

New Multi Sided Platform Operator Growth –  
Post Funding

by

Renuka Gamage

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Renuka Gamage

## ABSTRACT

Most of the literature on multi-sided platforms (MSP) is descriptive and examines the mature or declining stage of the company life cycle. This thesis seeks to increase our understanding of MSP startups during the growth stage – defined to start when external funding is secured. Nineteen MSP startups that were launched and funded from 2012 to 2017 were examined against a model that is developed to interpret the mathematical formulations advanced in the literature to explain affiliations among independent suppliers, customers, and MSP operators. The results suggest that funded MSP startups affiliate with four agents: third-parties, catalysts, affiliates, and sides-on-demand to strengthen their affiliations with independent suppliers and customers. The results add knowledge to the theory of new firm growth and are relevant to founders and top management teams of MSP startups because affiliations with agents may increase their likelihood of attracting resources to grow and affect MSP startups outcomes.

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## 1. INTRODUCTION

### 1.1 Research question

Growing a new startup is different from growing an existing firm. Growing a pipeline business is different from growing a multi sided platform (MSP) business. Pipeline businesses contract with or purchase from suppliers, or create goods/services and sell to customers. MSPs enable direct interactions between independent suppliers and customers where both sides are affiliated with the platform. Provided most of the literature on MSPs focus on later stage of a company life cycle, much less is known about how to grow a new MSP startup. Growth stage is defined to start when external funding is secured and how a startup that operates as a MSP grows after it receives external funds (e.g., seed, series A, convertible, or debt financing) needs to be understood. The research question addressed in this thesis is: how does a startup that operates as an MSP increase its revenue during the post-funding growth stage. The answer to the research question will contribute to the theory and practice related to new MSPs.

### 1.2 What is known about startups that operate as MSPs?

The extant literature on MSPs examine the mature stage of the company life cycle than on startups designed to operate as MSPs from inception (Hagiu, 2007; 2014). The literature focuses on how later-stage MSP companies attract and retain customers, price, and govern (Evans, 2009), as well as use information systems (Tan et al., 2015). How early stage MSP companies grow revenue, value and importance

is not well understood. Hagi and Wright (2015b) suggest early-stage startups may function in vertically integrated (VI) mode first before transitioning to MSP mode due to their inability to establish a market presence. Airbnb, Etsy, and Uber concentrated on getting the service side of the equation first, and customer side second (HBS case, 2016) and worked hard to match early customers with early suppliers to identify what made them resonate most with the sides. It is not well understood the logic of growing a MSP startup during growth stage.

### 1.3 What is known about MSPs?

Noteworthy progress in understanding how MSPs work has been made in terms of explaining how the economics of MSPs differ from the economics of the more traditional modes of operation such as supplier, input supplier, and reseller (Eisenmann et al., 2006; Hagi, 2007; 2014; Hagi and Wright, 2015b; 2015c; Evans and Schmalensee, 2016). The MSP literature identifies strategies in building critical mass, establishing high switching costs, governance, right pricing, avoiding envelopment (the threat of becoming obsolete due to moving into another market combining its functionality to form a multi-platform bundle), security concerns, and positioning of stakeholders. Hagi and Wright (2015a; 2015b; 2015c) explain the trade-offs between operating as an MSP versus operating a business in traditional forms, and the allocation of control rights referring to the choice that an existing organization would make in the transition to a MSP mode. Evans and Schmalensee (2016) argue that one sided theory involving one type of customer does not apply

to Multi sided platforms. MSPs are constructed differently, the sides and their ties can be arranged in several configurations (Staykova and Damsgaard, 2015), and can act as a foundation to develop additional complementary products, services, and technologies (Gawer, 2009).

#### 1.4 Role of funding

Funding is a major constituent of the growth of a startup. Funded startup teams find market access and credibility, and reveal opportunities to accelerate. There is a high probability that a startup may not be able to secure steady stream of revenue but decline in capital during the initial growth stage unless it receives funding. Entering growth stage, startups encounter challenges and may not generate enough funds to sustain its operations. Therefore, growth stage is defined to start when external funding is secured. Seed funding, series A, B, C funding refers to the purpose of raising capital and relates to different types of investors. Other types of funding may include convertible note and debt financing. Startups have to show their potential to raise the initial capital, and they need to have accumulated plenty of proof to raise more funding to secure subsequent funding rounds during growth stage. Therefore, how MSP startups grow after they receive external funding need to be understood.

### 1.5 Objective

The objective of this research is to examine the agents and their affiliations that are related to growing new MSP operators during the post-funding stage.

### 1.6 Deliverables

The deliverables of this research project include:

- (i) A model that explains the logic of an MSP
- (ii) A set of propositions anchored around the model
- (iii) Findings from examining data on startups that operate as MSPs during their growth stage
- (iv) A refined model that incorporates data on startups to explain the logic of an MSP
- (v) A set of new propositions anchored around the refined model

### 1.7 Contribution and relevance

This research contributes to theory as well as practice. It fills a knowledge gap by improving our understanding of MSP startups during growth stage. It makes logic explicit and add to literature. Firstly, this research interprets and advance extant literature to explain the affiliations among independent suppliers, customers, and MSP operator and provides a set of propositions; secondly, the research findings suggest four agents and their affiliations with MSP operator that strengthen the direct interaction between independent suppliers and customers contributing to

the growth of an MSP startup, and thirdly, this research develops a model that explains these affiliations and provides a set of propositions developed around the new model. These theoretical contributions also stimulate the potential for future research. To develop testable hypotheses from the propositions anchored around the MSP logic, to suggest a taxonomy of MSPs based on MSP operator affiliations, or to clarify the funding-growth relationship would be such opportunities.

