 5).

However, Cordella (2006) has also shown that the adoption of ICT could lead to an increase in transaction costs. As a consequence, he argues that it is important to weight the benefits that ICT bring in terms of transaction costs against the costs implied by their adoption (p. 201). Indeed, the efficiency of faster information communication and transfer implies increased complexity. For example, Schultz and Vandenbosch (1998) propose that the rise of ICT could potentially lead to a state of information overload, wherein the amount of information outweighs the capability of the individuals to process it (p. 128). As a consequence, buyers' perceived usefulness would be decreased. In addition, other researchers have found out that the move to market has not materialized completely. Bakos and Brynjolfsson (1993) suggest that there is a trade-off between coordination and fit, implying that an optimal number of suppliers exist. In some cases, searching for suppliers involves search costs that may surpass the benefits of identifying a better supplier (p. 39). The implications of these additional considerations have led to the examination of alternative organizational forms such as strategic alliances and value added relationships.

2.2 Analytical framework

In order to evaluate the value creation potential of the business models of Amazon and Alibaba, the analytical framework of Brousseau and Penard (2007) was chosen for the following reasons. First, the framework has been specifically designed for the comparison of digital business models, which suits the main goal of this thesis. As already mentioned in Section 1.2, although a variety of frameworks exist in the literature, few are designed for this purpose. Furthermore, another advantage provided by Brousseau and Penard's framework is that it is not solely designed for the analysis of Internet business models – as some of the earliest frameworks do – but aims at covering the whole digital industry (p. 83), which increases its scope in terms of applicability. Second, the framework takes into account “three contrasting domains of existing literature on digital business model” (Brousseau and Penard, 2007, p. 86). As a consequence, it allows us to cover different aspects that constitute the fundamentals of the economics and functioning behind the e-business model, by taking on topics including the transaction costs economics, network externalities, etc., thus demonstrating the overall effect of ICT. Third, this framework considers the value creation aspect, which is central to the study of business model (as it has been previously highlighted in the literature review). Brousseau and Penard (2007) argue, indeed, that their approach “insists on the horizontal and vertical ‘co-opetition’ phenomena along transaction chains, and analyses how value can be created and shared to result in sustainable models” (p. 88). Fourth, this analytical framework emphasises on the “competition between business models rather than within each of these business models” (p. 88), which allows us to compare Alibaba and Amazon between themselves.

The analytical framework proposed by Brousseau and Penard (2007), which enables the comparison of different digital business models for producing information goods and digital services, focuses on three dimensions, namely matching, assembling and knowledge management (p. 81). These dimensions in their purest form are represented graphically as the three angles of a triangle, whereas the surface of the figure corresponds to a certain combination of the three dimensions (see Figure 1). According to the authors, e-Bay – which is a combination of matching and knowledge management – would sit somewhere on the right-hand side, in-between the top and the base of the triangle (p. 88).

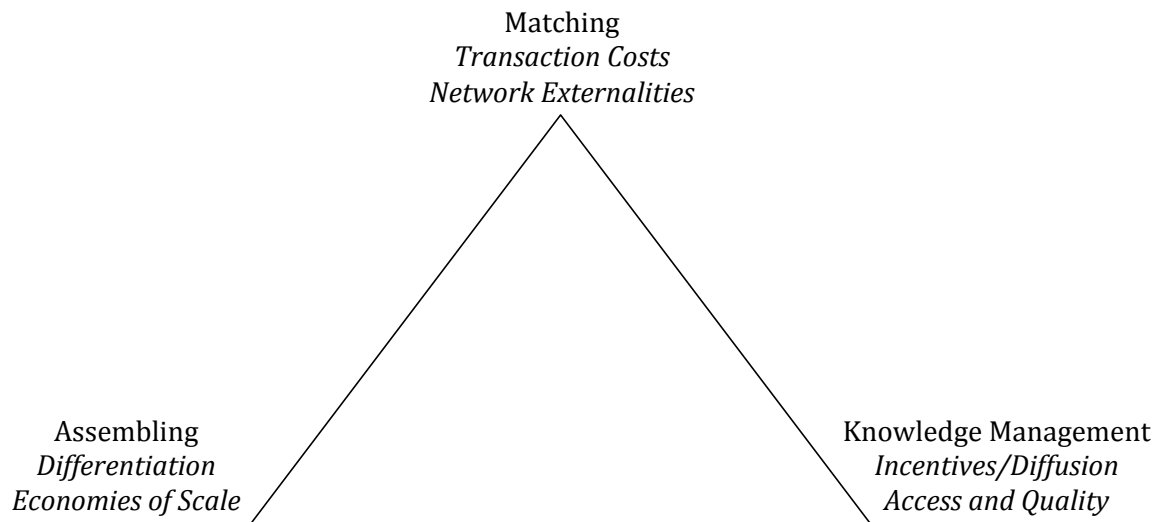


Figure 1 – Analytical framework (Brousseau and Penard, 2007, p. 87)

The analytical framework presented is based on three observations.

1. Digital products and services have a modular nature, i.e. they consist of assembled functionalities that meet the needs of the customers (p. 83). Therefore, packages meeting the same need could be competing against each other and a given package could be made of different organizational processes, which leads to competition based on the organizational model (p. 84).
2. Digital activities are characterized by the following three basic operations: the production of functionalities/modules, their assembling and the consumption of the services, which generates value (p. 84). As a result of the previous observation, components are multipurpose but they do not generate value unless they are assembled to produce the specific service that is needed.
3. Users could influence the process of value creation because they can assemble themselves the functionalities needed and they can be the source of knowledge and information creation that may be valuable (p. 84). As consumers could act as partner (by generating valuable information) or as competitors (by creating functionalities themselves), the concept of coopetition is used to describe such phenomenon that occurs in the digital world (p. 84).

In the following sections, the framework will be described in details. However, some aspects of it are adapted in order to take into consideration the specificities of electronic marketplaces and to emphasize on the effects of ICT. Also, the notion of functionality/module will be broadened in order to incorporate also commercial activities rather than just digital

components. Finally, the theoretical underpinnings of the dimensions are completed by further theoretical readings in order to build the checklist for the comparison.

2.2.1 Matching

The dimension of matching “refers to the economics of intermediation and focuses on transaction costs” (Brousseau and Penard, 2007, p. 86). In such context, the digital business is understood as a marketplace where transactions occur and supply meets demand. An example of pure matching platform is, for example, the dating service Match.com. The authors suggest that digital business models have the capacity to organize the double-sided market in such a way to reduce cost or make transactions more efficient (p. 86). This can be examined in relation to the value drivers that Zott and Amit referred as “effectiveness”, because the analysis of transaction costs takes a key position. The reduction of transaction costs therefore represents a source of value for the business and its stakeholders. However, while Brousseau and Penard (2007) have not tackled how specifically the transaction costs should be assessed, I suggest to take into consideration the three types of transaction costs as delimited by Cordella (2006) separately, i.e. search costs, negotiating costs and enforcement costs.

Furthermore, thanks to the advancement of ICT, new business models with the potential to manage externalities have emerged. Brousseau and Penard (2007) emphasize the advantage provided by an intermediating platform, which internalizes the externalities identified by the two streams of literature on two-sided market and on commercial intermediation. As a consequence, two sets of trade-off should be brought to light (p. 90). First, under the literature on two-sided market, a trade-off exist between a monopoly market structure, under which the platform is able to capture rents and in return offer efficient matching services by capitalizing on the information and its market positioning, and a competitive market structure, under which the platform offers less efficient matching services due to the augmented competitiveness (Brousseau and Penard, 2007, p. 91). In the latter case, a strong differentiation is needed. Second, depending on the type of service performed by the platform, i.e. matching, logistic operations, dealing with information asymmetries, ensuring the liquidity of exchanges, and the resulting business model of the platform, a trade-off exists between integrated commercial intermediaries, typically holding property rights on the goods, and a model of specialized intermediation service providers (Brousseau and Penard, 2007, pp. 91-92). The first will make efficient service a priority in order to guarantee market clearing while the other benefits from higher economies of scale and specialization but has less

incentive to deliver efficient service, unless under strong competition (Brousseau and Penard, 2007, pp. 91-92).

2.2.2 Assembling

This second dimension relates to the role that incurs to digital platforms to assemble functionalities such as to meet customers' demand. Typically, new functionalities are progressively built around the initial core service of the business. This can be done in several ways in practice, e.g. acquiring an existing company or through licensing, and the authors precise that the activity of assembling has to be understood in a large sense, and it ranges from infomediaries to industrial aggregators (pp. 92-93). Nowadays, technology giants have become assemblers on top of being producers. Indeed, platforms have a greater revenue generating potential compared to products, as evidenced by the fact that half of the world's top 10 most valuable companies (Apple, Microsoft, Google, Amazon and Facebook) have adopted the platform model (Zhu and Furr, 2016, p. 74). The recent acquisition of LinkedIn by Microsoft at the price of \$26 billion, which makes it Microsoft's largest M&A deal ever, can be considered as an assembling activity. Indeed, this acquisition provides Microsoft with the opportunity to embed LinkedIn with other Microsoft products (e.g. Skype, Outlook etc.) and therefore "recreate the connective tissue for enterprise", as suggests one Silicon Valley expert (Feller, 2016).

The activity of assembling involves transaction costs when the functionalities have to be acquired from third parties, and technical costs in order to make these various functionalities compatible and interoperable (Brousseau and Penard, 2007, p. 92). As a result of these costs, a trade-off exists between a well-integrated package supporting a selected number of functionalities and a less integrated package that proposes a wide array of functionalities (Brousseau and Penard, 2007, p. 95). Additionally, packages could be provided free of charge or on a pay per provision basis. The authors touch upon the two essentials ways by which digital technologies could be valorised in case the package is provided for free. Consumers could be targeted by third-party advertisements or, alternatively, information could be generated from the users – either upon request or through their usage behaviour (Brousseau and Penard, 2007, p. 95). In both cases, the cost is also incurred to the final customer, who has to face either "pollution" from unwanted content or "pollution" from intrusive marketing approaches (Brousseau and Penard, 2007, p. 96). In such context, a parallel could be drawn with the notion of "information overload" coined by Schultz and Vandenbosch (1998), which

is defined as a state resulting from the evolution of ICT and increased complexity wherein a high amount of information is generated, surpassing the ability of individuals to process it (p. 127). The final choice of valorisation strategy depends the cost of exclusion.

2.2.3 Knowledge management

This dimension refers to the ability of the digital network to motivate its users to create and share knowledge on the platform, and to the efficiency with which the information generated is capitalized so as to work on the improvement of products and services and innovation (Brousseau and Penard, 2007, p. 87). Wikipedia is an example of a platform that relies extensively on user-generated knowledge. In Sundin (2010)'s word, "Wikipedia does not exist as a fixed entity; rather it is being made and remade through the actions of hundreds and thousands editors" (p. 841). Similarly, open source initiatives are also based on the willingness of users to contribute. In this regard, a large part of the literature on digital knowledge and information sharing concentrates on the incentives for users to contribute and on the consequences for sharing online (Brousseau and Penard, 2007, p. 99). With the rise of ICT, more means exist for exchanging and sharing information concerning every one of the three dimensions of the business model: transaction, assembling and cognition (Brousseau and Penard, 2007, p. 99).

According to Brousseau and Penard (2007), the main trade-off for knowledge management is the extent to which contributions are regulated and moderated: one extreme would be an organized and hierarchized knowledge sharing system or, on the other hand, a system that is totally decentralized and spontaneous (p. 103). Of course, these two cases come with a cost: a centralized system implies costs related to the organization and opportunity costs, and the decentralized system would lead to higher search costs and redundancy (p. 103). A second point of contention concerns the way rights of access and use are managed in order to encourage the contribution of participants: "intellectual property rights" vs. "open science".

2.3 Choice of comparison target and data collection

As Alibaba and Amazon are present in several business areas, the comparison will mainly address the e-commerce business because both companies have built their empire around this particular aspect. Furthermore, as Alibaba has a large collection of e-commerce platforms under its umbrella, we will be focusing primarily on Tmall (B2C) and Taobao (C2C) in order

to be aligned with Amazon (B2C). In the following analysis, Taobao is considered as relevant despite being categorized as C2C platform due to the fact that the majority of the sellers are small businesses having fewer than 10 employees (Qu, Wang, Wang and Zhang, 2013).

The following analysis will not only touch upon the digital aspects of both platforms but also the structure of the companies, including their other businesses. The purpose is to give a broad overview of how the two companies operate online and offline by looking through the lenses of the three key dimensions outlined above. The matching dimension will be more reflective of the e-business economics behind the functioning of the platforms. More specifically, the buyer's viewpoint will be adopted when analysing the different transaction costs. Then, the assembling dimension will be aimed at describing the various sectors and business areas the two firms engage in. Third, the knowledge management dimension will look into how Alibaba and Amazon are able to leverage the knowledge generated by their users in all of their businesses. The bottom line is to understand how value is generated.

For the purpose of this research, data has been collected from diverse materials originating from the two companies in question but also from third parties. Hereunder, Table 6 summarizes the main sources consulted.

Company resources	Third party sources
- Annual reports - Letters to shareholders - Press releases - Company websites - In-house press publication - PowerPoint presentations	- Academic articles - Monographs - Theses - Newspaper articles - Industry reports - Business magazines - Trade magazines - Executive interviews - Government resources - Blog posts from trusted sources

Table 6 – Data collection sources

Part 3. Company Overview

3.1 Alibaba

Founded in 1999 by Jack Ma and his team of 18 co-founders, Alibaba has been developed with the belief that the Internet would serve as a launching platform for small and medium enterprises (SMEs), allowing them to compete effectively on a domestic and global level (Alibaba, 2016a, p. 56). Indeed, throughout their conversations with a large panel of Chinese companies, including big private companies, SMEs and state-owned companies, Jack Ma and his team realized that SMEs were underserved and, as a consequence, were the ones that really needed e-commerce (Hahn, 2016). According to Jack Ma, more than 40 millions of SMEs were operating at that time in China in fragmented markets, lacking appropriate communication channels and information sources to effectively promote their products (Wulf, 2010, p. 1). The company's name, Alibaba, was therefore chosen as a reminder of the legend of Alibaba and the 40 thieves, because just like the hero in the story, it would "open sesame" for those in need (Hahn, 2016).

