

HOW THE FACTORS OF THE RELATIONSHIP BETWEEN PARTIES INFLUENCE THE MULTI-SIDED MARKETPLACE SUCCESS?

Anna Célia Affonso dos Santos and Adriana Backx Noronha Viana
Faculty of Economics and Business Administration / USP, Brazil

ABSTRACT

The increase in the number of marketplaces and the expansion of its offerings generated greater competition in the market and difficulties in differentiation. While the multi-sided marketplace offers many advantages for the parties (marketplace, sellers and customers), it also incurs some risks and operational costs. The paper provides an in-depth aggregation of the results of identified primary studies about multi-sided marketplaces, after carrying out a systematic literature review, and proposes a framework showing the contributions and risks for the parties participating in the marketplace.

KEYWORDS

Marketplace, Retail, Digital Platform

1. INTRODUCTION

Multi-sided marketplaces (MSM) are digital platforms (DP) applied in the context of e-commerce that facilitate the interaction and exchange of products and services between third-party providers and end-customers (Hänninen et al., 2019). The power of MSM comes from their ability to tap into a large group of end-customers and providers (Gawer & Cusumano, 2014b). A key feature of MSM is its scalability. Furthermore, it makes use of supply and demand data, as well as merchandise, logistics, customer service and payment information to create a harmonic customer experience through the digital platform-based ecosystem (Hänninen et al., 2019). According to Ardolino et al. (2020), although MSM have been discussed in the literature, little research has dealt with the characterization of this type of business. Most studies develop analytical models focusing on a specific feature of multi-sided platforms, such as price structure, network externalities or competition, while it lacks a holistic approach to characterize the multi-sided platforms. The intent of this study is to analyze which factors in the relationship between parties at a MSM influence the business success.

HOW THE FACTORS OF THE RELATIONSHIP BETWEEN PARTIES INFLUENCE THE MULTI-SIDED MARKETPLACE SUCCESS?

A digital platform business can be defined as a two-sided market, which is an environment with supplier and consumer groups that engage in exchanges and transactions (Kim, 2018a). Two-sided platforms “earn money by bringing two groups together— typically one group with a need and another group with possible solutions” (Ritter & Lettl, 2018). Platforms represent a fundamental change in how companies relate to each other – from linear to networked business models. Platform businesses build ecosystems and induce customers to interact with each other (Rogers, 2019). According to Hagiu & Wright (2015b), marketplaces are a type of multi-sided platform (or two-sided market) where the two sides are buyers and sellers, and the interaction is the commercial trade between them. So, marketplaces are an important subclass of multi-sided platforms. As Figure 1 shows, the multi-sided marketplace acts as an intermediary that enables third-party providers to sell products directly to end-customers. In a multi-sided marketplace, the product flow often happens directly from the third-party providers to the end-customer, or the product is directly shipped from a third-party logistics center. This means that the optimization of both the product and information flow is critical to ensuring a seamless customer experience as a number of third-party partners are responsible for various stages of the service system (Hänninen et al., 2019).

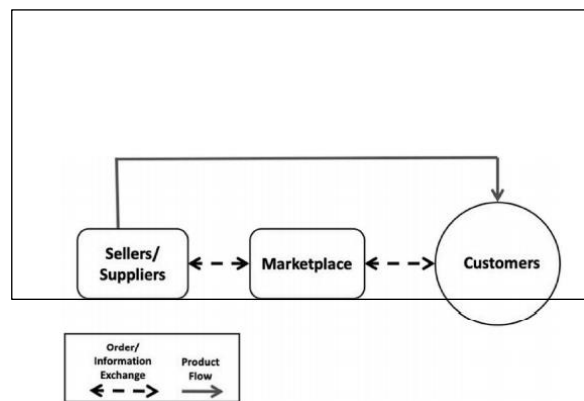


Figure 1. The marketplace Model
Source: Hänninen et al., (2019)

Marketplace’s expansion strategies are based on the external hiring of suppliers of products and services, with increased variety and diversity of offers for the customer, without the need for greater investment in inventory. The largest portfolio of products offers advantages for the marketplace like commissions on products sold in the platform, greater visitation on the site, increase of the average ticket and sale, customer loyalty and additional data about the customer’s preferences and purchase process. On the other hand, the marketplace, responsible for the final delivery quality and customer loyalty, depends on the quality of the products and services of third-party providers (Ramos, 2016).

From the seller’s point of view, the strategy of using marketplace as a sales channel generates scalability and increase in sales, using site traffic and audience diversity of the intermediary. The seller’s offers are linked to the marketplace’s consolidated brand and credibility. Other advantages for the seller include the use of the structure, tools and monitoring functionality of marketplace, low initial investment, free marketing, less investment in technology and learning with the big retailer. However, the seller’s dependence on marketplace is dangerous, considering

the high bargaining power of the latter. There is low visibility of the seller's brand, decreased profit margins with commissioning on sales and increased bureaucratic processes (Zacho, 2017).

The relationship between companies (marketplace and sellers) affects the customer experience. Among the positive factors for the customer are the greater variety of stores and items per store, the practicality of the purchase, the safety offered by the recognized brand of the marketplace, savings in shipping costs when concentrating purchases of different items in the same place. But there are negative factors arising from this business model, like the lack of support and privacy issues.

Therefore, MSM offer advantages and disadvantages for all parties involved – marketplace, sellers and customers. This study aims to better understand MSM by conducting a systematic literature review. The following research question guides our scientific inquiry: *How do the different factors of the relationship between parties in the context of platform-based multi-sided marketplace influence the business success?*

The remainder of this article is organized into four sections. The second section explains the research methods of the literature review, including the systematic process conducted in this analysis. The third section includes a bibliometric and descriptive analysis of the articles in the literature. The fourth section shows a content analysis and consolidates the main factors that affect this business model and proposes a framework consolidating these factors. Finally, the last section brings the conclusions and some limitations of the study.