As contributions to practice, this research provides insights that support new MSP operators' decision making. The results of examining MSP startups that are funded suggest four agents and affiliations that strengthen the affiliations among independent suppliers, customers, and MSP operators and affect the interactions between independent suppliers and customers. The results emphasize the need for entrepreneurs to have developed capabilities to affiliate with different new agents. It is important for entrepreneurs to build capabilities and leverage their network to affiliate with agents other than the sides that directly interact to exchange value.

This research is relevant to academia and researchers because of the new knowledge added to the theory of new firm growth related to MSP startups during the growth stage. The results are relevant to founders and top management teams of MSP startups because affiliations with agents may increase their likelihood of attracting external resources to grow and affect MSP startup outcomes.

## 1.8 Organization of the document

The remainder of the thesis is organized into five chapters. Chapter 2 provides a literature review. Chapter 3 describes the research method undertaken and Chapter 4 provides the results. Chapter 5 discusses the results and Chapter 6 provides the conclusions, the limitations of the research, and provide suggestions for future research.

## 2. LITERATURE REVIEW

Chapter two is organized into six sections. Section 2.1 reviews the literature based on formal mathematical formulations explaining the logic of an MSP. Section 2.2 review the literature based on empirical studies related to MSP formulation and operation, and section 2.3 reviews the literature found as descriptive essays explaining MSPs. Section 2.4 provides a description and references to databases available to find data on MSP companies. Section 2.5 provides lessons learned, and section 2.6 summarises and concludes the literature review.

### 2.1 MSP logic explained based on formal mathematical formulations

The purpose of reviewing the literature on MSP logic based on formal mathematical formulations was to understand how MSPs work in relation to economic aspects of trade and exchange, a seller-buyer relationship. Formal mathematical modeling tried to explain given transactions in terms of traditional economics to find out what variations or similarities observed in an economic model of an MSP.

Table 2.1 provides studies that tried to explain with mathematical formulations, the trade, and exchange that happens in an MSP economic model. The aspects that economists tried to explain, the authors' standpoint and the references are listed in table 2.1.

Table 2. 1 The aspects of an MSP logic that were attempted to explain mathematically

Aspects	Standpoint and references
Choice of the intermediary	<ul style="list-style-type: none"> <li>• A choice between functioning as a marketplace (MSP) or as a reseller, to optimally position themselves between the two modes with the best product/service decision in either of them (Hagiu and Wright, 2015a, p.184,185)</li> <li>• Trade-offs that exist when choosing to operate as a marketplace (MSP) or reseller, that drive them towards or away from MSP model relative to traditional alternatives – VI firm, reseller, or input supplier (Hagiu and Wright, 2015b, p.162,198)</li> <li>• A choice between an employment mode (firm controls service provision by employing professionals, sales reps, and agents), and a platform mode (agents control the provision of their services to customers) (Hagiu and Wright, 2015c, p.1)</li> </ul>
Marketplace	<ul style="list-style-type: none"> <li>• Marketplaces (MSP) enable contractual relationships between buyers and suppliers (Hagiu and Wright, 2015a.p.186; 2015b, p.163), and suppliers sell directly to buyers using the platform (Hagiu and Wright, 2015a, p.184)</li> <li>• Motivation benefits individual suppliers having residual control rights over the provision of the service to client (Hagiu and Wright, 2015a, p.184,185)</li> <li>• Marketplaces are subclasses of MSP where two sides are buyers and sellers, in an interaction of commercial trade (Hagiu and Wright, 2015a, p.185)</li> </ul>
VI mode	<ul style="list-style-type: none"> <li>• Essentially contracts with suppliers and control the sale to buyers (Hagiu and Wright, 2015a.p.186; 2015b, p.163)</li> <li>• Coordination benefits internalize unexpected consequences caused by the decisions of some professionals on another professional (Hagiu and Wright, 2015b, p.164)</li> </ul>
Reseller	<ul style="list-style-type: none"> <li>• Resellers entirely control the transaction between the buyer and the seller (Hagiu and Wright, 2015b, p.170)</li> </ul>