In 2003, Alibaba decided to venture into the C2C market, which was at the time dominated by eBay. Compared to more developed countries, online auctions took off rather slowly in China because of the low Internet penetration rate, lack of regulations protecting online transactions, and the underdeveloped technological and financial infrastructures (Barnett, Luo and Feng, 2010). Although eBay enjoyed the position of first-mover, having acquired the startup EachNet, Taobao was able to squeeze eBay out by 2006 thanks to a more accurate understanding of both the specificities of the Chinese market and the needs of the consumers. For Jack Ma, the entry of eBay consisted of a threat for its B2B business as well because, in his words, "in China, there are so many small businesses that people don't make a clear distinction between business and consumer" (Kuchinskas, 2004). This was true for Taobao as well, which did not make any distinction between business and customers as customers during the first few years – until it built Tmall. Currently, the majority of the sellers on Taobao are small businesses with less than 10 employees (Qu et al., 2013, p. 1197).

In 2006, after a failed attempt at monetizing the Taobao marketplace, Alibaba launched the beta version of its new service "Mall of brands" and was charging for a variety of value-added services (Barnett et al., 2010, p. 15). Two years later, the Tmall marketplace went live

with a very different positioning compared to Taobao. Indeed, it focused more on higher-quality goods and luxury brands and was able to develop at a rapid rate thanks to the ever-growing brand-conscious middle class (Rao, 2016c). Companies listing on Tmall have to pay an upfront fee every year, in addition to commission fees based on product categories (Alibaba, 2016a, p. 69). In 2014, Tmall Global was launched, offering a platform for international brands to access Chinese customers (Alibaba, 2016a). As of March 2016, over 100,000 brands were selling on Tmall (Alibaba, 2016a, p. 69) including Amazon itself, which had trouble penetrating the Chinese market (Cendrowski, 2015).

Today, both the Taobao and the Tmall platform are generating revenues through advertising principally. Positioned as a crossroads for Alibaba's marketplaces and services, Taobao also generates significant traffic for Tmall (Alibaba, 2015a, p. 60).

3.2 Amazon

Following the opportunity presented by a rapid upsurge of Internet usage, Princeton graduate Jeffrey Bezos decided to leave his position as senior vice-president of D. E. Shaw, an investment bank based on Wall Street, to open an Internet venture during the summer of 1994 (Kotha, 1998, pp. 214-215). First incorporated under the name of "Cadabra", the online book retailer had been later renamed Amazon for a matter of practicability – so as to appear on top of the alphabetical list in directories – and imagery – to evoke the fact that the company could grow the size of the Amazon River (Berryman, 2014, p. 1). Bezos made the deliberate choice to sell books because brick-and-mortar stores had limited storage capacity (Kotha, 1998, p. 215). In this way, Amazon became the first company of its kind to move online (Mellahi and Johnson, 2000).

Launched in July 1995, the website started off with a portfolio of almost one million books (Kimble and Bourdon, 2013, p. 60) and was already selling \$20,000 per week by September the same year (Ritala, Golnam and Wegmann, 2012, p. 241). In 1997, the three-year-old Amazon was floated for \$300 million (NASDAQ: AMZN), disclosing its ambition to become "the leading on-line retailer of information-based products and services" in the SEC filing (Knecht, 1997). Amazon's mission was from the start to provide value for its customers, as clearly stated in the first letter that Jeff Bezos addressed to shareholders – he still sends it every year (McGinn, 2014, p. 58). In 1998, Amazon began selling music and DVD/videos as well and, one year later, "electronics, toys, home improvement items, software, and video games were also added to Amazon's selection" (Milliot, 2015, p. 4).

During the same period, Amazon was also expanding geographically with the launch of Amazon.co.uk and Amazon.de through acquisitions (Ritala et al., 2014, p. 241).

The mode applied by the online platform at the time was closer to the one of a pure merchant but it evolved into a marketplace by 1999 with the launch of Auctions and zShops which turned into Amazon Marketplace in 2000 – a platform where the company gave its suppliers the ability to manage their own storefront (Hagiu, 2007, p. 127; Zhu and Liu p. 8). What started as a market for used books has become today a place “where anybody can sell just about anything right alongside Amazon’s own wares” (Helm and Yakowicz, 2016, p. 36). Through Amazon Marketplace, customers are indeed able to not only access products from Amazon but also find products from third-party sellers, therefore adopting a “dual-format retailing” model (Mantin, Krishnan and Dhar, 2014, p. 1937). Now, Amazon Marketplace counts more than two millions sellers and contributes to over 40% of the total revenue from Amazon.com (Bose, 2016; Helm and Yakowicz, 2016). Businesses listing on Amazon have to pay a monthly subscription fee as well as additional referral fees and variable closing fees for each product sold (Amazon Services, n.d.-a). In total, Amazon owns 11 global marketplaces spread across America, Europe and Asia (Amazon Services, n.d.-b), whereon sellers can choose to base themselves.

3.3 Economics

Before proceeding to the formal comparison using the framework described in Section 2.2, it is important to understand the underlying economics of the two companies. Indeed, the literature review has shown that revenue and cost structures were dimensions that needed to be addressed when considering the business model. In order to offer an overview of the companies, key data and figures of Alibaba and Amazon are presented in Table 7.

Amazon and Alibaba are often compared head-to-head because of the nature of their businesses and their position of e-commerce market leader in their respective countries. Looking at the distribution of revenues across regions, Alibaba and Amazon are both generating the greatest share of their revenue in their home countries. Alibaba, headquartered in Hanzhou, generates most of its revenue through its Chinese retail business (Alibaba, 2016a, p. F-54) and accounts for approximately 80% of e-commerce market share in China (Trefis Team, 2015). Seattle-based Amazon, on the other hand, has to face a much fiercer international competition on the U.S. market and accounts for about 40% market share of said market according to the latest numbers (Kam, 2016; Trefis Team, 2015). Amazon generates

the largest portion of its revenue through the North America segment, which consists primarily of earnings from retail sales of consumer products (including export sales) and subscriptions through websites targeting the North American region (Amazon, 2015a, p. 67). In particular, electronics and other general merchandise accounted for the greatest part of the sales within this segment (Amazon, 2015a, p. 27).

Although Amazon's annual revenue is much greater than Alibaba's, the two companies have comparable total assets and free cash flows. The notion of free cash flow is important because Amazon has vowed to focus on a "long-term, sustainable growth in free cash flows per share" (Amazon, 2015a, p. 18). Indeed, Jeff Bezos has been very clear from the beginning that this measure would be their core focus instead of net profit (McGinn, 2014, p. 61). Alibaba has also highlighted the importance of free cash flow in terms of amount of cash that could be invested in strategic corporate transactions (Alibaba, 2016a, p. 3). With regard to investment, Amazon's report shows a much higher level of capital expenditure (\$4.6 billion), which is justified by the company's investment in support of the growth of its extensive in-house logistical and technological infrastructure primarily for Amazon Web Services (Amazon, 2015a, p. 22). Alibaba on the other hand, has mainly invested in the acquisition of land use rights, computer and office equipment, and the building of corporate campuses and offices in China (Alibaba, 2016a, p. 139), resulting in figures (\$1.682 billion) that are nearly three times less than those of Amazon.

Finally, both companies have attempted to penetrate the opponent's primary market. Alibaba's boutique e-commerce website "11 Main" launched in 2014 in the US resulted in a flop, and was sold to OpenSky only one year later (Horwitz, 2015). Since then, Alibaba has concentrated in the task of learning about the US market by making strategic investment, such as its 5.6% stake in Groupon (Trefis Team, 2016). Amazon's expansion in China started way back. Indeed, the company bought the online bookseller Joyo in 2004 (Morris, 2016) but the e-tailer was rebranded Amazon China in 2011 for the sake of consistency (Millward, 2011). It therefore constitutes one of the 11 global platforms Amazon owns. Nonetheless, business never really took off. Indeed, figures from iResearch indicate that Amazon's e-commerce market share in China accounted for less than 1.5% (Cendrowski, 2015).

	Alibaba	Amazon
Foundation date	1999	1994
Leadership	Jack Yun Ma (founder and executive chairman) Daniel Yong Zhang (CEO)	Jeffrey P. Bezos (founder, chairman and CEO)
Headquarter	Hangzhou (China)	Seattle, Washington (USA)
Mission statement	Alibaba Group's mission is to make it easy to do business anywhere	We seek to be Earth's most customer-centric company
Annual revenue	\$15,686 millions	\$107,006 millions
Key regions	China (\$13,077 millions)	United States (\$70,537 millions)
Net income	\$11,056 millions	\$596 millions
Total asset	\$56,521 millions	\$65,444 millions
Main competitors	eBay Inc. Amazon.com, Inc. Google Inc. Tencent Holdings Limited Baidu, Inc. NetEase, Inc. Paypal, Inc.	Barnes and Noble, Inc. Bluefly, Inc. Books-a-Million, Inc. eBay Inc. Overstock.com, Inc.
Capital expenditure	\$1,682 millions	\$4.6 billion
Free cash flow	\$7,953 millions	\$7,331 millions

Table 7 – Comparative table of key figures and facts²

² General data and facts on the two companies are collected from the newest annual reports of Amazon and Alibaba (see Amazon, 2015a, pp. 5, 15, 17, 22, 31, 69; Alibaba, 2016a, pp. 2, 6, 56, 139), Alibaba's official website (see Alibaba, n.d.-b; Alibaba, n.d.-c), and the online statistics portal Statista (see Statista, 2016). The main competitors are extracted from third-party reports (see MarketLine, 2016, p. 27; Canadean, 2013, p. 29). It is worth specifying that Amazon's latest annual report shows figures from FY2015 (which ended the 31st of December 2015) while Alibaba's annual report shows figures from FY2016 (which ended the 31st of March 2016).

Part 4. Analysis

4.1 Matching

4.1.1 Search costs

Product descriptions and recommendations

During the first years of its launch, Amazon was already providing its customers with loads of information on the books, including “capsule descriptions, snippets of review and ‘self-administered’ interviews posted by authors (Kotha, 1998, p. 215). In addition, Amazon also offered services that physical bookstores were unable to provide, through the ‘Eyes’ program that offers personalized notifications in relation with the customers’ interests, and the ‘Editor Service’ program that e-mails editorial comments on featured books (Kotha, 1998, p. 216). Even though it meant more information to process for the customers, these were able to access exclusive information, helping them choose and discover books that they would have not heard of in a physical store. Furthermore, thanks to the information on historical purchases, Amazon was able to build a large pool of market data that physical bookstores could not match. As a consequence, Amazon’s models could recommend potential books based on the user characteristics and preferences, consequently incentivizing the customer to use Amazon again (Kotha, 1998, p. 219). Since then, Amazon has greatly evolved. The online recommendation system has also become more bespoke with the development of machine learning (Metz, 2015). The typical product description page of Amazon includes indeed additional information such as the “frequently bought together”, “customers who bought this item also bought” and “sponsored products related to this item” sections. A very useful tool the e-tailer provides is the “compare to similar items” visualization, which may help giving customers an overview of the various options available.

Taobao provides similar recommendations based on what others have purchased and popular items that are bought together. However, the product details pages are more flexible than those of Amazon. Indeed, each seller is free to display on the listing page pictures, videos, certificates and text descriptions. Tmall offers similar liberty for brands to design the product description page. Lastly, for products that are relatively expensive, Taobao displays

an embedded customized comparison tool. This allows customers to access a larger pool of information but the downside is that it lacks the structured view that Amazon provides.

On the one hand, the amount of information that customers have to process has sensibly increased since the advent of the Internet and the ICT, which influences the search costs incurred by buyers. On the other hand, e-commerce platforms have also introduced a collection of tools that help customers visualize and organize the information at hand, so as to reduce the potential information asymmetry caused by the inability to see the product, and the uncertainty linked to the purchase. In this sense, Amazon and Alibaba were able to reduce part of the search costs.

Listing

The listing system of Amazon is built so as to enable its customers to rapidly find the product they want at the lowest price possible. Indeed, unlike eBay, where each vendor is listed separately, Amazon Marketplace groups sellers by type and price in such a way that only the best deal for a chosen product is showcased (Helm and Yakowicz, 2016, p. 36). When a certain product lands in the number one spot (i.e. is set at the cheapest price), it is called “getting the buy box”, which means that every time a shopper clicks on “Add to cart” the product in question would get the sale (Helm and Yakowicz, 2016, p. 36). Therefore, Amazon spares its customers the hassle to search for the lowest prices and, consequently, reduces the search costs incurred by the buyers by lowering the level of complexity. Taobao and Tmall, on the other hand, have adopted a different strategy in terms of listing. Indeed, sellers on Taobao are able to open storefronts and access to the listing for free (Alibaba, 2016a). The default listing option is an of aggregation criteria, such as the number of times a product has been viewed and saved, the sales volume, the rating received and the price, as explained by Wang, Taobao’s senior search engine expert (Sina, 2016).

However, both companies have a bidding system that allows sellers to position their ad on the right-hand side of the result page (see Figure 2 and 3). As consequences, buyers have to scroll through sponsored ads that may not meet their specific criteria. This represents a higher search cost due to an increased level of complexity.