2. METHODOLOGICAL PROCEDURES

This paper is based on the Systematic Literature Review Process published by Charters et al. (2009). It starts with the definition of the research question (see above), that is the guide of the entire conduct of the research. The next step was to define the strategy of search and selection of studies that should be included in the list of papers of the systematic literature review. The search thread used in the project was: “Digital platform” and the equivalent terms: marketplace or “two-sided market” or “multi-sided market” or “intermediary market”. The citation search was performed using the Aguiá Portal from the Faculty of Economics and Administration (USP) on March 2022. Aguiá Portal consolidates 313 different data bases, including for instance, Elsevier Science Direct, Scopus, Web of Science, Google Scholar. Our search returned 995 documents. In line with other relevant and recent systematic literature review studies, only peer reviewed articles were selected. We also removed duplication and overlaps, reducing the initial sample of articles to 534 documents. The process of selecting the papers was done in three phases. First, the researcher evaluated each paper for inclusion in the set of candidate papers based on title and abstract. The excluded articles did not focus on the retail segment, but mainly on transportation, hospitality, communication and advertising, health care and education. As a result, a total of 54 documents were selected. After this selection, the researcher selected only papers published on magazines with CiteScore higher than 4,0, to ensure the quality of the study. The final inclusion/exclusion decision took place when full papers were read in parallel with data extraction and quality assessment, following Kitchenham & Brereton (2013) strategy. In this phase, the excluded articles did not focus on MSM and its applicability in the retail segment. A total of 25 papers met the above-mentioned requirements and were the basis for the content analysis. Table 1 summarizes the quantity of articles selected on the search engine.

HOW THE FACTORS OF THE RELATIONSHIP BETWEEN PARTIES INFLUENCE THE MULTI-SIDED MARKETPLACE SUCCESS?

Table 1. Selection criteria for the systematic literature review

Filters applied	Quantity of articles
No filter	995
With Peer Review	558
Only articles	536
Removing Duplicates	534
After title and abstract analyses	54
Only Magazines with CitiScore > 4	35
After full article reading	25

The descriptive and content analysis included synthesizing the articles in a narrative by systematically describing, reporting, tabulating, and integrating the features and results of the studies. First, a bibliometric and descriptive analysis was used, which included yearly distribution, thematic analysis and research techniques. Next, the content analysis was fundamental to address the research question. We used a structure method to code all the selected papers. During a preliminary analysis of a sample of articles, a list of codes of categories (factors) that influence the MSM business was developed. The data interpretation consisted of making note in all the papers of these codes and others that emerged during the analysis. The qualitative data analysis software Atlas.ti 9.0 was used to organize the documents and set the codes in the texts.

3. BIBLIOMETRIC AND DESCRIPTIVE ANALYSIS

Petticrew, M. & Roberts (2006) recommend that the initial key task for data analysis in a systematic literature review involves summarizing the results of the articles, according to the study's objective. We first assessed the characteristics of our sample by performing a bibliometric and descriptive analysis. The analysis shows the growing interest in MSM and DP topics since 2018, as they are increasingly being adopted in business (see Figure 2). The research collected papers from journals in different subject areas, with a focus on management journals, as DP and MSM affect the business model of the firm with impacts on the economic and social environments. (see Figure 3).



Figure 2. Evolution of publications

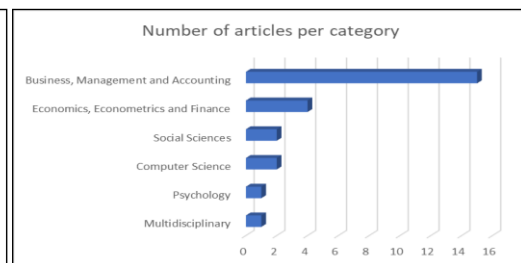


Figure 3. Categories of the journals with publications

The selected articles used different methodological approaches, with predominance on theoretical research, as shown in Figure 4. Theoretical studies try to bring further reflections on the subject relevant to reconstructing the theory and improving the practice (Lynham, 2002), which showcases the idea that knowledge of the subject is still being constructed.

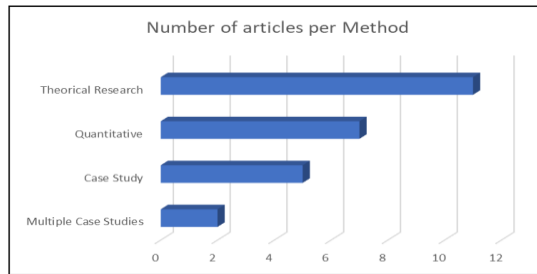


Figure 4. Methodological approaches of articles

More important than listing the journals’ subject area, is to analyze the scope of the articles, i.e., the focus to which the study is directed. There is a clear focus on the impact of DP for companies (small and medium enterprises, entrepreneurship, companies with digital transformation strategies) seeking to grow in the local or international market. Customer experience on digital platforms is also the subject of recent studies. Table 2 presents the scope of the articles.