	<ul style="list-style-type: none"> <li>Resellers purchase from suppliers, choose how to sell, sell to buyers and extract more rent from buyers (Hagiu and Wright, 2015a, p.184,195)</li> </ul>
MSP	<ul style="list-style-type: none"> <li>MSPs get two or more sides on board and enable direct transactions between them (Hagiu and Wright, 2015a, p.185; 2015b, p.162)</li> <li>The two key aspects that make MSPs special are: (i) they enable direct interactions between two or more distinct sides, and (ii) each side is affiliated with the platform (Hagiu and Wright, 2015b, p.163)</li> <li>Attracts a larger number of buyers and expects a larger net surplus (Hagiu and Wright, 2015a, p.195)</li> </ul>
Market intermediation: merchant mode vs. two-sided platform mode	<ul style="list-style-type: none"> <li>Trade-off exists between proprietary platforms and open platforms (Hagiu, 2004; 2006)</li> <li>Proprietary platforms internalize the consequences of indirect network effects and direct competitive effects, but open platforms and platform competition prevent internalizing both effects (Hagiu, 2006, p.28).</li> <li>Two polar strategies: “merchant” mode – buy from sellers and sell to buyers; “two-sided platform” mode – enable affiliated sellers to sell directly to affiliated buyers (Hagiu, 2007)</li> <li>Depending on the extent of control over buyer-seller interaction left to sellers, there exists a continuum of intermediary types between a pure merchant and pure two-sided platform (Hagiu, 2007, p.118)</li> <li>The buyout bid is important to sellers under pure merchant mode, number of consumers to trade with is important to sellers under pure platform mode (Hagiu, 2007, p.120)</li> <li>Indirect network effects (buyers - sellers), asymmetric information (sellers – intermediary), investment incentives, and product complementarities (or substitutability) affect the trade-off between merchant mode and the two-sided platform mode (Hagiu, 2007, p.129)</li> </ul>
Direct Interaction	<ul style="list-style-type: none"> <li>The two or more distinct sides retain control over the key terms of the interaction, as opposed to the intermediary taking control of those (Hagiu and Wright, 2015b, p.163)</li> </ul>

	<ul style="list-style-type: none"> <li>• Key terms could be either pricing, bundling, marketing and delivery of goods/services traded, the nature and quality of services offered, or the terms and conditions. (Hagiu and Wright, 2015b, p.163,164)</li> </ul>
Affiliation	<ul style="list-style-type: none"> <li>• Platform-specific investments are necessary to have a direct interaction between sides and distinguish MSPs from input suppliers (Hagiu and Wright, 2015b, p.164).</li> <li>• Users of each side make platform-specific investments in the form of a fixed access fee, expenditure of resources, or an opportunity cost (Hagiu and Wright, 2015b, p.163)</li> </ul>
Non-contractible or transferable decision	<ul style="list-style-type: none"> <li>• Choice of the mode is a decision between control rights over a non-contractible decision (Hagiu and Wright, 2015b, p.164)</li> <li>• The choice of mode is determined by the need to balance two-sided moral hazard problem arising from the investments that only the agents can make, and investments that only the firm can make, and minimize distortions in decisions that either party could control (Hagiu and Wright 2015c, p.6)</li> <li>• Three types of non-contractible decisions: (i) a transferable decision that is chosen by the firm or the agent, (ii) a costly on-going investment that is always chosen by the firm, and (iii) a costly on-going effort that is always chosen by the agent (Hagiu and Wright 2015c, p.6).</li> </ul>
product/service	<ul style="list-style-type: none"> <li>• Individual suppliers must have a significant information advantage about the best way to market the products and services (Hagiu and Wright, 2015a, p.184,198)</li> <li>• When products and services are substitutes, some suppliers set prices too low putting other suppliers at risk, but when services are complements, suppliers can set prices higher thus mitigate the risk. MSPs benefits from selecting products and services complements (Hagiu and Wright, 2015c, p.3)</li> <li>• Long-tail products to be offered when the marketplace (MSP) mode has a marginal cost disadvantage (Hagiu and Wright, 2015a, p.198; 2015b, p.170). Marketplaces handle a broad range of unpopular products, that has lower marginal cost of handling and stays long to sell (Hagiu and Wright, 2015a, p.196; Hagiu and Wright, 2015b, p.170))</li> </ul>

	<ul style="list-style-type: none"> <li>• Products from late-stage ventures benefit MSPs (Hagiu and Wright, 2015a, p.198)</li> <li>• Professional services which cannot be purchased or resold (Hagiu and Wright, 2015b, p.164), and contexts where creativity and human effort are needed (Hagiu and Wright, 2015c, p.170) are opportunities for MSPs</li> </ul>
Marketing activities	<ul style="list-style-type: none"> <li>• Prices and marketing activities with limited unexpected consequences on another suppliers' effort (Hagiu and Wright, 2015a, p.198)</li> <li>• Devising variable fees, or selling some products under reseller mode help mitigate the effects due to unfavorable expectations by suppliers (Hagiu and Wright, 2015a, p.192)</li> <li>• MSPs have to be proficient in managing third-party relationships with sides (Hagiu and Wright, 2015a, p.162,171)</li> <li>• Merchant can internalize the complementarity/ substitutability between seller products (Hagiu, 2007, p.123) and platforms mitigate the problem by charging the sellers variable fees (Hagiu, 2007, p.124)</li> </ul>
Allocation of control rights	<ul style="list-style-type: none"> <li>• Allocation of control rights between professionals and the firm determines the mode and the responsibility for marketing activities that create demand for the product or service (Hagiu and Wright, 2015a, p.185,188; 2015b, p.163).</li> <li>• Due to relative information advantage professionals retain responsibility and have residual control rights for the product/service (Hagiu and Wright 2015b, p.164,170)</li> <li>• Suppliers may contract away some control rights over the goods sold to customers by specifying a price limit or the mode of transfer of goods to the customer. however, supplier-customer direct interaction remains if supplier retains the residual control rights. (Hagiu and Wright, 2015b, p.170)</li> </ul>
Generate demand	<ul style="list-style-type: none"> <li>• Having professionals managing their individual demand motivates their efforts to the highest of their expertise (Hagiu and Wright, 2015b, p.162)</li> </ul>
Customers	<ul style="list-style-type: none"> <li>• Large and more experienced buyers best deal with suppliers through MSPs because benefiting from economies of scale or</li> </ul>