Filtering and sorting options

Due to the increased amount of information made available by ICT, complexity has increased, as buyers are offered a larger pool of choices. However, both platforms have provided tools allowing buyers to find the product they want more easily. Through the search field, Taobao

allows customers to sort goods by popularity, reputation and price ranges (see Figure 2)³. The website also offers additional criteria such as “free shipping”, “online status on WangWang”, “goods sold on Tmall” and “promotions”. Users are able to discriminate based on the area from which the goods are issued as well, as a mean to determine the fastest option available. In addition, depending on the type of goods searched, the window on the left-hand side displays filtering criteria based on the specific characteristics of the product (e.g. brand, style, model, material, etc.). On Amazon, the sorting options consist of: relevance, featured, price (respectively high to low and low to high), average customer review, and newest arrivals. On the side, similarly to Alibaba, users are offered the possibility to refine their search based on the specificities of the product searched. When looking at the same type of product (iPhone cases), the criteria offered by Amazon were more precise (e.g. brand, material, feature of the case, packaging option, condition, discount, seller, minimum star rating received etc.).

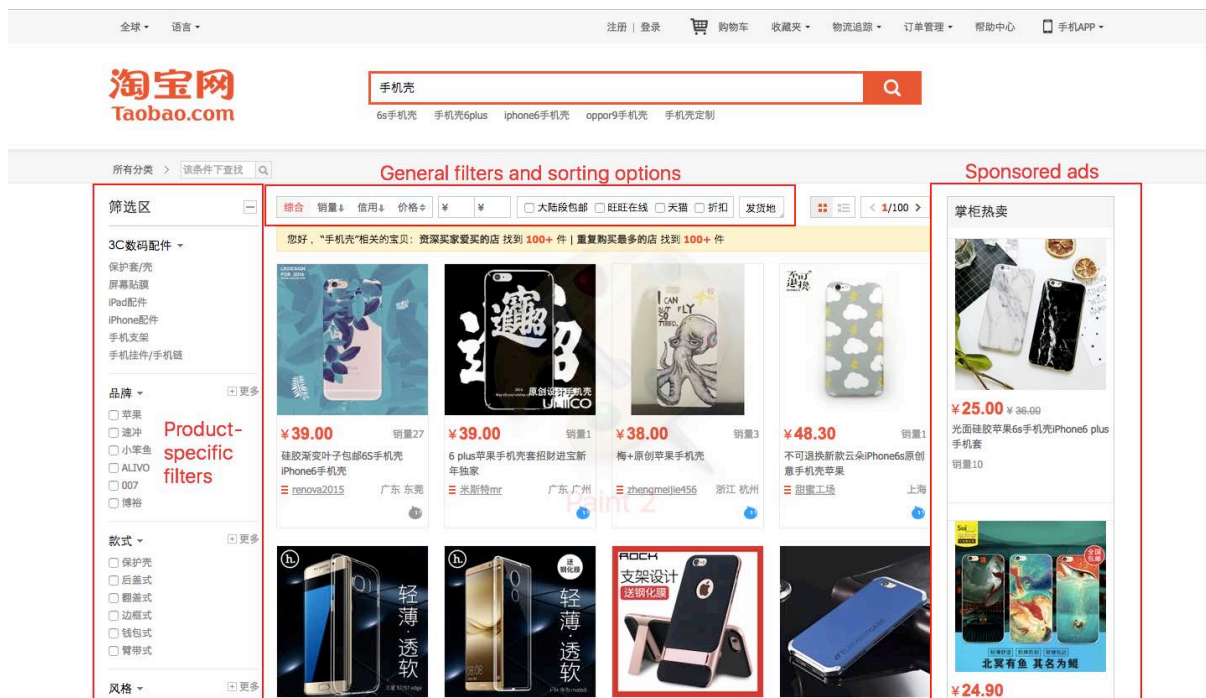
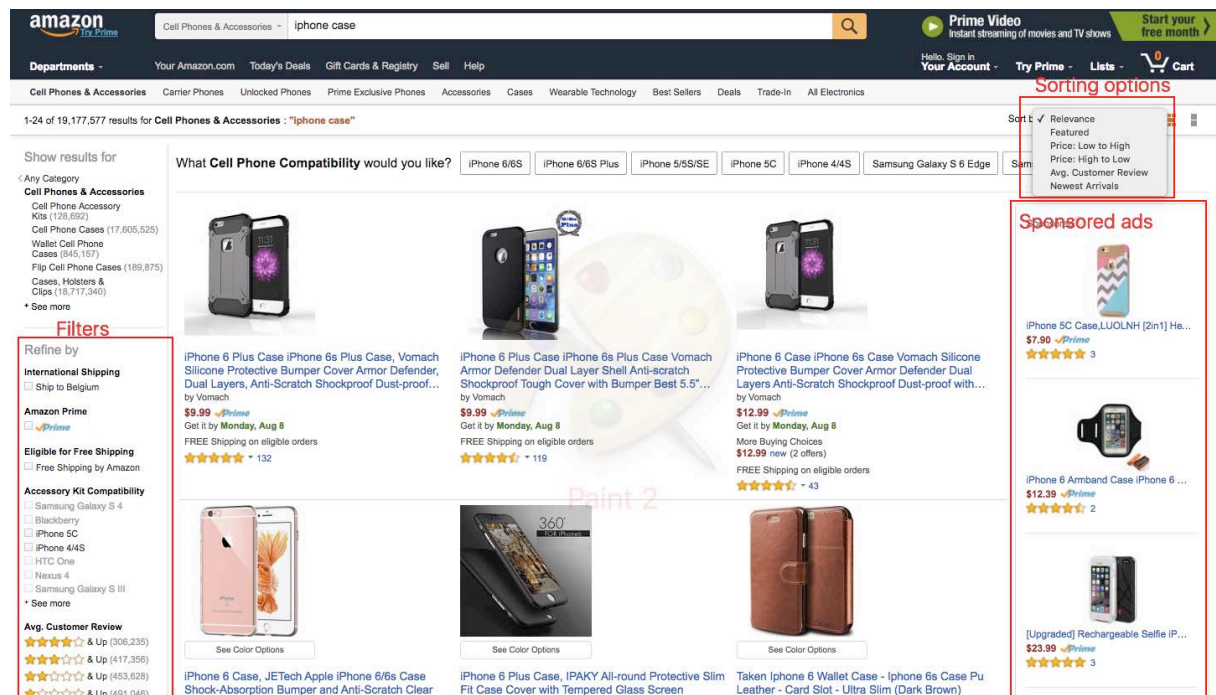


Figure 2 – Taobao filters⁴

³ The presentation on Tmall is similar

⁴ <http://bit.ly/2aOXYK>

Figure 3 – Amazon filters⁵

4.1.2 Negotiating costs

Pricing

In our retail business, there are three big ideas: Low prices, vast selection, and fast, reliable delivery. We continually work on all three. We don't know what technologies might be invented or who our competitors will be, so it's hard to build strategies around those uncertainties. But I do know that 10 years from now, nobody is going to say, "I love Amazon, but I wish the prices were a little higher." It's the same thing with fast delivery. (McGinn, 2014, p. 60).

When the Kindle was first introduced, Amazon was already pushing for the prices of popular e-books to be set under \$10, even if it meant taking the loss on their balance sheet (Stone, 2013). Indeed, Amazon was in favour of the traditional “wholesale” pricing model, which gives the retailer the freedom to set the price after they buy books from publishers at a wholesale price (Gilbert, 2015, p. 165). Publishers felt threatened by this initiative and had three main concerns regarding the impact Amazon could have on the industry, on top of the obvious power that the latter would gain. The main fears of the industry were geared toward the increased risk of piracy associated with e-books, the lowering of the recommended price that consumers were prepared to pay caused by Amazon's price distortion, and the risk of being made irrelevant by the Amazon's self-publishing business (Clee, 2013, p. 53). Publishers dreaded that Amazon would put them out of the business and become a monopoly,

⁵ <http://amzn.to/2b009CJ>

as they drew parallels with what happened with the music industry when Apple introduced the iTunes store, selling digital songs at \$0.99 each (Stone, 2013, p. 57).

As a consequence, major publishers saw a real opportunity when Apple decided to enter negotiations with them just before bringing the iPad to market in 2010 (Parloff, 2014, p. 149). Apple, which was put in a position of second mover, needed the support of publishers in order to get the right to sell the digital version of their titles in the iBooks store. Therefore, the company agreed to the publishers' request to use the "agency" pricing model instead. In this alternative pricing model, the publisher chooses the final price, and the retailer gets a fixed percentage of the revenue (Hao and Fan, 2014, p. 1017). As dissatisfied publishers threatened Amazon to resort to "windowing" and achieved to push for an "agency" pricing model, Amazon was working on setting up its own publishing business AmazonEncore, which was announced in May 2009 (Stone, 2013). Contrarily to what would have been expected by the publishers, it was shown in Hao and Fan (2014)'s analysis of the e-book market that a "wholesale" pricing model was more beneficial for the overall welfare, including that of the publishers.

Similarly to Amazon's bookselling business, the publishing business was also in favour of cutting prices. For example, Kindle Direct Publishing encourages self-publishing authors to sell their books under \$10 by promising a 70% royalties rate compared to the 35% they offer for prices above \$10 (Fox and Patterson, 2015, p. 42). However, these rates remain higher than what was offered in the regular publishing industry. Until recently, the rate typically offered by publishers was around 15%, which was then raised to 25% under pressure (Clee, 2013, p. 53). In this sense, the revolution brought by Amazon was beneficial for customers, who could enjoy lower pricing, and self-publishing authors, who could receive higher royalties.

Regarding the third-party sellers who do business on Amazon Marketplace, they are also pressured to compete on prices because of how listing on Amazon Marketplace functions: only the most attractive deals land in the number one spot (as briefly explained in Section 4.1.1). In an interview with Inc. magazine, the entrepreneurs behind Pharmapacks, a \$70 million retail business that sells drugstore products, argue that price is everything. "Set a price too high, and Amazon buries it. Setting it too low is worse, earning the buy box and leading to thousands of orders flooding in—and a loss of money on every sale" (Helm and Yakowicz, 2016, p. 38). As a consequence, the negotiating costs of the buyers are also lowered, as Amazon itself pushes for the best prices for its customers.

On Taobao, the pressure on price is also high for sellers. Indeed, a multitude of vendors offer the same products, resulting in price competition. Even though the Internet has reduced information asymmetry to a certain extent, buyers are still unable to predict if the product ordered will meet the description, so they tend to base their choice on the average price of the market (Hu, Lu and Huang, 2009). Sellers that offer higher quality product will be pushed out of the market because they demand higher prices, and the overall quality of the products will drop as well. As a result, the expectations of the buyers are lowered, inducing even higher pressure on price (Hu et al., 2009). A vicious circle is created as a result.

Communication

One of the main “local” innovations Alibaba introduced on its online platforms is the ability to communicate in real-time with sellers through the WangWang instant messenger system – a function that was rarely seen in Western e-commerce platforms. This is particularly relevant due to the void of information that was dominant in the Chinese business environment and the tendency of the Chinese people to distrust strangers, especially in the context of an online interaction (Davison and Ou, 2008, pp. 287-288). In addition, WangWang displays the buyers the online/offline status of the seller. This function is seen by buyers as a value added service because buyers tend to trust the sellers more easily if they are able to communicate with them directly, especially if it is a first-time deal (Ou and Davison, 2009, p. 148). In such a way, buyers are able to easily and quickly get in contact with vendors and ask for clarification on the products or transaction process. For example, one buyer argues that “searching for online sellers is critical because when consumers buy things, they must have questions to ask. The transaction intention increases greatly if the seller is online. Trust can be also developed during the conversation in WangWang” (Ou and Davison, 2009, p. 146).

The ability to be able to communicate with sellers is therefore highly valued by Alibaba’s customers. WangWang also enables merchants to send pictures, videos, and voice messages, which is source of additional information for buyers. As a consequence, Alibaba has lowered information asymmetry and uncertainty, which has a positive impact on negotiation costs. According to Yang and Liu (2009), WangWang has attracted more players for Taobao by making communication more convenient and timely (p. 203). On Amazon, the only instantaneous mean of communication is to call the hotline provided by the merchant.

Checkout

In 1997, Amazon introduced the concept of “1-click” ordering, which allows customers to save their billing and shipping information and skip the shopping cart step, resulting in faster checkout recorded with a simple click. Amazon was able to profit notably from the patenting of this business method, which has since then been licensed by numerous firms including Apple (A.C., 2015; Nazaryan, 2016, p. 29). The 1-click option is beneficial in the sense that it reduces considerably the steps needed by a customer to execute the transaction, which has an impact on the condition of complexity. Consequently, negotiation costs are partially reduced. In comparison, shopping on Taobao and Tmall, involves more steps.

In order to make ordering even easier for Amazon Prime members (see Section 4.2.2 for more information this membership service), Amazon has launched the Amazon Dash buttons. These small buttons, which are now supporting over 100 brands across dozens of retail categories and thousands of product options, are connected through Wi-Fi and allow customers to order the specific product from the brand represented (Amazon, 2016b). Once the button is pressed, the product that is paired up with it will be delivered within two days, sparing the client the need to search for the product online (Amazon, 2016b). The button is essentially free because the \$4.99 that it costs comes with an equivalent amount of credit (Amazon, n.d.-e). According to Amazon, orders through Amazon Dash happen on average more than once per minute (Perez, 2016).

4.1.3 Enforcement costs

Rating and reputation systems

The product rating system that is provided by online platforms allows customers to have an idea of the quality of a certain product before buying it. Assimilated to a form of electronic word-of-mouth (Cheung, Lee and Rabjohn, 2008), online product reviews are a way for customers to communicate among themselves before and after buying a product. Mudambi and Schuff (2010) define online customers review as “peer-generated product evaluations posted on company or third-party websites” (p. 186).