Table 2. Scope of articles

Article scope	Authors	Quantity
Impact of DP for companies	L. Li et al. (2018); Tan et al. (2019); Nambisan et al. (2018); Song (2019); Zaki (2019); Dell’Era et al. (2021); Schmidt et al. (2021)	7
Customer experience with multi-sided platforms	Krafft et al. (2021); Kim (2018b); Saberian et al. (2020); Alalwan et al. (2019)	4
Impact of Digital Platform for international business	J. Li et al. (2019); Jean et al. (2021); Nambisan et al. (2019);Stallkamp & Schotter (2021)	4
Network effect on Digital Platforms	Vakeel et al. (2020); Wichmann et al. (2022); Mullick et al. (2021)	3
Outside Competition	McCarthy et al. (2021); Kenney et al. (2019)	2
Sellers impact on platforms	Taeuscher (2019); Penttinen et al. (2018)	2
Firms theory applied to DP	Rangaswamy et al. (2020)	1
Framework for Multi-sided platforms	Ardolino et al. (2020)	1
How platform drives innovation	Trabucchi et al. (2021)	1

In summary, the analysis of the categories suggests that the themes DP and MSM have generated interest in recent years, focusing on its impact on businesses and consumers. There are opportunities to explore the theme in qualitative and quantitative research, aiding the strategies for new companies or established ones which are applying the digital transformation process.

4. CONTENT ANALYSIS

The reading and analysis of the articles revealed many characteristics of MSM that help to understand not only how each party collaborates with the success of the business model, but also the restrictions and risks for each of them. The framework proposed in this paper consolidates all the relevant factors discovered on the study.

4.1 Contributions of the Parties

Marketplace: Marketplace offers many advantages for the sellers. **The infrastructure and usability** factor is composed of the tools made available to sellers to facilitate the sale of its products and services to the final customer (L. Li et al., 2018), like the advanced technical functionalities, especially the data analysis tools, that allow sellers to know more about their businesses and customers. The marketplace also drives the phenomenon of **intermediation**, which allows higher **traffic** for the sellers (Kenney et al., 2019; Nambisan et al., 2018; Rangaswamy et al., 2020; Rogers, 2019; Seevers et al., 2010). Intermediation happens when a platform builds such a broad customer base and becomes such a valuable interface for customers that other companies cannot afford to waste the opportunity to reach customers through this new intermediation (Rogers, 2019). A digital platform, in roughly the same way as any market, but with far greater reach and scope, can connect diverse participants, allowing them to better match the fragmented desires and needs of the participants. By lowering the cost of intermediation and making the regulatory restrictions easier on market entry, platforms facilitate interactions that might have been impossible before (Kenney et al., 2019). According to Seevers et al. (2010) service providers, including retail vendors, benefit by gaining access to new customers, leads, referrals and so on. In the DP–service provider relationship, the service provider benefits from the customer flow managed by the DP, which serves as a matchmaker. Another benefit is the **training** offered by the marketplace to sellers, assisting their digital transformation (L. Li et al., 2018). For example, there are the management-oriented services offered by Alibaba for the small and medium enterprises, like learning and training events, benchmarking opportunities, field trips and site visits, and orchestration of local companies (L. Li et al., 2018).

For the customers, marketplace offers **reputation and trust** (Jean et al., 2021; Saberian et al., 2020; Rogers, 2019; Tauscher, 2019). According to Saberian et al. (2020), customers' level of trust in a platform is a key determinant of whether they will use its platform services. Supported by the signaling theory, Jean et al. (2021) suggests that e-platform can be used as a signal that helps buyers reduce the amount of information asymmetry they have about the sellers' product quality and credibility. Tauscher (2019) also states that if consumers' uncertainty about transaction partners is high, they will pay greater attention to cues and signals about the reputation of transaction partners. **Customer experience** is believed to be the key competitive advantage for brands, above other factors such as price or product (Saberian et al., 2020; Hänninen et al., 2019; Hänninen & Smedlund, 2019; Verhoef et al., 2009). Ensuring a favorable customer experience – a frictionless transaction that enables customization is trustworthy and offers good two-way communication – is essential to sustaining customer engagement (Hänninen & Smedlund, 2019). The final benefit offered by the marketplace to the customers is the **value-added by the platform**, as exclusive attributes and benefits of the platform and free content (Rogers, 2019). According to Rangaswamy et al. (2020), one important source of DPs' value creation is that digitization reduces the transaction and

production costs of many routine activities, thereby lowering the overall costs for all users compared with the same activities executed by pipeline businesses. The time savings in execution or the reduction in frictions are valuable to platform users (Evans et al., 2013).

Sellers: Sellers provide **scalability and product diversity** for the MSM ecosystem (Dell’Era et al., 2021; Hagiú & Wright, 2015 ; Rangaswamy et al., 2020; Saberian et al., 2020; Vakeel et al., 2020). According to Saberian et al. (2020), platforms have no warehouse inventory, or as a hybrid platform such as Amazon.com, that combines both warehouse inventory and no warehouse inventory models. They also leverage the **direct network effects**, as a higher number of sellers improve knowledge spillovers among complementors (J. Li et al., 2019). Another important contribution of the sellers is that they provide relevant **seller’s data** for the marketplace regarding product demand, payment conditions and supply information (Hänninen & Smedlund, 2019; Nambisan et al., 2018).