	<p>verifying quality are less important to them (Hagiu and Wright, 2015b, p.172)</p> <ul style="list-style-type: none"> <li>• Buyers purchase decision will depend on the surplus they receive above the affiliation cost (Hagiu and Wright, 2015a, p.195)</li> </ul>
Cross-group network effects	<ul style="list-style-type: none"> <li>• By being affiliated with multiple sides create cross-group network effects, a key defining feature of MSPs (Hagiu and Wright, 2015b, p.164)</li> <li>• MSPs create and capture value through indirect network effects (Hagiu and Wright, 2015b, p.164)</li> <li>• Consumers' taste for variety and producer competition leads to Indirect network effects that are produced within the system (Hagiu, 2009)</li> </ul>
Chicken and egg problem	<ul style="list-style-type: none"> <li>• A supplier's profit depends on how many other suppliers join – more suppliers join if they expect others to join and if doing so gives them non-negative profits in the resulting equilibrium (Hagiu and Wright, 2015a, p.190)</li> <li>• When more products are made available, more buyers will become aware of the intermediary (through word of mouth, reputation effects, or sources of information and review) or the more likely a buyer who is informed will be to find other products of interest through the intermediary (Hagiu and Wright, 2015a, p.191; 2015b.p.165)</li> <li>• Strong supplier bargaining power leads to low participation fee and motivate suppliers to join regardless of their expectation about others to join (Hagiu and Wright, 2015a, p.195)</li> </ul>
Asymmetric information problem	<ul style="list-style-type: none"> <li>• Feedback systems can pool users' experience and mitigate the effect of imperfect or insufficient knowledge problem (Hagiu and Wright, 2015b, p.171)</li> </ul>
Hybrid mode	<ul style="list-style-type: none"> <li>• Suppliers retain residual control rights over some decisions while the intermediary holds residual control rights over some of the other, results in an intermediate business model between MSP and Reseller. A similar situation arises when a portion of the goods and services are controlled by the intermediary (Hagiu and Wright, 2015b, p.170).</li> </ul>

	<ul style="list-style-type: none"> <li>• Sell all products which intermediary has an information advantage in reseller mode, sell all products that suppliers have an information advantage in marketplace mode (2015a, p.192)</li> <li>• The intermediary and the suppliers were each assumed to have private information about the ideal choice of marketing (2015b, p.170)</li> </ul>
Platform pricing structures:	<ul style="list-style-type: none"> <li>• MSPs charge independent professionals a fixed joining fee (a rent or a membership), and potentially a variable fee (Hagiu and Wright, 2015b, p.166)</li> <li>• Three new aspects of pricing structures: consumer demand for product variety; platform competition; choice between membership fees and usage fees (Hagiu, 2009, p.1012,1013)</li> <li>• Two-sided market platforms exhibit different platform pricing structures across different industries (Hagiu, 2004)</li> <li>• When users have a stronger preference for variety, when there is uncertainty with respect to availability or a limited supply, developers (suppliers) make a larger share of profits (Hagiu, 2004, p.21,26,37)</li> <li>• The efficiency of a proprietary platform and an open platform depends on three factors: fall of total surplus due to monopoly pricing; product diversity effect; and indirect network externalities (Hagiu, 2004, p.36)</li> </ul>
Levels of information on the platform:	<ul style="list-style-type: none"> <li>• Platforms with more market power (monopoly) prefer facing informed users with responsive expectations because higher responsiveness lead to demand increases (Hagiu and Halaburda, 2014, p.3)</li> <li>• Platforms with less market power (facing competition) prefer facing less informed users with passive expectations because more information intensifies price competition (Hagiu and Halaburda, 2014, p.3)</li> </ul>

## 2.2 MSP logic as observed in empirical studies

Literature that dealt with empirical evidence to come up with suggestions about how to create and operate MSPs, tried to define and describe MSP mode

accordingly. Relating to real-world cases, authors expressed slight differences that may have been difficult to notice but important to know to understand the MSP logic. Table 2.2 shows Studies that relate empirical evidence mostly through case studies along the aspects noted, authors' standpoint and references.

Table 2.2 The aspects of an MSP logic that were explained along with empirical evidence

Aspects	Standpoint and references
MSP	<ul style="list-style-type: none"> <li>• MSPs are “technologies, products or services that create value primarily by enabling direct interactions between two or more customer or participant groups” (Hagiu, 2014, p.71)</li> <li>• “physical or virtual places where members of different groups get together”, that help parties who have something valuable to exchange find each other, get together and do a deal (Evans and Schmalensee, 2016)</li> </ul>
Strategic issues that MSPs face:	<ul style="list-style-type: none"> <li>• Adding more sides to a platform may increase positive indirect network effects, but creates a more complex business model (Evans and Schmalensee, 2016)</li> <li>• Three main obstacles: the chicken-and-egg problem inherent in launching, resistance from key potential MSP constituents, and then the complexity of running an MSP business with conflicting interests to satisfy. (Hagiu, 2014)</li> <li>• Getting the pricing structure right is critical both for getting a new MSP off the ground and for running it; platforms must balance the interdependent demands of the multiple groups of participants (Evans and Schmalensee, 2016)</li> <li>• MSP’s most important inputs being generating customers and enabling them to interact with each other, while an ordinary business focus on attracting customers and selling to them on profitable terms (Evans and Schmalensee, 2016)</li> </ul>
Importance	<ul style="list-style-type: none"> <li>• MSPs create value by reducing search costs /transaction costs or both for participants (Hagiu, 2014; Evans and Schmalensee, 2016)</li> </ul>