On Amazon, both the product and seller rating systems range from 1 to 5 stars: 1 star is equivalent to the poorest rating and 5-star rating reflects a very positive view (see Figure 4 as example). The website also displays the number of ratings that has been collected, which is informative in the sense that a high number of respondents is a sign of a larger consensus and

a more reliable measure of the quality of a product. For more detailed description of the seller, buyers can navigate in the “feedback” section of the merchant’s page, which shows the feedbacks received during the past 30 days, 90 days, 12 months and lifetime. It also offers insights on the total number of reviews totalled and the segmentation into percentage of the positive, neutral and negative reviews (see Figure 5).



Figure 4 – Amazon 5-stars rating system

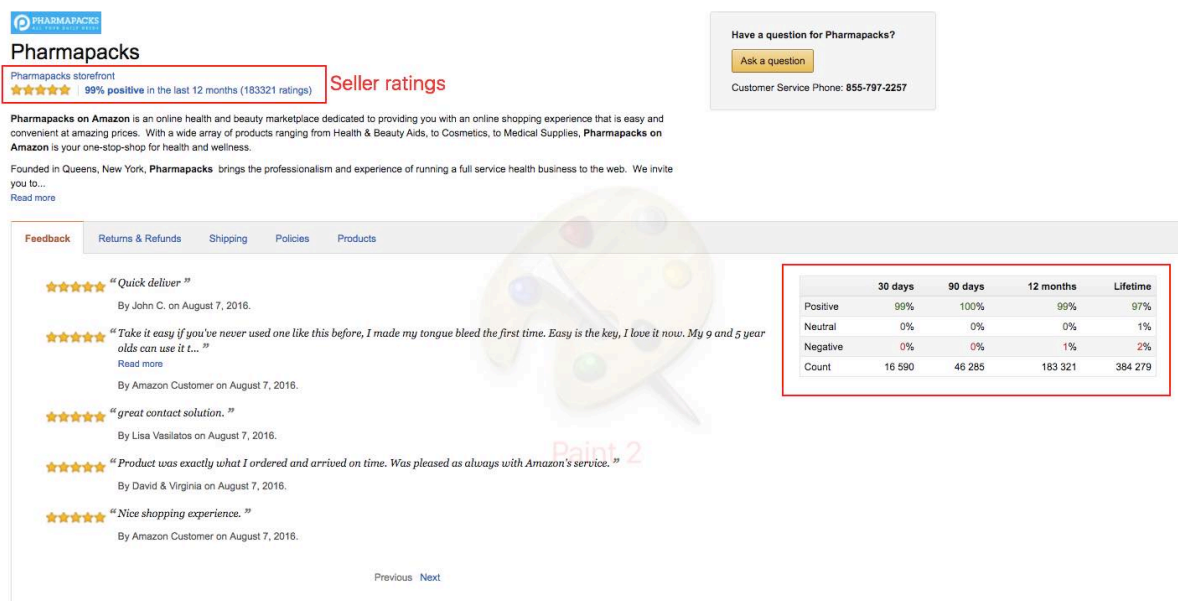


Figure 5 – Amazon merchant’s page and customer feedbacks section

The rating system offered by Taobao is based on a different scale (see Figure 6a). When purchasing a product, three types of rating can be attributed to the merchant: a positive rating is equivalent to 1 point, a neutral rating does not have any impact, and a negative rating costs the seller 1 point (Taobao, n.d.-a). Depending on the total number of points received since the beginning, the seller will get a rating of 1 to 5 hearts, diamonds, silver crowns or golden crowns. In addition, when the customer clicks on the three small horizontal bars logo, a window displays an aggregated percentage of good reviews received, along with three additional measures scaled from 1 to 5, describing respectively the “similarity with description”, “service attitude” and “delivery speed” (see Figure 7a). Another noticeable difference in the two companies’ rating system is that buyers on Taobao are also rated after each transaction with a similar point-based system (see Figure 6b).

The existence of such rating and reputation systems diminishes the buyers' enforcement costs because sellers have pressure to provide good customers service and high quality products in order to get favourable reviews. It has been showed, indeed, that reputation highly influences the decision to initiate transactions as well as the price that a seller can request (Swamynathan, Almeroth and Zhao, 2010). They represent therefore a valuable selection criterion for buyers in an e-commerce context. From a transaction costs perspective, information asymmetry and uncertainty are slightly reduced thanks to these systems, which lowers the enforcement costs incurred by the buyers as a result.

Fake reviews and counterfeit products

Although theoretically a larger number of suppliers should have reduced the risk of opportunism according to the condition of small numbers, ICT and the Internet have also produced an opposite effect because of the increasing need of coordination required and the altered distribution of information (Cordella, 2006, p. 200). Similarly to most rating sites (e.g. Yelp, Trip Advisor, etc.), Amazon and Alibaba have also to tackle the proliferation of fake reviews. These occurrences are due to a variety of factors, among which the lack of accountability of online identities and the divergence in terms of interests, resulting in selfishness and opportunism (Swamynathan et al., 2010, p. 239). Due to the fact that buyers tend to prefer engaging with sellers and products that are better rated as mentioned previously, sellers have an incentive to improve their reputation quickly (Xu, Liu, Wang and Stavrou, 2015, p. 1).

Amazon is currently suing over 1,000 people who allegedly wrote fake reviews for money, and it has also filed lawsuits against websites that sells 4 or 5 stars reviews to sellers (Fonda, 2016, p. 64). Another issue with Amazon's review system is that all users are able to submit a review, even if they have not bought the product themselves. To help prevent fake reviews, Amazon singles out the reviews of people who have actually bought the product with a "Verified Purchase" badge (Fonda, 2016, p. 66) (see Figure 8). Users are also able to vote on whether they found the review useful or not, and report abuse if applicable.

crocs Unisex Baya Clog
\$19.77 - \$99.99 & FREE Returns on some sizes and colors. [Details](#)

Select options to buy

Customer Reviews

★★★★★ 1,662
4.5 out of 5 stars

5 star 70%
4 star 16%
3 star 6%
2 star 3%
1 star 3%

Share your thoughts with other customers
[Write a customer review](#)

See all 1,662 customer reviews

Top Customer Reviews

★★★★★ **Great shoes, but...they shrink.**
By George Kaplan on August 15, 2015
Size: 11 D(M) US | Color: Black | **Verified Purchase**

I was given a pair of these by my wife, and they became my go-to shoes for wearing while doing yard work. Insanely comfortable, easy to hose off to clean, great ventilation on hot Southern days. They stayed outside for me to wear when the next impromptu chore came along. I had them for over a year, wore them constantly when yard duties called each weekend.

Lately, I noticed as I placed the shoes on my feet each week that they were getting harder and harder to slide on my feet. I was finally forcing my feet into the toe box just to get them on. I worried that I was retaining water in my feet, possibly a sign of heart issues...turns out, all I needed was a new pair. The shoes, left outside day after day, will slowly shrink. My old and new shoes, side-by-side, show the old to be easily one size smaller than it first was, maybe two sizes. The new shoes, by contrast, are roomy and comfortable.

[In the attached photo, the shoe on the left is the "old" shoe, the one on the right is the one just delivered, and BOTH are size 11]

The moral to the story is to care for your Crocs, don't leave them outside for days on end. Otherwise, they may begin to get snug on you, too.

[3 Comments](#) 70 people found this helpful. Was this review helpful to you? [Yes](#) [No](#) [Report abuse](#)

★★★★★ **Perfect for summer**
By Gil S on April 2, 2013
Size: 10 B(M) US Women / 8 D(M) US Men | Color: Chocolate

These are a slight variation on the classic Crocs clogs. In my opinion they look a little bit better but I did not notice any difference in how they are built or how they fit and feel. I've owned quite a number of Crocs shoes/slippers/clogs over the years. These are my 4th pair of Crocs clogs - I've owned 3 pairs of 'classic' (I think they are called "Beach" clogs) and one pair of lined clogs that I use as slippers in the fall and winter.

Customer Images

See all customer images

Most Recent Customer Reviews

★★★★★ **Good crocs, good price**
Around the homestead we are constantly slipping on shoes, either muck boots or crocs. As my oldest son is growing like a weed, he needed a new pair. [Read more](#)
Published 1 hour ago by Homestead Dad

★★★★★ **Five Stars**
Very comfy
Published 21 hours ago by David V

★★★★☆ **Why four stars if they are SOOOO good. Well they wear out fast**
Why four stars if they are SOOOO good. Well they wear out fast! Why buy and wear them, easy on and off. [Read more](#)
Published 1 day ago by StevenM

★★★★☆ **Four Stars**
good quality.
Published 1 day ago by Angel

★★★★★ **Five Stars for my first Crocs!**
First pair of Crocs. They are great. For now, I have a pair by the back door and slip them on when going outside!
Published 1 day ago by Ms. Gail

★★★★★ **Just what we wanted!**
Shoes were a perfect fit and half the price as the store, son loves them!
Published 1 day ago by Amazon Customer

★★★★★ **Five Stars**
2nd pair and they are great
Published 2 days ago by Marlowweather

★★★★★ **Happy feet :)**
My feet are very happy at work!!

Figure 8: Customer review section⁹

Alibaba is facing the same problem but on a larger scale. Indeed, the risk of opportunism is increased due to the business environment in China where fraud and counterfeit have always been an issue historically – the situation has actually worsened after the country's move toward free-market capitalism (Schuman, 2015). In China, the phenomenon of “brushing” is plaguing e-commerce websites such as Taobao. It consists of a network of people paid by vendors to fake purchases so as to improve key metrics such the merchant's rating as well as the number of items sold. These kind of organized structures are referred as seller-reputation-escalation (SRE) markets. Through a study infiltrating five SRE markets, Xu et al. (2015) have observed that sellers using such services were able to improve their e-store's reputation 10 time faster compared to regular vendors (p. 2).

Furthermore, Alibaba has also been accused repeatedly of lacking the adequate preventive anti-counterfeit measures regarding the goods that are sold on its online platforms – Taobao being the main culprit. In 2011, a scandal erupted revealing that about 100 employees of Alibaba were involved in covering fraudulent activities in exchange of monetary payment (Schuman, 2015, p. 106). The company has since been working with brands to tackle the problem of counterfeit, launching a crusade against fraudulent goods and setting up a team of 2,000 employees focusing on this task solely (Schuman, 2015, p. 112). However, luxury brands are still generally showing discontentment toward Alibaba because Jack Ma has taken

⁹ <http://amzn.to/2aAtCzh>

a quite ambivalent stance toward counterfeit products, telling brands that they are fighting with them and, at the same time, reassuring sellers that the company will protect them. Since May 2016, Alibaba has further tightened the control over counterfeit goods by requiring sellers to provide proof of authorization to sell from the luxury brands (Kwok and Siu, 2016).

According to a recent report, Amazon is not immune either to the increase of fraudulent products on its platform ever since it opened its gates to Chinese manufacturers (Levy, 2016). Amazon's listing system based on price is even more hurtful for the sales of the legitimate sellers because these will see their products disappear from the listing once a counterfeit product is offered at a better price. Furthermore, some fake products are delivered through Amazon's fulfilment centres (in exchange of handling fees), earning them an Amazon tag that may increase the legitimacy perceived by the buyers (Levy, 2016). Merchants can report counterfeiters but it takes time, and the stores can easily bypass the system by reopening under new names (Levy, 2016). As a result, complaints have been heard from sellers who are growing increasingly frustrated with the lack of proactivity shown by Amazon in its quest to tackle this problem (Levy, 2016).

Payment and guarantees

Amazon enables payment by credit and debit cards such as Visa, MasterCard, American Express, etc (see Amazon, n.d.-h). Additionally, Amazon allows customers to store their data in their proprietary payment system for external purchases on partners' websites (see Section 4.2.4 for more details). Amazon's payment system is not really revolutionary e-commerce-wise and does not guarantee protection in itself. However, Amazon provides an A-to-Z guarantee, which can reimburse up to \$2,500 of the purchase price including shipping charges if a certain number of conditions are met (Amazon, n.d.-g). Such guarantee decreases the uncertainty for the buyer, which results in lower enforcement costs. However, filing a claim does involve a certain number of steps that may be costly in terms of time and effort, resulting in a potential rise in complexity.

Built up through a union with several Chinese financial institutions (Yang and Liu, 2009, p. 203), Alibaba's payment system Alipay represents an extra layer of security in the sense that it retains the payment until the products are received and inspected by the buyer. The seller is also protected because products are to be sent only once the payment notification is received. The launch of Alipay revolutionized the payment space in China, as the Chinese economy was still primarily relying on cash at the time and customers were very wary of

using their cards for online shopping due to fear that their personal information could be stolen (Jung, Ugboma and Liow, 2015, p. 506). Through this system, sellers are incentivized to deliver the agreed upon products and services if they wish to receive the money, and buyers are able to examine the goods before releasing the money from Alipay. In this way, the effects of buyers' uncertainty and information asymmetry were greatly reduced and, as a consequence, enforcement costs were lowered as well. However, the shipping fees are not covered but buyers can choose to buy an insurance.

Tracking and delivery

Already in the early 2000s, Amazon was providing its clients with strong customer services. Indeed, in 2001, 2002 and 2003, the scores Amazon received were the highest ever recorded by the "American Customer Satisfaction Index" (Kebblis and Chen, 2006, p. 433). Back then, Amazon already owned an array of features that allowed the customer to track orders and shipments, review estimated delivery dates, and cancel unshipped item (Kebblis and Chen, 2006, p. 433). These features allow the buyer to be kept in the loop and reduce the uncertainty linked to the delivery of the goods. Nowadays, users may also subscribe to the "Text Trace" service, which updates the user via text message on the state of delivery of the parcel. Taobao and Tmall provide a tracking system as well. Same as Amazon, customers can check the shipping status of the parcel (including date of dispatch, date of transfer, etc.) directly from their user account. A hotline is also available for parcel tracking. These various functions reduce the uncertainty and information asymmetry that the buyer has to face.