Sellers also relate directly with customers providing **services**. To ensure end-customer satisfaction in such a dynamic marketplace, suppliers (sellers) must become responsive customer service organizations. When customers and suppliers can interact and collaborate over a digital platform, the supplier must also compete to deliver instant, intimate, frictionless, mass-customized, low-risk value on a large scale (Hänninen & Smedlund, 2019)

Customers: The **customer’s data** is a contribution that the customers give to MSM (Hänninen et al., 2019; Krafft et al., 2021; Mansell, 2015; Rangaswamy et al., 2020; Vakeel et al., 2020; Zaki, 2019). According to Ikeda & Marshall (2019), when used effectively, data enables companies to strategically perform analytics to better predict the experiential wants of their customers. As retail continues to be increasingly information technology driven, through increased customer understanding with big data analysis, and the possibilities provided by data analytics, as well as new technologies like artificial intelligence, the leading players in the future will likely be the ones with the most coherent customer experience and service system across both the online and offline domains (Hänninen et al., 2019). Zaki (2019) emphasizes that the exponential availability of data enables companies to analyze the insights and derive the right decisions in real time. According to Krafft et al. (2021), consumer data represents value to the retailer, as it can be translated into insights, and action. **Consumer crowdsending** denotes the consumer’s own contribution of products, services, and content for the MSM (Wichmann et al., 2022). Reviews influence other customers purchasing behavior. According to Alalwan et al. (2019) customers can easily rate products and brands marketed online, share their recommendations with other customers, and contribute to the collective content on social media platforms. A customer on a digital platform has a myriad of ways to become more extensively engaged –automating repeat purchasing, sharing product information with friends via interactive platform tools, recommending products through social media, accepting solicitations for deals and discounts – thus offering more efficient value co-creation between platform participants (Pullman & Gross, 2004). The **customer network effect** is another contribution from the customers to the marketplace. Gawer & Cusumano (2014) state that network effects can be very powerful, especially when they are direct between the platform and the user of the complementary innovation, such as how Facebook attracts users, friends of users, and friends of friends of users. According to Rogers (2019) the platform with more customers will attract an even greater amount in the future, which he calls the value added by the network. As customers behave less like isolated individuals and more like cohesive connected networks, all businesses should learn to exploit the power and potential of these customer networks. This means engaging, empowering, and co-creating with customers beyond the time of the first purchase. It involves leveraging the means and ways in which happy customers influence other

HOW THE FACTORS OF THE RELATIONSHIP BETWEEN PARTIES INFLUENCE THE
MULTI-SIDED MARKETPLACE SUCCESS?

customers and drive new business opportunities (Rogers, 2019).

A market that has two or more sides is vastly more financially attractive to create since it has the potential to scale and generate value in a non-linear manner. **Indirect network effects**, most common on platforms, occur when an increase in the quantity and quality of customers on one side of the platform generates increasing value for customers on the other side of the platform. Indirect network effects are not always reciprocal, but when they manifest themselves in both directions, they trigger a virtuous circle, with new customers on each side increasing attractiveness to the other side. This is what drives extremely fast growth and highly defensible market position for some platforms (Rogers, 2019).

Table 3 summarizes the contributions of the parties to the MSM, improving the MSM business model.

Table 3. Contributions of the parties to the MSM

Origin	Destiny	Factor	Author	Quantity	
Marketplace	Sellers	Infrastructure and Usability	L. Li et al. (2018)	1	
		Intermediation and Traffic	Kenney et al. (2019); Nambisan et al. (2018); Rangaswamy et al. (2020); Rogers (2019); Seevers et al. (2010)	5	
		Training	L. Li et al. (2018)	1	
	Customers	Reputation and Trust	Jean et al. (2021); Saberian et al. (2020); Rogers, (2019); Taeuscher (2019)	4	
		Customer experience	Hänninen et al. (2019); Hänninen & Smedlund (2019); Saberian et al. (2020); Verhoef et al. (2009)	4	
		Value-added by the platform	Evans et al. (2013); Rangaswamy et al. (2020); Rogers (2019)	3	
	Sellers	Marketplace Customers	Scalability and product diversity	Dell’Era et al. (2021); Hagiú & Wright (2015a); Rangaswamy et al. (2020); Saberian et al. (2020); Vakeel et al. (2020)	5
			Sellers’ Network effect	J. Li et al. (2019)	1
		Customers	Sellers’ data	Hänninen & Smedlund (2019); Nambisan et al. (2018)	2
			Service	Hänninen et al. (2019)	1
Customers	Marketplace	Customers’ data	Hänninen et al. (2019); Ikeda & Marshall (2019); Krafft et al. (2021); Mansell (2015); Rangaswamy et al. (2020); Vakeel et al. (2020); Zaki (2019)	7	
		Consumer Crowdsending	Alalwan et al. (2019); Pullman & Gross (2004); Rangaswamy et al. (2020); Rogers (2019); Wichmann et al. (2022)	5	

		Customer Network Effect	Gawer & Cusumano (2014a); Rogers (2019)	2
Sellers or Customers	Customers or Sellers	Indirect Network Effect	Gawer & Cusumano (2014a); Rogers (2019)	2

4.2 Risks for the Parties

Marketplace: Platform **governance** provides access, support, guidance, and incentives to various ecosystem participants (Tiwana, 2014). Previous research has shown that the success of a platform technology is not only a structural function of externalities, but it also depends on the platforms' learning orientation (Schilling, 2002). Platform companies learn how to better coordinate the activities of external partners. However, because of multilateral interdependence among ecosystem participants and the sheer number of actors involved, realigning partners as market conditions evolve is not easily done. A recognized challenge in platforms is how to establish governance mechanisms that appropriately bind participant behavior without constraining their innovativeness (Constantinides et al., 2018; Schilling, 2002). **Outside competition** occurs among platforms as they compete to get the users on board their platform (Ardolino et al., 2020; McCarthy et al., 2021; Penttinen et al., 2018). According to McCarthy et al. (2021), the networked nature of the web, combined with the economics of preferential attachment, increasing returns and global trade, suggest that in the long run a small number of competitive giants are likely to dominate each functional market segment. The larger the market power digital platform wields, the greater the responsibility local governments should have in monitoring and preserving market competition. Debates on legitimacy of government lobbying and antitrust policies will become more relevant in public discourse. (Ardolino et al., 2020; Kenney et al., 2019; Nambisan et al., 2018; Song, 2019). New **rules, regulation** and antitrust policies should impact the marketplace. The larger the market power digital platform wield, the more likely it is to partake in monopolistic behavior that hurts digital users and agents. For example, the platform sponsor could leverage privacy and security concerns to its own advantage to foster a monopoly and to elbow its competitors. Monopolistic behavior of platform sponsors will eventually come at the expense consumer and societal welfare; it will also stifle market competition, innovation, and entrepreneurial activities (Song, 2019). Therefore, marketplaces can lead to **social negative impacts**, which should be avoided by them.