	<ul style="list-style-type: none"> <li>• The value to customers on one side increases with the number of participants on the other sides, which results in cross-side network effects (Hagiu, 2014; Evans and Schmalensee, 2016)</li> </ul>
Design challenge	<ul style="list-style-type: none"> <li>• If the cost of building and implementing features is less than the value created, include them (Hagiu, 2014)</li> </ul>
Price	<ul style="list-style-type: none"> <li>• Treating each side of an MSP independent of others, MSPs can charge (1) higher price to the group with less price sensitivity, (2) more to the side that stands to benefit more, (3) more to the side that extracts more value (Hagiu, 2014)</li> <li>• Price determinants in a sharing economy allow platforms charge premium prices against perceived quality signals (Wang and Nicolau, 2017, p.130)</li> </ul>
Chicken and egg problem	<ul style="list-style-type: none"> <li>• No side will join without the others, resulting a chicken and egg problem (Evans and Schmalensee, 2016; Hagiu, 2014)</li> <li>• The need to balance the interests of all sides to get them on board, and keep them on board, and get them to interact with each other groups (Evans and Schmalensee, 2016)</li> <li>• The need to satisfy different platform constituents results in possible constraints on MSP's ability to innovate (Hagiu, 2014)</li> <li>• Even though more sides lead to potentially larger cross-side network effects, larger scale and potentially diversified revenue streams, it may not be economically viable, and attracting many sides might create too much complexity and conflicts of interests between multiple sides (Hagiu, 2014)</li> </ul>
MSP strategy	<ul style="list-style-type: none"> <li>• Strategy to create an MSP would be to sell a product/service to two distinct customer segments that interact with each other outside the offering (Hagiu and Altman, 2017, p.98)</li> <li>• Who your customers are? How do you interact with them? How do they interact with one another? (Hagiu and Altman, 2017)</li> <li>• May require enforcing some degree of technological or customer experience consistency between otherwise separate products and services (Hagiu and Altman, 2017)</li> </ul>

	<ul style="list-style-type: none"> <li>• Turn competitors to complementors (Hagiu and Altman, 2017)</li> <li>• Become an MSP by creating an offering for your customers' customers that enhances the value of the product or service they buy from your customers. (Hagiu and Altman, 2017)</li> </ul>
Regulation	<ul style="list-style-type: none"> <li>• MSPs regulate third-party actions through non-price governance rules in two categories: the rules regulating access to the MSP, and the rules regulating interactions on the MSP (Hagiu and Baudreau, 2008; Hagiu, 2014)</li> <li>• Unlike normal firms, the scope of strategy for platforms is not limited to pricing, product design, and technology, but includes control over interactions which do not happen at the firm's boundaries (Hagiu and Boudreau, 2008, p.25)</li> <li>• Non-price instruments impose rules and constraints, create inducements and shaping behaviors that price instruments alone cannot establish (Hagiu and Boudreau, 2008, p.3)</li> <li>• Imposing a degree of control on platform participants impact on the value of the platform of controlling some things itself, and giving control of other things to platform participants (Evans and Schmalensee, 2016)</li> </ul>
Network effects	<ul style="list-style-type: none"> <li>• Indirect network effects influence the way an MSP build their business, design their products, run their operations, and price their offerings and this interdependency of the demands has being neglected in the teaching of economics (Evans and Schmalensee, 2016)</li> </ul>
Third-party relationships	<ul style="list-style-type: none"> <li>• Proficient management of third-party relationships attract and retain sides (Hagiu and Altman, 2017, p.96)</li> <li>• Relationship management becomes more important and MSPs better have business and marketing professionals in leadership roles (Hagiu and Altman, 2017, p.97,100)</li> <li>• Curation of third party products/services as to maintain trust and quality of interactions becomes critical (Hagiu and Altman, 2017, p.97)</li> </ul>
Critique	<ul style="list-style-type: none"> <li>• A fundamental problem with Economists' view that applying a one-sided theory involving one type of customer, into</li> </ul>

	<p>MSPs that serve two or more distinct types of customers. (Evans and Schmalensee, 2016)</p> <ul style="list-style-type: none"> <li>• The strategic implications of two-sided networks have gone largely unexplored (Evans and Schmalensee, 2016)</li> <li>• “Many entrepreneurs – and many otherwise highly successful businesses – have tried this “simple” strategy and failed. Everything they and their investors put into their MSP ventures went up in smoke” (Evans and Schmalensee, 2016)</li> <li>• MSPs, being a tough business model to get right, entrepreneurs have a tough puzzle to solve (Hagiu, 2014)</li> </ul>
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### 2.3 MSP logic as explained in descriptive essays by business writers

MSPs have become an interesting or most intriguing topic in the business world and more business writers took the opportunity to present more information to influence the business community. The purpose of reviewing the literature in the category of descriptive essays is to find out the practitioners’ perspective and understanding of the MSP as a concept and an interpretation of an MSP logic. Table 2.3 shows the aspects they brought in the articles and other publications, the authors’ standpoint and respective references.