What differentiates the two companies is the fact that members of Amazon Prime are promised faster and cheaper delivery. Sellers that are part of the Fulfilment By Amazon (FBA) program can rely on Amazon for storage, delivery and after-sales service (Amazon Services, n.d.-c). For the customer, this means more security, as Amazon is in charge of the whole process. In such way, Amazon further reduces the enforcement costs for buyers, who can trust Amazon for the handling of their orders from A-to-Z. Merchants on Taobao and Tmall do not have access to such developed in-house logistic network (see Section 4.2.3 for details on logistics). As a result, Alibaba fails to offer the same guarantee for buyers because sellers (and third-party courier services) are largely in charge of the handling, delivery and after-sale service.

4.1.4 Summary and trade-off analysis

Globally, both Alibaba and Amazon have put in place tools and mechanisms facilitating the search, negotiation and enforcement processes for the buyers (see Figure 9). The filtering, product descriptions and recommendations functions are mostly similar. However, both companies have focused on the development of specific dimensions. Alibaba has put more emphasis on the creation of effective communication and payment tools (i.e. WangWang and Alipay) due to the general environment in China and the specific needs of the customers. By contrast, Amazon's efforts have been put into the development of a fast checkout system ("1-click" system) and a trusted tracking and delivery service in the form of the FBA program.

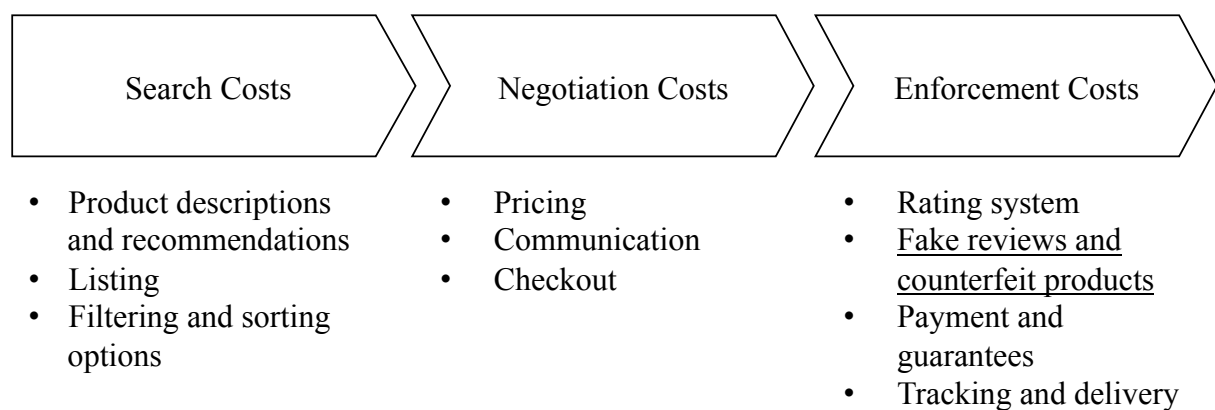


Figure 9 – Transaction costs reduction mechanisms put in place by Alibaba and Amazon

By decreasing the various externalities (e.g. information asymmetry, uncertainty) relative to online shopping, the two companies have managed to lower the overall search costs, negotiation costs and enforcement costs from the buyers' side. Indeed, the tools and functions provided either allow buyers to access a larger pool of information or offer them a certain security layer. Furthermore, Alibaba and Amazon also implemented adequate mechanisms to deal with the increased level of complexity linked to the rise in information load. Lastly, both companies have to face the challenge of opportunism, which negatively impacts the overall quality of the goods sold but also the trustworthiness of the platforms.

A possible explanation of such challenge is that Alibaba and Amazon have to compete in a rather crowded e-commerce market (even though they are considered as leaders from a market share standpoint). As a result, both of them are considered as competitive market structures. Contrarily to a monopoly structure, these cannot leverage efficiently economies of scale and maximisation of network effects (Brousseau and Penard, 2007, p. 91). Furthermore, platforms in a competitive market structure are less likely to be able to control entry and

monitor behaviours, therefore decreasing the quality of the products (Brousseau and Penard, 2007, p. 90).

Regarding the second type of trade-off, Amazon offers a more integrated package compared to Alibaba (e.g. by taking in charge the handling, delivery and after-sale service), which makes it closer to a commercial intermediary. According to Brousseau and Penard (2007), this sort of model makes efficient service a priority by reducing transaction costs, and has a strong focus on market clearing. Albeit a marketplace, Amazon is also assuming the role of a classic retailer (and has started as such), which might explain the difference in terms of service and infrastructure. In contrast, Alibaba is more of a specialized intermediation service provider, and has less pressure on the efficiency of its service but benefits from higher economies of scale and specialization. Next section on the assembling dimension will further specify the different specialized platforms Alibaba has under its flag.

4.2 Assembling

Alibaba's strategy was to become the "one-stop shop for mobile consumers" and build a whole range of services around Alipay, its third-party payment system, because Jack Ma was expecting the value that could be derived from the democratization of the smartphone and the rising middle class in China (O'Connell, 2015, p. 52). In this regard, the approach taken by Amazon, also nicknamed "the everything store", was quite similar. Jeff Bezos has indeed described the reality of Amazon as a "collection of several businesses and initiatives" (Business Insider, 2014). In the interview with Business Insider (2014), Bezos draw the comparison with a lemonade stand built 20 years ago that was profitable enough to allow the team to venture into new businesses (e.g. hamburger stand, hot dog stand) using the skills and assets that they have acquired. Amazon is therefore taking advantage of the synergies created between its different businesses. Tom Phurphy, a former Amazon executive, declared that it made sense to roll out Prime, same-day delivery, and AmazonFresh, because "when all of those things start working in concert, it can be a very beautiful thing" (McCorvey, 2013, p. 74).

4.2.1 Retail business

For many products, Amazon acts as a traditional retailer and earns profit through mark-ups (Zhu and Liu, 2016, p. 30). In a research on the competitive landscape of online platforms, Zhu and Liu (2016) studied the case of Amazon focusing on how the technology giant was

competing with third-party sellers (or “complementors”) on a large set of products. In this context, the complementors are at risk because they are relatively small compared to the platform and therefore lack the adequate resources to protect their innovations (Zhu and Liu, 2016, p. 3). Due to the nature of the relationship that Amazon maintains with its sellers, its model is often referred as “coopetition-based” because it involves the simultaneous competition and collaboration between the same actors (Bengtsson and Kock, 2014, p. 180). For Amazon, coopetition has always been a major part of its business model because of the value it represents for its customers, given that value creation is at the core of its mission (Ritala et al., 2014, p. 241). Zhu and Liu (2016) found out that during a 10 months period, Amazon began selling 3% of the set of third-party sellers’ products that the authors had collected beforehand. Best-seller products with good customer reviews, which do not involve storage and high shipping costs, were more likely to be targeted by Amazon (Zhu and Liu, 2016, p. 5).

Besides, Amazon also owns the B2B arm Amazon Business, previously known as AmazonSupply (whereon Amazon was the only seller) (Demery, 2016; O’Connor, 2015). Through this new marketplace populated by over 30,000 third-party sellers, businesses are able to choose from a huge variety of products selected to match their specific industry (Amazon Business, n.d.-b; Demery, 2016). Functioning like Amazon B2C but with additional tools (e.g. shared payment accounts, multiple users access), businesses can subscribe for an account for free and access special pricing (Amazon Business, n.d.-a). Amazon Business has been growing steadily at a 20% month-to-month rate since its launch in 2015 according to Prentis Wilson, the vice-president of Amazon Business (Demery, 2016).

First started in Seattle in 2007, the online grocery delivery service AmazonFresh sells supermarket staples, including perishables and goods from local merchants (McCorvey, 2013; McCracken et al., 2015, p. 76). After years of testing in Amazon’s hometown, the delivery service has been then progressively rolled out in several other major urban areas in the US starting from 2013, and has penetrated the London market in June 2016 (Banjo, 2016; Perez, 2016). Although the online grocery market is still rather small in the US, as people are still not completely comfortable with buying food without being able to touch or smell it, AmazonFresh represents a huge opportunity for the company because customers would be buying more frequently from the e-tailer (Banjo, 2016; McCorvey, 2013; p. 74). The AmazonFresh initiative is completed by Amazon Pantry, which allows Amazon Prime’s subscribers to shop online packaged food and household products and have them delivered in

boxes that could contain more than 20kg of goods to their houses the next day in exchange of a flat fee (Butler, 2015; D'Onfro, 2014a). This service is currently available in the US, Japan, Germany, Austria, and the UK (Butler, 2015).

These past years, Amazon has also been developing its own private label products, as part of its strategy to dominate all areas of the retail industry. In 2009, the company introduced AmazonBasics, which offers electronics at affordable price, as well as office and house products under various brands (Dunn, 2015; Frommer, 2009). After rumours running for months on the presumed development of in-house clothing brands, it has been uncovered early 2016 that Amazon has quietly launched its own clothing line with at least 7 in-house labels, ranging from men, women and children's clothing to shoes (Petroff, 2016). Then, in June 2016, Amazon has also begun selling without fanfare private-label perishable goods, ranging from diapers and cleaning supplies to food (Bensinger, 2016). These products, which are also sold at affordable price, will be only available under the Amazon Prime subscription (Rao, 2016a). This move would allow the company to secure higher margins thanks to savings on brand development and marketing, but this would also mean being able to design the packaging so as to reduce shipping cost (Bensinger, 2016).

Another move from Amazon that may seem surprising for a company that has completely disrupted the bookselling business twenty years ago is their decision to open brick-and-mortar bookstores. In 2015, the first prototype of Amazon Books opened in a mall in University Village, Seattle (Ruddick, 2015). The store not only sells books, whose prices match those displayed on Amazon.com, but also showcases the large collection of Amazon's electronic devices (Lashinsky, 2016). According to Sandeep Mathrani, CEO of General Growth Properties the major American shopping centre operator and real estate investment trust, Amazon plans on rolling out 300 to 400 more physical bookstores, although the company later refuted the authenticity of these rumours (Elgan, 2016, Rao, 2016b). However, Jeff Bezos has announced that Amazon "definitely" plans on opening more stores during Amazon's annual shareholders' meeting in May 2016 (Huddleston, 2016). As part of this project, the locations of two upcoming physical bookstores have already been confirmed: one near the University of California's San Diego campus and one in Portland, Oregon (Rao, 2016b).

Started off as a simple listing platform for SMEs that morphed into the B2B platform Alibaba.com, Alibaba has created a large ecosystem surrounding its e-commerce operations. The major difference with Amazon is that Alibaba still acts mainly as an intermediary and,

rather than developing the infrastructure itself, Alibaba is creating a platform for third parties to evolve. Often praised for its ability to reinvent itself continuously, Alibaba was able to respond to the emerging market realities but also to shape the interactions between customers and businesses (Reeves, Zeng and Venjara, 2015, p. 80). Another characteristic of Alibaba is its ability to juggle between a variety of separate business units, and create more business model options as a result (Reeves et al., 2015, p. 80). A typical example is the split of Taobao in three spin-offs in 2011: the C2C marketplace Taobao, the B2C marketplace Tmall, and the lesser-known e-commerce product search site eTao. The latter seemed to be a logical move for Alibaba, which was already operating a number of separate e-commerce platforms at the time. The president of eTao explained that “eTao aims to help more business-to-consumer and online shopping companies grow and improve; only by doing so can we ensure that the e-commerce industry achieves sustainable and healthy development” (Wee, 2011). In April this year, Alibaba has invested \$1 billion in order to gain controlling stakes in e-commerce start-up Lazada, which operates in Southeast Asia (Abkowitz and Purnell, 2016).

Similarly to Amazon, Alibaba has also begun selling groceries and fast-moving consumer goods in top-tier cities in China, promising same-day delivery and next-day delivery (Alibaba, 2016a, p. 69). This initiative, called Tmall Supermarket, allows customers to buy products directly from the Taobao and Tmall platforms (Wang, 2015). However, the logistic part is taken care by Cainiao Network (see Section 4.2.3 for more information on Cainiao).

Aside from Tmall, Taobao, Alibaba.com marketplaces, Alibaba has established Juhuasuan (a group-buying platform where aggregation of buyers can obtain more competitive deals), 1688 (Chinese wholesale marketplace), and AliExpress (global marketplace that links consumers abroad to wholesalers and manufacturers in China) (Alibaba, 2016a, p. 60; Alibaba, n.d.-a).

4.2.2 Membership programs

Amazon Prime is a subscription service that promises free second-day delivery on a selection of products, which grew from the initial 1 million available in 2005 to over 30 millions in 2015 (Amazon, 2015b, p. 3; Amazon, 2016a; McCorvey, 2013, p. 71). Over the years, additional services have been introduced, such as Sunday Delivery, Free Same-Day Delivery on hundreds of thousands of items, and Prime Now the one-hour delivery service (Amazon, 2015b, p. 3). Furthermore, the subscription also offers access to music streaming and downloading with Prime Music, photo storage with Amazon Drive, film and video streaming

with Prime Video (including Amazon's original content), and a collection of free e-books through the Kindle Owners' Lending Library (Amazon, 2015b, p. 3; Amazon, 2016a; McCorvey, 2013, p. 71). Although the project was initially met with scepticism by executives, as Amazon would be making losses on the delivery, it proved to be a complete success by boasting tens of millions of customers in 2015 (Amazon, 2015b, p. 3; Carr, 2015, p. 94). Thanks to the value added services, fast delivery and low prices, Amazon was able to conquer the loyalty of Prime customers who spend on average \$1,224 a year on Amazon, thus \$700 more than regular members (McCorvey, 2013, p. 71). In some major US areas, Prime members can also enjoy the Prime Now free food delivery service for a limited time from participating restaurant within one hour (Amazon, n.d.-b).