Sellers: Sellers should be concerned about **inside competition** (Boudreau, 2012; Wichmann et al., 2022), as brands have difficulty differentiating from competitors because aggregation platforms standardize product presentation, limit the use of branding elements and encourage simple comparison on a few key features (Wichmann et al., 2022). An individual supplier's profit depends on how many other suppliers join. Until a certain number of suppliers, the equilibrium point, the marketplace offers cross-sell opportunities for the supplier. But a big competition among suppliers results in negative profits (Rogers, 2019) **Information asymmetry** between exchange parties can cause an adverse selection, which occurs when the party with better private information about the product quality selectively participates in transactions that benefit itself at the expense of the partner (Jean et al., 2021; Vakeel et al., 2020). The information asymmetry increases the bargaining power of the marketplace. The platform can raise prices for customers, lower payments to providers, overcharge other participants on other sides of the market, and restructure the terms of participation to complementors to capture an inordinate amount of the economic value generated by the ecosystem (Kenney et al., 2019), showing **the dependence** risk for the seller (Kenney et al.,

HOW THE FACTORS OF THE RELATIONSHIP BETWEEN PARTIES INFLUENCE THE
MULTI-SIDED MARKETPLACE SUCCESS?

2019; Penttinen et al., 2018; Wichmann et al., 2022; Zacho, 2017). The prices a DP charges its users on one or more sides is the primary mechanism for value appropriation, which we call **cost of affiliation** (Penttinen et al., 2018; Rangaswamy et al., 2020). The price might have different components, such as a membership fee to join the platform, a usage fee based on the number of transactions, or a commission on transactions (Rangaswamy et al., 2020). Finally, the seller must follow many **bureaucratic processes** dictated by the marketplace (Kenney et al., 2019; J. Li et al., 2019).

Customers: Considering the perspective of the customer, **lack of adequate support** can restrict their use of the MSM. Hannah & Eisenhardt (2018) single out bottlenecks as the component that most constrains the growth or performance of the ecosystem due to poor quality, poor performance, or short supply. When customers provide data to the marketplace, they can face **privacy issues** (Mansell, 2015; Evans et al., 2013). Users of a multi-sided platform play a double role insofar as they are both consumers and citizens. When digital intermediaries sit at the core of complex platform ecologies, how can policy makers ensure that the public's interest in fairness, plurality and privacy protection is upheld? According to Mansell (2015), policy makers and industry players are increasingly turning to questions of governance and policy, as the digital intermediary marketplace develops. Policy makers concerned with digital intermediaries need to consider the whole data cycle from data ownership, sharing, interoperability, competition and potential market abuse to social impacts, such as material and information inequalities. Napoli (2014) argues that it is essential to have an insight into the extent to which the changing velocity, volume and value of data supported by intermediaries are encouraging citizens to “embrace algorithmically driven decision-making tools”. Many countries are discussing their citizens' rights when using DP.

Table 4 summarizes the risks for the parties participating in the MS based on the papers selected in the study.

Table 4. Risks for the parties participating in the MSM

Party	Factor	Author	Quantity
Marketplace	Governance	Constantinides et al. (2018); Schilling (2002); Tiwana (2014)	3
	Outside Competition	Ardolino et al. (2020); McCarthy et al. (2021); Penttinen et al. (2018)	3
	Regulation and Antitrust	Ardolino et al. (2020); Kenney et al. (2019); Nambisan et al. (2018); Nambisan et al. (2019); Song (2019)	5
	Social Negative Impacts	Song (2019)	1
Sellers	Inside Competition	Boudreau (2012); Rogers (2019); Wichmann et al. (2022)	3
	Information Asymmetry	Jean et al. (2021); Vakeel et al. (2020)	2
	Dependency	Kenney et al. (2019); Penttinen et al. (2018); Wichmann et al. (2022); Zacho (2017)	4
	Cost of Affiliation	Penttinen et al. (2018); Rangaswamy et al. (2020)	2
	Bureaucracy	Kenney et al. (2019); J. Li et al. (2019)	2
Customers	Lack of Support	Hannah & Eisenhardt (2018)	1
	Privacy Protection	Mansell (2015); Evans et al. (2013)	2

4.3 The Marketplace Framework

Based on the marketplace model proposed by (Hänninen et al., 2019) (see Figure 1) and on the factors collected during the literature review, the following framework is proposed (Figure 5), highlighting how different parties contribute to the MSM ecosystem and the risks that should be addressed by each of the party.