Table 2.3 The aspects of an MSP logic that were explained in descriptive essays/publications

Aspects	Standpoint and references
MSP	<ul style="list-style-type: none"> <li>• Products/services that bring together groups of users in two-sided networks are <i>platforms</i>, that provide rules and infrastructure to facilitate the two groups’ transactions and can take many guises” (Eisenmann et al., 2006).</li> </ul>
How to get the different sides	<ul style="list-style-type: none"> <li>• Get pricing right: choose a price for each side, the “subsidy side” and the “money side”. Encourage through</li> </ul>

<p>around an MSP “on board”</p>	<p>subsidization, and encourage through privilege of gaining access to it (Eisenmann et al., 2006)</p> <ul style="list-style-type: none"> <li>• Which side should you subsidize, and for how long? (Eisenmann et al., 2006)</li> <li>• Consumers receive value by visiting the platform; get the attention, and sell that attention to businesses that aren't able to get consumers' attention: sell access! (Evans, 2016)</li> <li>• Provide free services or content to attract users' attention and charge advertisers for reaching to users (Evans, 2016)</li> <li>• Spend money to attract participants to one side of the market (Parker et al., 2016, p.21)</li> </ul>
<p>Design</p>	<ul style="list-style-type: none"> <li>• In the traditional value chain, value moves from left to right: in two-sided networks, it is both ways because of distinct group of users on each side incur costs in serving both groups and can collect revenue from each, although one side is often subsidized (Eisenmann et al., 2006)</li> <li>• Develop networks in which companies and people create value together (Parker et al., 2016, p.32,33)</li> </ul>
<p>Price</p>	<ul style="list-style-type: none"> <li>• User sensitivity to price (Eisenmann et al., 2006)</li> <li>• Prices need to balance the demands (Evans, 2016)</li> <li>• Pricing strategies: (1) Subsidize quality- and price-sensitive users, (2) Secure “marquee” users' exclusive participation in your platform (Eisenmann et al., 2006)</li> </ul>
<p>Network effects</p>	<ul style="list-style-type: none"> <li>• Network effects, increase returns to scale, margins improve as user bases grow, as opposed to the effect of diminishing returns in a traditional firm where acquiring new customers becomes harder at some point (Eisenmann et al., 2006)</li> <li>• With two-sided network effects, value grows as the platform matches demand from both sides (Eisenmann et al., 2006)</li> <li>• Platforms exhibit two types of network effects, same-side effects and cross-side effects, which may be either positive or negative (Eisenmann et al., 2006)</li> </ul>

	<ul style="list-style-type: none"> <li>• Manage all four kinds of network effects: same side (+)ve, (-)ve; and cross-side (+)ve, (-)ve network effects, and reinforce positive ones (Parker et al., 2016,p.21)</li> </ul>
Customer	<ul style="list-style-type: none"> <li>• Users are sensitive to quality (Eisenmann et al., 2006)</li> <li>• A price increase or quality decrease affecting one side affects the other as well (Evans, 2016)</li> </ul>
Products and services	<ul style="list-style-type: none"> <li>• Industries in which information is an important ingredient (Parker et al.,2016, p.3)</li> </ul>
Competitive strategies	<ul style="list-style-type: none"> <li>• Platform strategy succeeds when (i) multi-homing costs are high, (ii) network effects are positive and strong, (iii) sides don't have preference for special features (Eisenmann et al., 2006)</li> <li>• Pre-existing relationships with prospective users, reputation for past prowess, and deep pockets help win markets (Eisenmann et al., 2006)</li> <li>• Enable open, participative infrastructure for the interactions between external producers and consumers, and set governance conditions for them (Parker et al., 2016, p.5)</li> <li>• Emphasize ecosystem governance more than product optimization; persuade outside partners more than control of internal employees (Parker et al., 2016, p.12)</li> </ul>
Challenges	<ul style="list-style-type: none"> <li>• Threat of envelopment: platforms have to be vigilant, and may have to change the business model, or find support (Eisenmann et al., 2006)</li> <li>• "Managing platforms is tricky: strategies that make traditional offerings successful won't work in the two-sided markets (Eisenmann et al., 2006)</li> <li>• When the participation of a few large users is crucial for mobilizing a network, conflict over the division of value between platform providers and large users is common (Eisenmann et al., 2006)</li> </ul>
Critique	<ul style="list-style-type: none"> <li>• Failures rooted in creating strategies for two-sided networks, relying on assumptions and paradigms that apply to products <i>without</i> network effects. (Eisenmann et al., 2006)</li> </ul>

2.4 The databases where MSP company data were found

The purpose of this section is to provide information about databases that host information about companies that included MSP startups, and other useful websites where latest and most appreciated MSP startup companies could be found. Table 2.4 shows the aspects sought for and the resources that provided information related to those aspects and the respective website addresses.