4.2.3 Logistics and delivery

From a supply chain perspective, Alibaba and Amazon are both striving to become the "ultimate integrators", by taking in charge the whole process from the sales to the distribution, shipping and delivery of goods (Woods, 2016, p. 22). However, their strategy toward this goal is very different: Amazon aims at building its very own logistic network while Alibaba relies on a network of "fourth parties". These differences are reflected on their respective balance sheet published in the latest annual report of both companies (see Section 3.3).

In 2012, Amazon started to operate its own logistic services in the UK, with the goal to then expand in the rest of Europe and the U.S. (FreightWeek, n.d.). Today, the mail delivery service runs at Amazon's 13 hubs (Soper, 2016). Recently, Amazon has begun a new wave of investment, as it has aggressively acquired thousands of trailers, leased 20 cargo planes to increase its shipment capacity, and built new delivery and fulfilment networks across its network of countries (Cassidy and Hutchins, 2016, p. 11). According to insiders, all of this is presumably part of the global expansion of the Fulfilment by Amazon (FBA) service described as the "Dragon Boat" project in a report submitted to senior management in 2013 (Soper, 2016). One of the likely reasons that triggered such investment is the \$12 billion per year Amazon spends on outbound transportation (Cassidy and Hutchins, 2016, p. 11). By taking control of the entire supply chain and bypassing these intermediaries, Amazon is able to gather inventories from merchants in its own warehouses and arrange the delivery of parcels at reduced rates (Soper, 2016; Woods, 2016, p. 23).

Amazon has also been innovating in terms of delivery so as to be able to offer a service that is even more efficient and convenient for the customers. It has indeed a system of

Amazon Lockers that allows packages to be delivered when convenient in a pre-defined location in a locker instead of delivering at home or at work (Amazon, n.d.-c). This system also allows customers to return products easily. However, the most innovative project of Amazon would be Amazon Prime Air, which will allow packages to be delivered within 30 minutes with small drones (Amazon, n.d.-d). The project, that is still being tested, could however be launched first in countries with less strict drone regulations than the US (Hook and Doyle, 2016).

Instead of building their own logistics network from scratch, Alibaba's strategy was to lead the development of a vast "open logistics platform" in the form of the Cainiao Network Technology, a consortium comprised of China's top express firms and groups of retailers (Woods, 2016, p. 12). The difference in strategy results from the context wherein the two companies were evolving. Contrarily to the US that already had very mature players such as UPS, Fedex and even Walmart by the time Amazon began its logistics development, China was lacking an established company that could effectively service the entire country because of the geographical challenges that it represented, e.g. varied terrain, enormous size, remote village (Zeng, 2015, pp. 28-29). As a consequence, Alibaba could not benefit from existing third-party delivery infrastructure or strong human capital experienced in the design and management of such infrastructure (Zeng, 2015, p. 28). Founded in May 2013, Cainiao presently serves 250 cities in China and 146 nations internationally thanks to its 1 million square meters of warehouses and 55 supported carriers (Cainiao, n.d.-a; Cainiao Global; n.d.), guaranteeing the delivery of online orders to any Chinese address within 24 hours and offering on a global level a delivery within three days for all locations (Cainiao, n.d.-b). Covering more than 600 cities and 31 provinces in China, the Cainiao Network comprises of 15 courier services that employ 1,700,000 delivery personnel (Alibaba, 2016a, p. 76). Alibaba's next step is to provide to the underserved rural areas in China. The "Taobao Rural" project sets target to establish service centres in 100,000 rural villages issued from 1,000 counties over the next few years (Alibaba, 2016b).

4.2.4 Payment

Similarly to eBay's Paypal, Alibaba and Amazon have both launched their own third-party payment system, which allows customers to pay easily and safely. Alibaba has been one of the precursors of online payment in China and has, as a consequence, captured a big share of the market, although Tencent is now challenging it in the mobile payment space with its

WeChat Wallet (Wildau, 2016). Amazon, on the other hand, has entered the competition much later compared to its biggest competitor eBay.

Set up within three months of the official launch of Taobao in 2003, the escrow service Alipay makes it possible to reduce the transaction risks of the buyers by offering them guarantees on the effective delivery of the product and its quality (Davison and Ou, 2008; Wulf, 2010). Indeed, Alipay releases the payment to the seller only once the product has been received and examined by the buyer. Incorporated as a separate entity in 2011, Alipay has evolved from being a simple payment system to a destination app (Larson, 2015, p. 67). Indeed, Alipay provides consumers with a wide range of payment services (e.g. Person-to-Person payment, mobile payment, foreign exchange, etc.) and financial services (e.g. microfinance services, wealth management, insurance, credit referencing services, etc.) through its affiliation with its parent company Ants Financials Services (Alibaba, 2016a; Liu, 2015) (see Section 4.2.10 for more details). Alipay has also extended its services to offline operations such as supermarkets, restaurants, convenience stores, taxis etc. (Alipay, n.d.).

After several unsuccessful trials since 2008 to venture into the payment business, Amazon launched in 2013 the service “Login and Pay with Amazon”, which allows customers to use the credit and debit card information that is stored on their Amazon account to pay on partners’ websites (Bose, 2016; Linshi, 2014). Amazon offers the same protection as when buying directly from Amazon.com, given that all purchases are covered by Amazon’s A-to-Z Guarantee (Amazon, 2013a). By leveraging the trust of existing users in its brand, Amazon was able to expand into the third-party payment business in an attempt to compete with providers such as Paypal, Google Wallet, Apple Pay, etc. (Panzarino, 2013). In 2014, the service was further extended to include the possibility to pay for outside subscriptions against a variable transaction fee and a fixed authorization fee (Linshi, 2014). In 2015, the number of merchants using “Pay with Amazon” and the number of purchases being concluded with the service on partners’ websites are said to have risen tremendously, finally gaining traction (Bose, 2016).

4.2.5 Advertising

Due to the amount of data Amazon and Alibaba possess on their customers and the products that are sold on their platforms, both companies are able to leverage big data to create value for third parties. Amazon owns data on more than 1.5 billion of products and 152 million of customer accounts (van Rijmenam, 2016), which the company has been selling to marketers

since 2012 (Leber, 2013). Alibaba is also in possession of data on over 100 million of customers and a few hundreds million of products (Liu, 2014). Jack Ma, who esteems the current information technology era is moving toward a data technology era, has launched a company-wide training for all Alibaba employees in order for them to be able to process big data (Liu, 2014, p. 10). In addition, both companies own a marketing and advertising division.

Alibaba has built in 2007 the separate online marketing technology platform Alimama for its advertising business, operating P4P marketing service and display marketing service (Alibaba, 2015b). As sellers are able to open an e-shop for free on Taobao, one of the main sources of revenue for this Alibaba is through advertising. According to figures from iResearch, revenues from advertising represent over half of the total revenues of Alibaba (Osawa, 2014). Through Alimama, Taobao and Tmall have set up a keyword auction system with encourages sellers to bid for a privileged positioning or ad/banner placement. Furthermore, Alimama also gives the sellers the possibility to advertise not only on Alibaba's own websites but also on websites of third parties who are members of the Taobao Affiliate Network (Alibaba, 2016a, p. 63).

Amazon offer similar services through Amazon Marketing Service (AMS), including a keyword bidding system, product display ads, headline search ads, functioning generally on a cost-per click basis (Amazon Marketing Services, n.d.).

4.2.6 Proprietary technology

Just like Amazon itself, its cloud-computing division Amazon Web Services (AWS) has become a leader in its own field, capturing nearly three times the market share of its nearest competitors (Rao, 2015, p. 44). AWS is the partner of more than 1 million customers, including big names such as Netflix, Unilever, Instagram, Comcast, Dropbox and the Central Intelligence Agency, who trust it with the online infrastructure to support their businesses (Huber, 2014; Malik, 2014; Rao, 2015). Started a little over a decade ago, AWS provides today “more than 70 services for compute, storage, database, analytics, mobile, Internet of Things, and enterprise applications” (Amazon, 2015b, p. 3). According to a report by Synergy Research Group, AWS accounts for 28% of the global market share in terms of cloud infrastructure, which positions it as the market leader – followed by Microsoft with 10% of market share (Clark, 2015).

Launched in 2009, Alibaba also owns its own cloud computing service Aliyun (also known as Alibaba Cloud or AliCloud), which has over 2.3 million customers, among whom

500,000 are paying customers (Alibaba, 2016a, p. 58). As a mean to differentiate itself from the established competitors in the cloud infrastructure business (e.g. AWS, Microsoft Cloud, and Google Cloud), Aliyun has decided to expand internationally by focusing on servicing the Chinese businesses based abroad (Clark 2015; Shu, 2015b). According to figures from IDC, Alibaba Cloud was the largest cloud services provider in China in 2015 by revenue, offering a whole range of services including large scale computing, security, and management and application services (Alibaba, 2016a). Besides, Alibaba is also running its own operating system YunOS, which has become the world's third largest smartphone OS and has reached over 70 million of users by the end of May 2016 (Alibaba's YunOS, 2016; Suokas, 2016). The OS also runs also on TV boxes, smart devices, wearable etc.

4.2.7 Hardware

Although Amazon has introduced several pieces of hardware on the market (e.g. Fire tablet, Fire TV, Fire TV stick, Fire Phone, Echo voice-controlled speaker etc.), it is best known for the e-reader Kindle that was sold out within six hours of its release. The Kindle had as main competitive advantage the huge collection of easily downloadable e-books it gave access to through Wi-Fi, positioning it as leader in front of other existing models such as the Sony PRS (Kim and Mauborgne, 2015, p. 70). The success was also in part due to the value generated to the publishing ecosystem, authors and publishers alike, by selling e-books at loss in the beginning and investing in digital rights management (Reeves, Levin and Ueda, 2016, p. 49). The inventions of the Kindle and the Kindle e-bookstore have transformed the e-books industry, which was a niche prior to this. Indeed, e-books sales took off at a triple-digit rate in the US after the introduction of the Kindle (Gilbert, 2015, p. 166). In a similar fashion as what Apple did with the iPod, Amazon was able to capitalize on the synergies created by the Kindle and their library of contents. Other devices also function as a getaway to Amazon's huge offering. For example, the Fire TV allows customers to rent easily videos from Amazon Prime Video, the Echo cylindrical speaker equipped with a set of microphone and its own voice assistant Alexa allows customers to order directly from Amazon, etc. (Elgan, 2016; Tilley, 2016, p. 88). However, not all hardware launches were as successful. The Fire Phone, for example, sold only mere thousands of units before seeing its price being dropped from \$200 to \$0.99 with contract, mainly because the premium pricing was inconsistent with Amazon's value-conscious philosophy (Carr, 2015; Lashinsky, 2014).

In 2013, Alibaba introduced the Tmall Box, a small TV box running on YunOS operating system that provides users access to HD movies, games, online learning content, etc. and gives them the possibility to shop online and access exclusive promotions (Lee, 2014). The Tmall box therefore function as a portal to a collection of Alibaba's own content.

4.2.8 Online-to-offline services

Amazon Home Services is a marketplace allowing people to search for professional services offered locally (e.g. local home, yard/outdoor, automotive and electronic services) (Dowdle, 2015, p. 64). The services providers that are listed on the website are invited by Amazon. They have therefore been screened beforehand, vetted through a 6-point criminal background check and own the applicable trade licenses and insurance (Amazon, n.d.-a). Furthermore, similar to products shopping on Amazon, reviews of previous customers help assess the quality of the service that has been delivered (Amazon, 2015c). Launched in March 2015, Amazon Home Services is for now only available in selected major metropolitan areas in the US (Amazon, 2015c). According to Bhavnish Lathia, general manager of Amazon Home Services, the latter has been created because customers expressed the difficulty to find trusted experts in the neighbourhood at competitive price (Dowdle, 2015, p. 64).

Alibaba has also started catering to the online-to-offline (O2O) space through Taobao Local Service, an online platform that promotes services in the area of the buyers, Alitrip, an online booking platform for travel products and services, and Koubei, a platform promoting local services with focus on food and beverage services (Alibaba, 2016a; Alibaba, n.d.-a). Customers are also able to buy movie tickets on Taobao through Taobao Movies, which aligns with Alibaba's goal to expand into the entertainment business (LaPorte, 2016, p. 96).

Furthermore, Alibaba allows also third party service providers to list on sub-marketplaces of Taobao and Tmall. For example, various platforms exist for assurance providers (Taobao Bao Xian¹⁰), real estate companies (Taobao Fang Chan¹¹), flowers and pet shop and delivery service (Taobao Hua Niao¹²), car dealerships (Ali Qi Che¹³), renovation services list and furniture stores (Jiyoujia¹⁴), wedding related services (Taobao Hunban¹⁵) etc. The Taobao

¹⁰ <http://bit.ly/2aKegaw>

¹¹ <http://bit.ly/2aZKmn6>

¹² <http://bit.ly/2aDfoz0>

¹³ <http://bit.ly/2aCbzGR>

¹⁴ <http://bit.ly/2aXrYu0>

¹⁵ <http://bit.ly/2aCFIb0>

Life¹⁶ platform offers an aggregated view of all the different services that Taobao can connect the customers with (e.g. cleaning, reparation, legal consulting, graphic design, etc.). The layout applied is very similar to the generic product listing, displaying also a reputation score for each of the service providers. Parties desiring to be listed have to provide the relevant certificate as attestation of the authenticity of their credentials.