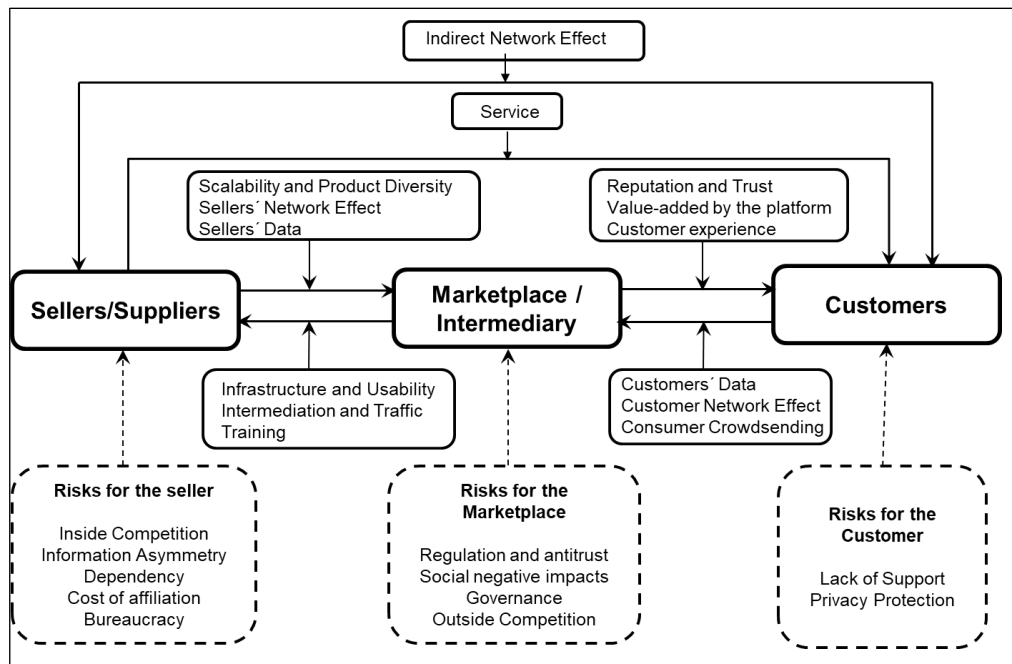


Figure 5. Framework of MSM with factors of the relationship between parties

For the sellers, marketplace provides infrastructure, traffic, and training to quickly reach a greater number of customers and increase sales. For consumers, marketplace ensures security, better shopping experience and value-added by the platform, as reduced transaction cost and time savings. Sellers provide different services for the customers, with direct interaction with them. Marketplace benefits from greater scalability and exponential increase in sales due to the phenomenon of network effect (direct and indirect), product diversity and the advantages obtained with the centralization of operations and data of customers and sellers. However, in addition to the benefits offered by the MSM model, each party must manage some risks and operational costs of the environment. Sellers should be concerned about inside competition, the marketplace bargaining power from information asymmetry, a possible dependence on the marketplace and the costs of affiliation and implementation of bureaucratic processes. Customers should be aware of information and support policies offered by more than one company. Marketplace has the operational costs of governance, in addition to the concern with external competition and the impact of possible new legislation for their business, avoiding social negative impacts.

5. CONCLUSION

The systematic review of the literature allowed the identification of several aspects relevant to the success of MSM. Platforms play an important role in the digital economy. The article contributes to academic literature by proposing a framework, which presents the contribution and risks of MSM for the various actors.

Considering the high relevance of the platform based MSM for the retail and all the innovations that this business model brings to the market, this study contributes to the academic corporate endeavors. From the academic point of view, the study proposes an evolution of the marketplace model (Hänninen et al., 2019), highlighting the relationships between the parties involved in the model. This framework can help the development of quantitative models that determine the actions that can be adopted by the various actors with greater impact for the business as a whole.

From the enterprise point of view, the study can point strategies that should improve the customer experience. The model shows not only the advantages customers are willing to have when adopting a marketplace, but also their worries and constraints. The MSM that better treat these aspects can achieve a differential position in the market.

There are, however, some relevant limitations to the study. The study is based on the systematic literature review on the topic of MSM. It is impossible to completely avoid personal bias during this process, hence the researcher may have missed some relevant papers. Another relevant limitation is how to guarantee the application of the model for MSMs of different sizes and in different stages of development, for customers in different regions and from diverse backgrounds.

REFERENCES

- Alalwan, A. A., Algharabat, R. S., Baabdullah, A. M., Rana, N. P., Raman, R., Dwivedi, R., & Aljafari, A. (2019). Examining the impact of social commerce dimensions on customers' value cocreation: The mediating effect of social trust. *Journal of Consumer Behaviour*, 18(6), 431–446. <https://doi.org/10.1002/cb.1782>
- Ardolino, M., Saccani, N., Adrodegari, F., & Perona, M. (2020). A business model framework to characterize digital multisided platforms. *Journal of Open Innovation: Technology, Market, and Complexity*, 6(1). <https://doi.org/10.3390/joitmc6010010>
- Boudreau, K. J. (2012). Let a Thousand Flowers Bloom? An Early Look at Large Numbers of Software App Developers and Patterns of Innovation. *Organization Science*, 23(5), 1409–1427. <https://doi.org/10.1287/orsc.1110.0678>
- Charters, S., Budgen, D., Turner, M., Kitchenham, B., Brereton, O. P., & Linkman, S. (2009). *Objectivity in Research: Challenges from the Evidence-Based Paradigm* (pp. 73–80). <https://doi.org/10.1109/ASWEC.2009.25>
- Constantinides, P., Henfridsson, O., & Parker, G. G. (2018). Introduction—Platforms and Infrastructures in the Digital Age. *Information Systems Research*, 29(2), 381–400. <https://doi.org/10.1287/isre.2018.0794>
- Dell'Era, C., Trabucchi, D., & Magistretti, S. (2021). Exploiting incumbents' potentialities: From linear value chains to multisided platforms. *Creativity and Innovation Management*, 30(1), 31–46. <https://doi.org/10.1111/caim.12413>