Two online databases were used, namely “Crunchbase” and “Owler” to collect common data about MSP company profiles. CrunchBase data is updated in real time by a community of partners, machine learning, with the help of their data science team, and provide company information from early-stage startups to Fortune 1000 ([www.crunchbase.com](http://www.crunchbase.com)). Owler database is updated in real time from a community of business professionals and puts in information from small startups to large, global enterprises ([www.owler.com](http://www.owler.com))

Table 2.4 the aspects that were searched about and the sources of information

Aspects	Source
Founding year, and were headquartered in: Status and the industry Sector: Funding information, status, Investors information: Founder (and CEO), and the leadership team: Estimated number of employees, employee history: Acquisitions made by the company: Website address, email and phone number: Social media links: News and activities:	<a href="http://www.crunchbase.com">www.crunchbase.com</a> <a href="http://www.owler.com">www.owler.com</a>

profile snapshot: website traffic: board members and advisors:	<a href="http://www.crunchbase.com">www.crunchbase.com</a>
Estimated revenue (TTM) and revenue history: Website history snapshots and company history: Competitive companies:	<a href="http://www.owler.com">www.owler.com</a>
Provides business news with financial, media, tech, and other industry verticals, including small business news and trends according to VC investors	<a href="http://www.businessinsider.com">www.businessinsider.com</a>
Provides news, events, research, and perspective on technology innovation covering small business to enterprise, including a list of companies to watch in a respective year.	<a href="http://www.venturebeat.com">www.venturebeat.com</a>
Venture for Canada foster entrepreneurship, a nonprofit that supports recent graduates to work at Canadian startups. The list of startups provided on the website covers Canadian startups in Nova Scotia, New Brunswick, and Ontario.	<a href="http://www.ventureforcanada.com">www.ventureforcanada.com</a>
Bloomberg provides private company information including the legal name of the company, a brief profile description, contact information and the names of the key executives.	<a href="http://www.bloomberg.com">www.bloomberg.com</a>

## 2.5 The lessons learned

Intermediaries may choose which mode to operate and mitigate the trade-offs resulting from their decision to choose. While Hagiu and Wright (2015a; 2015b; 2015c) explain the decisions and the consequences of doing business in either mode and specifically what an intermediary preferably be doing to operate an MSP. By providing a specific definition of an MSP (Hagiu and Wright, 2015b, p.163), and

precisely defining the terms “direct interaction” and “affiliation” the mathematical formulations explain the logic of an MSP to a greater extent. However, it does not explain what happens in a startup company’s growth situation.

Hagiu (2006) distinguishes a proprietary platform against an open platform, and Hagiu (2007) identifies through mathematical explanation, two polar strategies: a “merchant mode”, and a “two-sided platform mode”. These findings have probably provided a foundation to exploit intermediary’s choice of operation in an MSP mode.

Terminology has taken many variations in naming the mode of operation. “Proprietary platform and open platform” (Hagiu, 2004; 2006), “merchant mode and two-sided platform mode” (Hagiu, 2007), “reseller and marketplace” also indicating marketplace as a subsystem of MSP (Hagiu and Wright, 2015a), to defining a MSP (Hagiu and Wright, 2015b, p.163). The difference between a reseller, input supplier, a vertically integrated firm and an MSP, provides a fundamental understanding to learn and explore MSPs.

The literature based on empirical studies as well as the descriptive writings demonstrate the struggle to define an MSP (Eisenmann et al., 2006; Evans, 2016). Solving a “chicken-and-egg” problem was a major concern (Eisenmann et al., 2006; Hagiu, 2014; Evans, 2016; Evans and Schmalensee, 2016). The effect of market power (Hagiu, 2007), mitigating the risk of unfavourable expectations (Hagiu and Wright, 2015a; 2015b), and mitigating moral hazard problem (Hagiu and Wright, 2015c) somewhat implies the mechanisms of getting sides on board.

Explanations of “control rights”, “transferable decisions”, “information advantage” and “marketing activities” (Hagiu and Wright, 2015a; 2015b; 2015c) help to understand some of the concerns and critiques presented in the empirical case-related literature (Evans and Schmalensee, 2016; Hagiu, 2014; Parker et al., 2016), and the descriptive writings (Eisenmann et al., 2006, Evans, 2016).

Network effects have been another major discussion which Hagiu and Wright (2015b) qualifies as a necessary but not sufficient requirement in an MSP mode. However, Hagiu and Wright (2015b) accept that MSPs create and capture value through indirect network effects.

Pricing strategies based on network externalities (Hagiu, 2004; 2014; Eisenmann et al., 2006; Evans, 2016; Evans and Schmalensee, 2016), were given an additional perspective of the importance of the control over interaction with non-price governance rules (Hagiu and Baudreau, 2008). This extends to Wang and Nicolau (2017) price determinants in a sharing economy that allows platforms charge premium prices against perceived quality signals.

Although pricing strategies, governance, and challenges were discussed broadly in the extant literature, less about an MSP logic relating to startup was discussed. The features explained through mathematical formations by Hagiu and Wright (2015a; 2015b, 2015c) found to be effective in creating a knowledge base to study important features around an MSP logic.

Types and characteristics of products and services, as well as attributes of sellers (independent professionals) and buyers (customers) (Hagiu and Wright, 2015a;

2015b; 2015c) help, identify the responsibilities of an MSP operator, and to define the two sides and what to trade.