4.2.9 Publishing

Through AmazonEncore program, authors and books that have been previously overlooked despite receiving good reviews on Amazon.com were offered the opportunity to partner with Amazon and re-introduce their work with the appropriate support (Amazon, 2013b). A year later, Amazon introduced AmazonCrossing, an imprint that focuses on translating foreign books in English (Stone, 2013, p. 57). The latter has also been criticized for the bidding process used to select translators and the low rates that are offered (Flood, 2015). Under the lead of Laurence Krishbaum appointed as the head of Amazon publishing, Amazon has also pushed for collaboration with renowned authors like Timothy Ferriss to publish their books in hardcover format, ebook and audio-format (Welly, 2011). That move may seem contradictory with Amazon's booming digital publishing business, but "ultimately, the goal is to connect the customer with exactly what he or she is looking for – no matter what medium that product is sold in" (Welly, 2011, p. 11).

It is also worth to mention that both companies possess their own news outlets. Bought from the Graham family in 2013 for \$250 million, Jeff Bezos has the ambition to make The Washington Post "the new paper of record" (Nazaryan, 2016, p. 30). It was reported that since Amazon's acquisition, the online audience of The Post grew at a 30% year-over-year rate (Benner and Wingfield, 2016). As for Alibaba, it runs the news and commentary website Alizila (www.alizila.com), which focuses on news about Alibaba Group and e-commerce in China. Its mission, which has primarily the intention to inform rather than promote, is "to foster the international growth of e-commerce, and to support the growth of Internet-based small businesses everywhere" (Alizila, n.d.). In addition, Alibaba's acquisition of the English-language Hong Kong-based newspaper The South China Morning Post was finalized in April 2016 (Alizila, 2016a). Jack Ma's vision is to make the newspaper a global and unbiased media agency by drawing on Alibaba's resources, data and the support of its ecosystem (Chung-yan, 2016).

¹⁶ <http://bit.ly/2aXssQz>

4.2.10 FinTech

Ant Financial Services Group – known as Alibaba’s former online payment business Alipay – spun off from Alibaba in 2014 before its IPO and has become today China’s most valuable financial technology company (Wu, 2016). Even though identified as separate entities, Ant Financial Services Group is very much part of Alibaba Group, and they are affiliated in more than one way. Ant Financial’s services are grouped in several blocks:

- Payment: Alipay
- Wealth management: Yu’e Bao
- Financing solutions for businesses and individuals: Ant Check Later (short-term lending for individuals), Zhao Cai Bao (P2P lending), Antsdaq (Equity crowdfunding)
- Digital bank: MYbank
- Integrated wealth management platform: Ant Fortune

Ant Financial also provides support services such as a third-party credit reference institution (Sesame Credit) and a cloud computing service provider for financial institutions (Ant Financial Cloud).

Most of the services of Ant Financial are embedded on Alibaba’s platforms and the two companies share data on their users. Thanks to all the information Alibaba has gathered on the sellers and technology such as cloud computing and machine learning, Ant Financial’s Sesame Credit arm is able to quickly estimate the credit rating of the applicants and offer them micro-loans through Ant Financial’s Internet bank MYbank. In the words of Eric Jing, executive Chairman of MYbank, the aim of the online bank is “to give affordable loans for small and micro enterprises” because state-owned banks have been wary of this high-risk segment (Tham and Carsten, 2015). In such a way, Ant Financial does not have to face the same risks of traditional lending institutions because the loans are relatively low and they have access to the entire history of transactions of the merchants in question, including the number of products sold, the truthfulness of the credentials provided, the degree of activity of the shop, the average client satisfaction rate, the stocks available, the cash fluxes, and even the amount of their utilities bills (Liu, 2014, p. 12). Sesame Credit also offers credit rating services to third parties such as hotels, credit cards companies, P2P lending, etc. (Ant Financial, n.d.).

4.2.11 Content production and streaming service

Members of Amazon Prime have automatically access to the streaming service Prime Video, which is also available separately through monthly membership subscription (Amazon, n.d.-i). Competing against Netflix on the streaming space, Amazon also offers original content produced by Amazon Studios to its subscribers. Indeed, Amazon Prime collaborates with various high calibre creators such as Spike Lee, Jason Schwartzman and Jill Soloway, which allowed them to put forward original award-winning series and movies (Amazon, 2015b, p. 3). According to analyst estimates, Amazon was able to gain over 10 millions of new customers as a result of this move (LaPorte, 2016, p. 72). In addition, Amazon also offers a video on demand service through Amazon Video.

As for Alibaba, it has also made available to its clients a video streaming subscription program Tmall Box Office (TBO). Similarly to Amazon, the Chinese giant has also been licensing, cofinancing and developing its own feature films through its film studios Alibaba Pictures Group (LaPorte, 2016, p. 72; Shu, 2015). This move, along with the recent acquisition the Chinese online video provider Youku Tudou, has to be understood in light of Jack Ma's intentions of making Alibaba to become "the world's biggest entertainment company" (LaPorte, 2016). Furthermore, this also creates synergies with Alibaba's Tmall Box (see Section 4.2.7 for additional details on the TV box).

4.2.12 Summary and trade-off analysis

The analysis shows that Alibaba and Amazon are both offering a wide array of features and services complementary to their platform. However, Amazon's package is better integrated than the one proposed by Alibaba. Indeed, the B2C (Amazon), B2B (Amazon Business) and O2O (Amazon Home Services) businesses are running directly from the main platform Amazon.com. Furthermore, Amazon is relying on its own logistics network Fulfilment by Amazon and has managed to gain consumers' loyalty by promoting various value added services (e.g. access to exclusive streaming content produced by Amazon Studios, second-day delivery through Amazon Prime). The company has also successfully created a digital ecosystem surrounding the Kindle e-reader, which allowed it to create synergies with its publishing business and e-bookstore.

By contrast, Alibaba offers more diversity in terms of functionalities but its ecosystem is less integrated. Indeed, several independent platforms are running in parallel from different URL (see Figure 10), which may seem confusing for the users. Additionally Alibaba has

created a FinTech ecosystem under the flag of Ant Financial. This move complements its e-commerce services because users can easily make a payment online or apply for micro-loans to cover their transactions. Last but not least, Alibaba has also launched the Tmall Box, which gives customers access to a large selection of entertainment contents. All of these scattered pieces come together at the end. Calling itself an “e-commerce media ecosystem”, Alibaba is building a platform where sellers can perform brand building, customer engagement, channel expansion, product innovation, and sales conversion all in one place (Brennan, 2016).

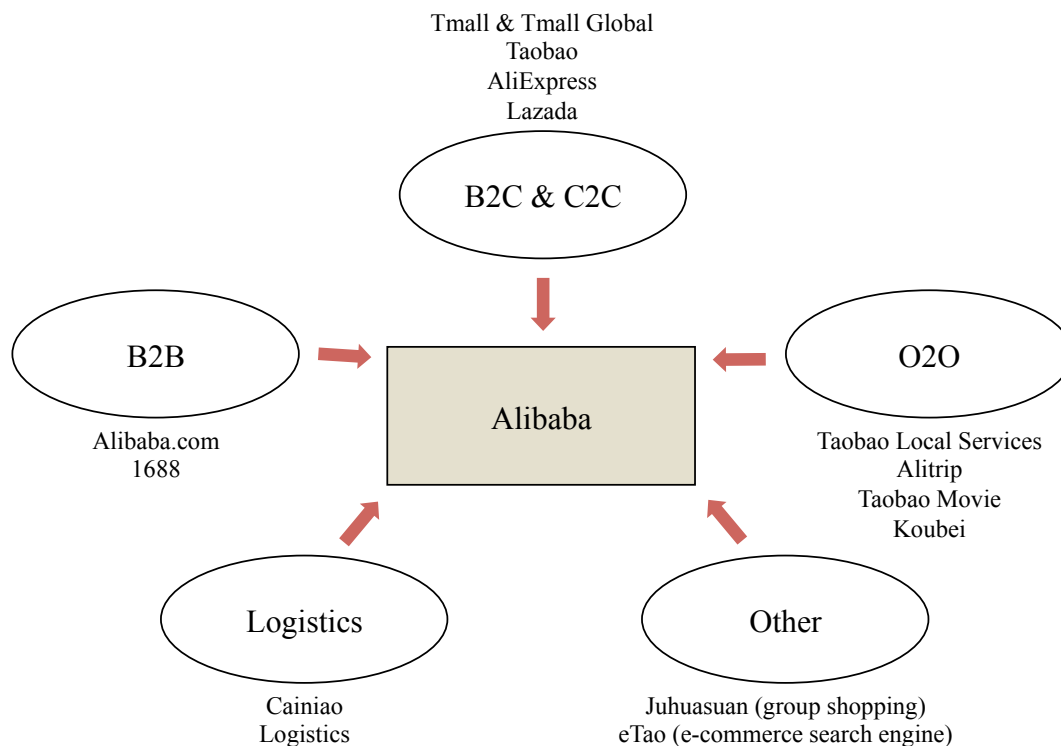


Figure 10 – Alibaba’s various independent platforms

Besides these disparities, Alibaba and Amazon have been battling on the cloud computing front and capitalizing from the accumulation of user-generated data through their advertising outlets Alimama and AMS. They are also both working on the production of their own unique content through respectively Amazon Picture Group and Amazon Studios, which brings added value to their streaming services. Overall, despite the large panel of offering that do not seem to mesh at first sight, every piece of the structure of these two giants is linked to a consistent vision and each move is meant to create more synergy in their respective ecosystem.

Finally, regarding the marketing methods, both platforms are a mix between third-party advertising and behaviour monitoring. The latter provides useful resources for different marketing practices, such as “studying satisfaction levels, establishing scoring, profiling to

target the communication of commercial offers, creating packages, etc.” (Brousseau and Penard, 2007, pp. 95-96). Indeed, buyers are able to browse these platforms for free mostly, therefore implying the existence of “pollution” costs.

4.3 Knowledge management

4.3.1 Transaction

Product reviews

User reviews on e-commerce platforms really bring value for potential customers because they can get honest and trustworthy opinions on a product that they are not familiar with. Amazon has been actively encouraging users to post reviews. For instance, Amazon started the program Amazon Vine in 2007 in order to increase the number of useful reviews that are submitted on its website (D’Onfro, 2014b). The “Vine Voices” are users invited by Amazon “based on their reviewer rank, which is a reflection of the quality and helpfulness of their review as judged by other Amazon customers” (Amazon, n.d.-f). These Vine members receive free products, which they cannot resell, submitted by participating vendors in exchange of their reviews (D’Onfro, 2014b). The reviewers are invited to be as honest as possible but this kind of practice may still create a bias because it could be interpreted as a paid endorsement (Fonda, 2016, p. 65).

Product reviews are part of a particular genre “where the line between audience and author becomes blurry, as participants are able to produce, rate, and read product reviews” (Skalicky, 2013, p. 84). As a consequence, a sense of community is created because users can rate or comment other reviews on Amazon.com. In the words of Joanna Daneman, a popular Vine member, “Amazon created a community. Wherever else you might buy things online, you're not talking to anybody. On Amazon, you're yakking away to a bunch of people.” (D’Onfro, 2014b). Furthermore, users can ask questions on the product-listing page through the “Customer Questions & Answer” section (see Figure 11). This system also allows users to interact between themselves by commenting and rating the answers provided.

On Taobao and Tmall, product reviews do not have the same level of interactivity because users are only able to indicate if a review was useful. For additional enquiries, users have to contact merchants directly.

Rating system

Amazon and Alibaba both aggregate user ratings to provide an indication of the trustworthiness of the different transactional parties. Such system needs the participation of a large base of users to be able to correctly predict an accurate score. This kind of indication is even more important for platforms based in China because figures show that less than 30% of Chinese netizens believe online shopping is secure (Yu, 2013, p. 62).

Customer Questions & Answers

▲

913 votes

▼

Question: [can you get a stylist for a kindle](#)

Answer: You can technically get a stylist, but shampoo will probably ruin the electronics, the hair dryer will melt the plastic, and any clothes on it will still make it look square.
By Dmitry Kudriavtsev on February 5, 2016
⌵ [See more answers \(17\)](#)

▲

48 votes

▼

Question: [Does this device support over drive for library e books?](#)

Answer: It does! I downloaded and read two books in the first week :)
By Christine Frey on November 24, 2015
⌵ [See more answers \(14\)](#)

▲

27 votes

▼

Question: [For programming books, do code listings display nicely?](#)

Answer: From what I have seen so far it really depends on how the listing is presented. For instance, long lines will wrap on the display but there is always switching to Landscape mode and/or changing the font size. I would say it takes some getting used. I have been doing software for a long time and sometimes you just can't... [see more](#)
By Dan McD on October 29, 2015
⌵ [See more answers \(7\)](#)

▲

16 votes

▼

Question: [Can i tranfer my books from my old kindle](#)

Answer: Transfer from iPad to kindle
By Richard L. Nachman on March 10, 2016
⌵ [See more answers \(52\)](#)

[See more answered questions \(996\)](#)

Figure 11 – Customer Questions & Answers section¹⁷

4.3.2 Assembling

FAQ and problem solving

Regarding after sales services, Amazon has created a “Help Community”¹⁸ which consists of a forum where users are free to ask questions and interact with each other. This service is helpful for buyers looking for advice regarding the different stages of the purchase. In addition, Amazon has set up official Amazon moderators who can redirect users to the adequate venue depending on the problems that were reported.

Alibaba offers a similar platform for its members – sellers and buyers alike – in the form of the Taobao Service Centre. The latter is broken down into two subsections: the general

¹⁷<http://amzn.to/2aZWXHg>

¹⁸<http://amzn.to/2aZW41B>

section¹⁹ that is destined to all users and the sellers-centred section²⁰. Both sections display the frequently asked questions, frequently encountered problems, and inform users on the key steps of the transaction, providing also tools and tutorials aimed at making their experience smoother.