- Evans, D. S., Schmalensee, R., Alstyne, M. Van, Armstrong, M., & Chao, Y. (2013). *the Antitrust Analysis of Multi-Sided Platform Businesses*. National Bureau of Economic Research. <https://www.nber.org/papers/w18783>
- Gawer, A., & Cusumano, M. A. (2014a). Industry platforms and ecosystem innovation. *Journal of Product Innovation Management*, 31(3), 417–433. <https://doi.org/10.1111/jpim.12105>
- Gawer, A., & Cusumano, M. A. (2014b). Industry Platforms and Ecosystem Innovation. *Journal of Product Innovation Management*, 31(3), 417–433. <https://doi.org/10.1111/jpim.12105>
- Hagiu, A., & Wright, J. (2015a). Marketplace or reseller? *Management Science*, 61(1), 184–203. <https://doi.org/10.1287/mnsc.2014.2042>
- Hagiu, A., & Wright, J. (2015b). Multi-sided platforms. *International Journal of Industrial Organization*, 43, 162–174. <https://doi.org/10.1016/j.ijindorg.2015.03.003>
- Hagiu, A., & Wright, J. (2015c). Marketplace or Reseller? *Management Science*, 61(1), 184–203. <https://doi.org/10.1287/mnsc.2014.2042>
- Hannah, D. P., & Eisenhardt, K. M. (2018). How firms navigate cooperation and competition in nascent ecosystems. *Strategic Management Journal*, 39(12), 3163–3192. <https://doi.org/10.1002/smj.2750>
- Hänninen, M., Mitronen, L., & Kwan, S. K. (2019). Multi-sided marketplaces and the transformation of retail: A service systems perspective. *Journal of Retailing and Consumer Services*, 49(April), 380–388. <https://doi.org/10.1016/j.jretconser.2019.04.015>
- Hänninen, M., & Smedlund, A. (2019). On retail digital platforms suppliers have to become responsive customer service organizations. *Strategy and Leadership*, 47(1), 37–43. <https://doi.org/10.1108/SL-04-2018-0036>
- Ikeda, K., & Marshall, A. (2019). Strategies for competing in markets enabled by digital platforms. *Strategy and Leadership*, 47(1), 30–36. <https://doi.org/10.1108/SL-10-2018-0097>
- Jean, R. J. “Bryan,” Kim, D., Zhou, K. Z., & Cavusgil, S. T. (2021). E-platform use and exporting in the context of Alibaba: A signaling theory perspective. *Journal of International Business Studies*, 52(8), 1501–1528. <https://doi.org/10.1057/s41267-020-00396-w>
- Kenney, M., Rouvinen, P., Seppälä, T., & Zysman, J. (2019). Platforms and industrial change. *Industry and Innovation*, 26(8), 871–879. <https://doi.org/10.1080/13662716.2019.1602514>
- Kim, J. (2018a). Market entry strategy for a digital platform provider. *Baltic Journal of Management*, 13(3), 390–406. <https://doi.org/10.1108/BJM-07-2017-0228>
- Kim, J. (2018b). Platform adoption factors in the internet industry. *Sustainability (Switzerland)*, 10(9). <https://doi.org/10.3390/su10093185>
- Kitchenham, B., & Breerton, P. (2013). A systematic review of systematic review process research in software engineering. In *Information and Software Technology* (Vol. 55, Issue 12, pp. 2049–2075). Elsevier B.V. <https://doi.org/10.1016/j.infsof.2013.07.010>
- Krafft, M., Kumar, V., Harmeling, C., Singh, S., Zhu, T., Chen, J., Duncan, T., Fortin, W., & Rosa, E. (2021). Insight is power: Understanding the terms of the consumer-firm data exchange. *Journal of Retailing*, 97(1), 133–149. <https://doi.org/10.1016/j.jretai.2020.11.001>
- Li, J., Chen, L., Yi, J., Mao, J., & Liao, J. (2019). Ecosystem-specific advantages in international digital commerce. *Journal of International Business Studies*, 50(9), 1448–1463. <https://doi.org/10.1057/s41267-019-00263-3>
- Li, L., Su, F., Zhang, W., & Mao, J. Y. (2018). Digital transformation by SME entrepreneurs: A capability perspective. *Information Systems Journal*, 28(6), 1129–1157. <https://doi.org/10.1111/isj.12153>
- Lynham, S. a. (2002). The general Method of Theory-Building Research in Applied Disciplines. *Advances in Developing Human Resources*, 4(3), 221–241.
- Mansell, R. (2015). The public’s interest in intermediaries. *Info*, 17(6), 8–18. <https://doi.org/10.1108/info-05-2015-0035>

HOW THE FACTORS OF THE RELATIONSHIP BETWEEN PARTIES INFLUENCE THE
MULTI-SIDED MARKETPLACE SUCCESS?

- McCarthy, P. X., Gong, X., Eghbal, S., Falster, D. S., & Rizoiu, M. A. (2021). Evolution of diversity and dominance of companies in online activity. *PLoS ONE*, *16*(4 April), 1–19. <https://doi.org/10.1371/journal.pone.0249993>
- Mullick, S., Raassens, N., Haans, H., & Nijssen, E. J. (2021). Reducing food waste through digital platforms: A quantification of cross-side network effects. *Industrial Marketing Management*, *93*(May 2019), 533–544. <https://doi.org/10.1016/j.indmarman.2020.09.021>
- Nambisan, S., Siegel, D., & Kenney, M. (2018). On open innovation, platforms, and entrepreneurship. *Strategic Entrepreneurship Journal*, *12*(3), 354–368. <https://doi.org/10.1002/sej.1300>
- Nambisan, S., Zahra, S. A., & Luo, Y. (2019). Global platforms and ecosystems: Implications for international business theories. *Journal of International Business Studies*, *50*(9), 1464–1486. <https://doi.org/10.1057/s41267-019-00262-4>
- Napoli, P. M. (2014). Automated media: An institutional theory perspective on algorithmic media production and consumption. *Communication Theory*, *24*(3), 340–360. <https://doi.org/10.1111/comt.12039>
- Penttinen, E., Halme, M., Lyytinen, K., & Myllynen, N. (2018). What Influences Choice of Business-to-Business Connectivity Platforms? *International Journal of Electronic Commerce*, *22*(4), 479–509. <https://doi.org/10.1080/10864415.2018.1485083>
- Petticrew, M.; Roberts, H. (2006). *Systematic Reviews in the Social Sciences: A Practical Guide*. Blackweel, Oxford.
- Pullman, M. E., & Gross, M. A. (2004). Ability of experience design elements to elicit emotions and loyalty behaviors. *Decision Sciences*, *35*(3), 551–578. <https://doi.org/10.1111/j.0011-7315.2004.02611.x>
- Ramos, L. (2016). *Os benefícios e riscos de um marketplace*. <https://www.ecommercebrasil.com.br/artigos/os-beneficios-e-riscos-de-um-marketplace/>
- Rangaswamy, A., Moch, N., Felten, C., van Bruggen, G., Wieringa, J. E., & Wirtz, J. (2020). The Role of Marketing in Digital Business Platforms. *Journal of Interactive Marketing*, *51*, 72–90. <https://doi.org/10.1016/j.intmar.2020.04.006>
- Ritter, T., & Lettl, C. (2018). The wider implications of business-model research. *Long Range Planning*, *51*(1), 1–8. <https://doi.org/10.1016/j.lrp.2017.07.005>
- Rogers, D. L. (2019). *Transformação Digital - Repensando o seu negócio para a era digital* (3rd ed.). Autentica Business.
- Saberian, F., Amirshahi, M., Ebrahimi, M., & Nazemi, A. (2020). Linking digital platforms' service dimensions to customers' purchase. *The Bottom Line (New York, N.Y.)*, *33*(4), 315–335. <https://doi.org/10.1108/BL-01-2020-0001>
- Schilling, M. A. (2002). Technology Success and Failure in Winner-Take-All Markets : The Impact of Learning Orientation , Timing , and Network Externalities Author (s): Melissa A . Schilling Source : The Academy of Management Journal , Apr ., 2002 , Vol . 45 , No . 2 (Apr ., 2. *The Academy of Management Journal*, *45*(2), 387–398.
- Schmidt, A. L., Petzold, N., Lahme-Hütig, N., & Tiemann, F. (2021). Growing with others: A longitudinal study of an evolving multi-sided disruptive platform. *Creativity and Innovation Management*, *30*(1), 12–30. <https://doi.org/10.1111/caim.12401>
- SeEVERS, M. T., Skinner, S. J., & Dahlstrom, R. (2010). Performance implications of a retail purchasing network: The role of social capital. *Journal of Retailing*, *86*(4), 310–321. <https://doi.org/10.1016/j.jretai.2010.07.002>
- Song, A. (2019). The Digital Entrepreneurial Ecosystem—a critique and reconfiguration. *An Entrepreneurship Journal*, *53*(3), 569–590. <https://doi.org/10.1007/s11187-019-00232-y>
- Stallkamp, M., & Schotter, A. P. J. (2021). Platforms without borders? The international strategies of digital platform firms. *Global Strategy Journal*, *11*(1), 58–80. <https://doi.org/10.1002/gsj.1336>

- Taeuscher, K. (2019). Uncertainty kills the long tail: demand concentration in peer-to-peer marketplaces. *Electronic Markets*, 29(4), 649–660. <https://doi.org/10.1007/s12525-019-00339-w>
- Tan, F. T. C., Pan, S. L., & Zuo, M. (2019). Realising platform operational agility through information technology-enabled capabilities: A resource-interdependence perspective. *Information Systems Journal*, 29(3), 582–608. <https://doi.org/10.1111/isj.12221>
- Tiwana, A. (2014). *Platform Ecosystems: Aligning Architecture, Governance, and Strategy* (S. F. E. S. & Technology (ed.)).
- Trabucchi, D., Buganza, T., Muzellec, L., & Ronteau, S. (2021). Platform-driven innovation: Unveiling research and business opportunities. *Creativity and Innovation Management*, 30(1), 6–11. <https://doi.org/10.1111/caim.12428>
- Vakeel, K. A., Malthouse, E. C., & Yang, A. (2020). Impact of network effects on service provider performance in digital business platforms. *Journal of Service Management*, 32(4), 461–482. <https://doi.org/10.1108/JOSM-04-2020-0120>
- Verhoef, P. C., Lemon, K. N., Parasuraman, A., Roggeveen, A., Tsiros, M., & Schlesinger, L. A. (2009). Customer Experience Creation: Determinants, Dynamics and Management Strategies. *Journal of Retailing*, 85(1), 31–41. <https://doi.org/10.1016/j.jretai.2008.11.001>
- Wichmann, J. R. K., Wiegand, N., & Reinartz, W. J. (2022). The Platformization of Brands. *Journal of Marketing*, 86(1), 109–131. <https://doi.org/10.1177/00222429211054073>
- Zacho, R. (2017). O que é Marketplace - veja as vantagens e desvantagens. *E-Commerce Brasil*. <https://www.ecommercebrasil.com.br/artigos/marketplace-vantagens-e-desvantagens/>
- Zaki, M. (2019). Digital transformation: harnessing digital technologies for the next generation of services. *The Journal of Services Marketing*, 33(4), 429–435. <https://doi.org/10.1108/JSM-01-2019-0034>