Online communities

According to Zhou (2011), an online community is a platform for people sharing common interests to discuss topics, exchange ideas and seek support (p. 68). In this sense, it is an effective tool for motivating users to share knowledge. Through a study of Taobao, Zhou (2011) found out that both social identity and group norm are important factors that influence significantly user behaviour (p. 76).

Alibaba encourages information sharing and collaboration among users by putting forward various forums and fostering a sense of identity on its diverse e-commerce platforms. For instance, sellers have been initiating unofficial tribes and groups, such as business alliances, having as main purpose to create an area for mutual assistance, partnerships and knowledge sharing (Hu et al., 2009). Alibaba also finances supporting events and platforms to further encourage the development of such communities. It has also set up a bulletin board system (BBS)²¹ which gives a venue for users (sellers and buyers alike) to share their experience, exchange knowledge, etc. Additionally, the company also offers various tutorials, news on promotional events and dedicated subgroups for various industries.

Amazon also has several platforms for users to interact with each other. For instance, customers are able to chat about the problems encountered during or after a transaction on Amazon Daily forum²². Other community forums are also available for discussing various themes ranging from history to TV series. These may not have much to do with e-commerce but they help foster a sense of community among users through internalization of group norms. On the other hand, sellers have a dedicated area in Amazon Seller Forums²³ where to discuss best practices, common issues, and find help, especially as a beginner.

¹⁹ <http://bit.ly/2aV5Ccq>

²⁰ <http://bit.ly/2asEJbL>

²¹ <http://bit.ly/2b098Tj>

²² <http://amzn.to/2aOVe4I>

²³ <http://amzn.to/1iKyGQM>

Added value services

Taobao offers “Data magic cube” (数据魔方), a service that gives sellers access to a variety of information regarding transactions (e.g. transaction time, product price, number of sales) that can be matched with user data (e.g. age, sex, location, personal characteristics, and even hobbies) (Ministry of Commerce of the People’s Republic of China, 2014). Thanks to all of this data and under the condition of consumer privacy protection, “Data magic cube” is able to provide a serie of data analysis services, including analysis on industries, brands, markets, products, and consumer behaviour. Furthermore, it provides tools and real-time operational data (e.g. the real-time transaction situation of the store or the industry) that allow sellers to manage production and storage more efficiently and elaborate bespoke marketing strategies (Ministry of Commerce of the People’s Republic of China, 2014).

Amazon also provides sellers with valuable data, such as the seller rating measure, which is an aggregation of response rate, shipping time, number of cancellations and credit card chargebacks etc. (Amazon, n.d.-j). This allows sellers to know exactly which areas are to be improved specifically. Other performance metrics tools can be found on the Account Health page (e.g. customer metrics scorecard, customer service dissatisfaction rate, etc.).

Alibaba and Amazon both leverage real-time bidding (RTB) technology in the context of their advertising services, namely Alimama and AMS. By assimilating information from the transactional platform on the characteristics of the buyer and the starting website, the system is able to quickly compute which category of ad to display (Ministry of Commerce of the People’s Republic of China, 2014). The merchant who bids the highest price will have his ad brought to the buyer.

Finally, as already explained previously, Alibaba is able to provide credit rating services through Sesame Credit thanks to the information it collects on its users.

4.3.3 Cognition

Knowledge aggregation and distribution

Alibaba has under its flag an e-commerce learning and formation centre created for accumulating and sharing the resources acquired from Alibaba Group itself and the e-commerce field in general (Taobao University, n.d.). Since its rebranding in 2013, Taobao University has already taught 5,000,000 students with the help of 1,500 teachers. Taobao University educates all level of merchants through online and face-to-face classes, and awards

them a certificate at the end of the curriculum. Furthermore, Taobao University also caters to rural areas. For example, it gives trainings to the Taobao Villages²⁴, by sending professors and technical experts in those remote areas and providing online classes to rural sellers (HiShop, 2015).

Innovation and user-created content

The introduction of Kindle Direct Publishing allowed thousands of aspiring authors, who might never have had the opportunity otherwise, to self-publish their work (Clee, 2013, p. 49). Amazon Studios also has an open-door submission policy and accepts contributions from creators of all experience level (Amazon Studios, n.d.). Through these initiatives, Amazon is actively encouraging the participation of its community in the content creation process.

4.3.4 Summary and trade-off analysis

Transaction	Assembling	Cognition
• Product reviews • Rating system	• FAQ and problem solving • Online communities • Added value services	• Knowledge acquisition and distribution • Innovation and user-created content

Figure 12 – Knowledge management mechanisms put in place by Alibaba and Amazon

In this Section, the focus was put on the diverse mechanisms Alibaba and Amazon have implemented on their platforms to engage customers and derive value from their implications (see Figure 12). Broadly speaking, the mechanisms were quite similar (e.g. product reviews, reputation system, FAQ, etc.) regarding the transaction and assembling dimensions. These did not differ much from what e-commerce platforms generally offer either. However, in the cognition part, the two technology giants have launched valuable initiatives. Alibaba is mainly working toward educating and providing entrepreneurial opportunities to people based all throughout China thanks to Taobao University. As for Amazon, it encourages creative-minded users to contribute to the content that is offered on its video and e-book platforms. Of course, these initiatives are also beneficial for Alibaba and Amazon themselves because more

²⁴ Having emerged in 2009, the Taobao Villages have been defined by Alibaba as “a cluster of rural e-tailers within an administrative village where: (1) residents got started in e-commerce spontaneously primarily with the use of Taobao marketplace; (2) total annual e-commerce transaction volume is at least RMB10 million (\$1,6 million); (3) at least 10% of village households actively engage in e-commerce or at least 100 active online shops have been opened by villages” (Alizila, 2016b).

users would populate their platforms, creating positive network effects and bringing higher quality content.

Generally, both platforms are considering the resources generated by users as “open-source”, the only exception being the content that users are self-publishing with Amazon and what is submitted to Amazon Studios. Indeed, in these cases, the creative users have intellectual property rights and are able to receive royalties. In most of the venues (forums, BBS, product review sections, etc.), the content is mainly self-moderated by other participants. However, Alibaba and Amazon have also some official moderators. In this way, Alibaba and Amazon are compromising on the costs that would be incurred in a pure centralized platform or a pure decentralized platform.

Conclusion

The literature review showed that the business model, albeit a trending concept, is still lacking a widely accepted formalization on key aspects, including among others the definition, components and classifications. Having appeared first during the dot.com era, it has grown from being purely a digital notion to a more general topic. This paper has therefore attempted to incorporate these two facets in the analysis by choosing the tridimensional framework of Brousseau and Penard (2007) as a comparison tool. Indeed, the matching dimension is key for understanding the role of Amazon and Alibaba as online intermediaries; the assembling dimension brings to light the vast ecosystem the two companies have built; and the knowledge management dimension draws out how the data and information generated by the users are leveraged to create value for the various stakeholders.

Alibaba and Amazon were chosen as comparison targets because they have been frequently contrasted these past years. Both Alibaba and Amazon are indeed known for their position of e-commerce leader and have expanded tremendously since their early years back in the nineties. By creating a huge panel of businesses around their e-commerce block, they have achieved to become deeply anchored in the lifestyle of e-shoppers and the everyday life of merchants. More precisely, the consumer business divisions of Alibaba (Taobao and Tmall) have been studied in order to be able to contrast with Amazon, which is first and foremost a B2C platform. As a consequence, comparing the business model of these two technology giants allowed us to have a broader overview of all the mechanisms they have instituted to create value for their users by reducing the transaction costs (matching), the wide collection of businesses they have under their umbrella (assembling), and the procedures they have implemented to transform user-generated content and data into value for all parties (knowledge management).

The analysis of the transaction costs had to be considered in light of the impacts of the Internet and ICT. Indeed, thanks to these new channels, information could be exchanged in a timelier manner but, on the other hand, new externalities emerged, such as increased complexity. This implies that the analysis had to weight the positive impacts against the negative ones. On the whole, Amazon and Alibaba were able to reduce the various transaction costs incurred to buyers. First, the search costs were lowered through various tools incorporated in their platform (i.e. product descriptions and recommendations, listing

mechanism, and filtering options). Second, the negotiation costs were partly taken in charge by the platforms, by investing in tools for facilitating the negotiation and checkout process, and by exerting a strong pressure on price. Third, both companies have also greatly improved the risk associated with online shopping by providing adequate reputation management, payment and tracking services. However, the tendency to act opportunistically is an issue that concerns Alibaba and Amazon. This results in part from their rather competitive intermediation market structure (as opposed to a monopoly one), which limits the control they have on the quality of the goods being exchanged. Furthermore, compared to Alibaba, Amazon is closer to a commercial intermediary, as it has developed infrastructure and services to support its activity efficiently.

Indeed, Amazon has embraced a more hands-on approach, setting up its own logistic network and selling private label goods. By adopting a model that is closer to the one of a traditional retailer, Amazon has maintained a cooptation-based relationship with the merchants selling on its platform. In comparison, Alibaba has taken the role of intermediary regarding activities that are directly linked to e-commerce. Through the various platforms it has created, a variety of players (merchants, courier services, etc.) are given the opportunity to sell their products and services. This move is consistent with the main motive of Jack Ma, who wished to empower Chinese small businesses. Besides the area of e-commerce, both companies have also pushed the boundaries and launched activities that are not directly related to their core business. A great example is their venture into the fields of cloud computing and data analytics. This proved to be successful for Amazon, whose profit emanate largely from AWS. Alibaba, on the other hand, has become a dominant player in the FinTech space through its financial service provider arm. All the different services and functions have the benefit to complement each other in one way or another. As a result of these differing models, Alibaba offers a wider variety of functions but Amazon's offering is better integrated, therefore able to guarantee higher quality in terms of goods and services. However, as the platforms are accessible for free, buyers surfing on Alibaba and Amazon have to bear "pollution" costs in the form of third-party advertising and behaviour tracking.

Finally, in terms of knowledge management, both companies were able to transform the content generated by users into valuable data for their peers but also for the platforms themselves. Indeed, aggregated information and product reviews can help customers making the right decisions and solve frequently encountered problems. Sellers also benefit from experiences of their peers and from the resources accumulated by the platforms in the form of

key metrics aimed at helping them improve their performances. Moreover, the platforms are able to benefit from this by monetizing the value added services they offer. Besides, the two companies have introduced some interesting initiatives. In line with its strategy to empower entrepreneurial minds throughout the country, Alibaba has launched the Taobao University as a mean to transfer the knowledge it has aggregated. Amazon, on the other hand, is encouraging users to generate content for Amazon Studios and Amazon Publishing. Ultimately, these initiatives are bringing value to the users and the platforms themselves. In terms of trade-offs, Alibaba and Amazon are mostly “open source” (the exception being the situation where the content is published or produced by Amazon) and they are delegating the moderation of the information being generated on their various venues the users themselves, which results in lower opportunity and organization costs but potentially higher redundancy and search costs as suggests the theory of Brousseau and Penard (2007).

The approach taken by Alibaba and Amazon is different but they share the same ultimate goal is to be able to keep growing and delivering value to the various stakeholders. Their respective business models have also shown to be quite balanced regarding the three dimensions presented. Comparatively, Alibaba’s business model is more centred toward matching, acting as a pure intermediary for most of its platforms, while Amazon’s business model is more about assembling and integrating diverse businesses so as to be able to capture rents. As shown by the analysis, the advantage of Amazon’s business model is that it has more control over the quality of the content that are offered on its platform and benefits from higher efficiency. Indeed, it is taking care of a large part of the value chain itself. The downside is that this business model requires high investments, which may not generate satisfying returns quickly enough – a reproach that has been often addressed to Amazon by its shareholders. In contrast, Alibaba’s business model disposes of a broader selection of less integrated functionalities and higher economies of scale, and could therefore grow more rapidly due to the fact that it does not have to invest in expensive supporting infrastructures, and has presence in more than one industry. As announced by the company, next developments will take place in rural China, as the market is currently underserved but presents great opportunities. Alibaba has, nonetheless, to resolve the issue of counterfeit goods if it wishes to position itself as a solid contender internationally.

This analysis, however, presents certain limitations. Indeed, Alibaba and Amazon are companies that are constantly innovating and challenging the status quo. As a consequence of the two companies’ strong ability to reinvent their business models, the aspects presented will

be constantly evolving and may differ greatly from what was described in this paper five years from now. This brings us back to the notion that business models are – as opposed to strategy – rather short-term visualizations of a state. These two companies, which have already gone a long way since the start, will definitively keep changing themselves and their business models. Furthermore, due to the breadth of the subject and the quantity of pieces in the Alibaba and Amazon narratives, this paper does not pretend to cover each and every detail but rather to offer an overview of what exists. As a consequence, the analysis of the various dimensions could certainly be further expanded. For example, the analysis of the transaction costs could be explored from the viewpoint of the sellers as well. Similarly, the domain of knowledge management could also be deepened so as to take into account the internal knowledge management systems. Finally, the choice of the framework has also influenced to a certain extent the results found, as the framework structures and delimits the approach taken. A similarity could be drawn with taking a picture from a different angle, as the business model can be understood as a snapshot of the strategy.

Future researches could include a comparison that takes into account the environmental, political, cultural and societal factors of the two companies. In this paper, some of these aspects were quickly addressed (e.g. the preference of Chinese customers to pay in cash) but it would be interesting to assess how much these differences (in terms of infrastructures, government and market policies, etc.) have impacted the evolution of the two companies and their respective business model. The international expansion of both companies in the home market of the opponent is also something worth studying because their respective attempts have not been proven to be very successful. Therefore, exploring the factors behind this could bring to light areas of improvement in terms of business model. Finally, adopting a more dynamic perspective by deep diving into the area of business model innovation could also be part of future initiatives.

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