## 2.6 Summary of the literature review

The purpose of the review was to identify from the extant literature of the helpful hints of an MSP logic. As such, three articles based on the mathematical formulation of an MSP logic were chosen to identify elements for investigation:

1. A choice between functioning as a marketplace (MSP) or as a reseller, to optimally position themselves between the two modes with the best product/service decision in either of them (Hagiu and Wright, 2015a),
2. Trade-offs exist when choosing to operate as a marketplace (MSP) or reseller, that drive them towards or away from MSP model relative to traditional alternatives – VI firm, reseller, or input supplier (Hagiu and Wright, 2015b),
3. A choice between an employment mode (firm controls service provision by employing professionals, sales reps, and agents), and a platform mode (agents control the provision of their services to customers) (Hagiu and Wright, 2015c)

Hagiu and Altman (2017) presentation on MSP strategies was chosen to complement the above three presentations, and the corpus for review consisted four articles.

Research on sources to obtain empirical data on MSP companies found two useful databases of valuable information as shown in table 2.4. Except for few elements, both databases matched the information providing a strong foundation

to record information on the companies selected to study. Further search for sources to find the names of new companies based on business news and trend reports resulted in three more websites as sources of information about MSP startup companies.

### 3. METHOD

Chapter three is organized into five sections. Section 3.1 introduces the theoretical approach and the method the research was conducted. Section 3.2 describes the logic in corpus. Section 3.3 informs the research design and section 3.4 describes the data acquisition for research. Section 3.5 shows the data analysis method and section 3.6 concludes.

#### 3.1 Theoretical approach

The review of the literature on MSP logic identified the need to concentrate on the selected corpus to study what interactions happen in formulating an MSP. As such three articles were selected for an in-depth study of the concepts, elements and the relationship between those elements. The three main articles were Hagiü and Wright (2015a), (2015b), and (2015c). These articles were related to previous work carried out by Hagiü, A., by himself and with other authors, finally coming up with formal mathematical modeling in an attempt to explain the assumptions woven around MSP logic. In addition to these three articles, the latest literature found by mid-2017, an article explaining strategic applications of MSP mode (Hagiü and Altman, 2017) was included in the corpus. The representation from the corpus led the first set of propositions that explained the concepts and relationships, and the elements and relationships exhibited in the representation were used to examine a sample of 19 companies. The method used to conduct research is shown in table 3.1.

Table 3.1 Method the research was conducted

	Activity	Outcome
1	Reviewed literature on MSP to understand the concept, the logic of an MSP to identify how a MSP startup can grow from the inception	Identified the need to focus on a model to explain the logic of MSPs and its strategic implications
2	Analysed Economist view of MSPs to find out concepts and positioning of MSP among other traditional modes	Decided on corpus from which to build the initial model
3	Identified the elements and their relationships acting in MSPs, and developed logic to construct a model from corpus	Model that explain the elements of an MSP, and affiliations between those elements and a set of propositions anchored around the model
4	Developed criteria for sample selection	List of criteria for sample selection
5	Examined the sample to gather data that correspond to elements in the model and that explain relationships between them	(i)a set of data that corresponds to elements and their relationships in the model; (ii)a set of data that correspond to new elements prompting inequalities and differentiators and a set of new relationships
6	Mapped characteristics of new relationships and assigned entities	A new set of entities that explain new relationships representing elements
5	Incorporated new entities and their relationships in the initial model	Refined model representing data from corpus and new data gathered
6	Developed propositions anchored around the model	A new set of propositions anchored around findings that represent newly found entities and relationships

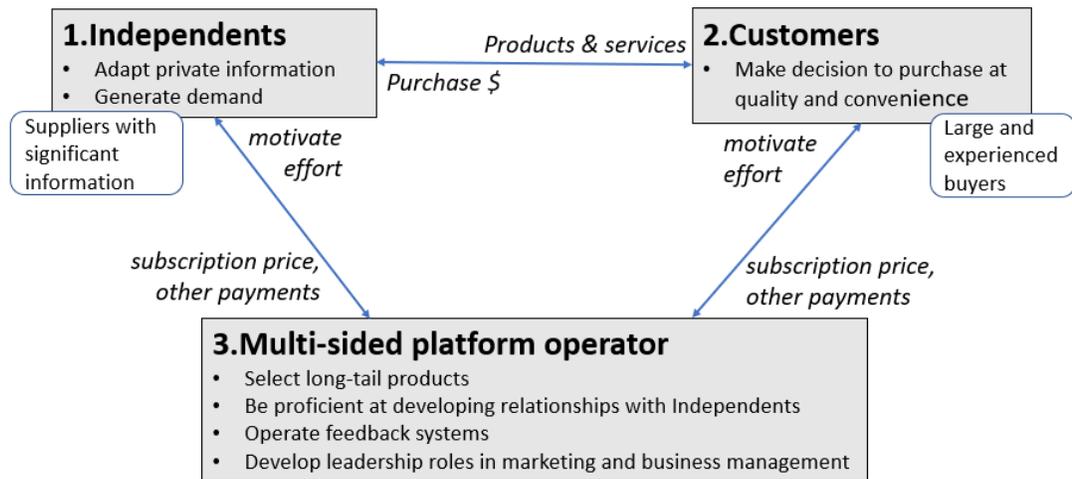
### 3.2 Logic in corpus

The representation from the corpus is shown in Figure 3.1. The information from corpus presents the direct interaction between two agents (independents and customers) affiliated with a third agent, MSP operator (Hagiu and Wright 2015a, p.184; 2015b, p.163; Hagiu and Altman 2017, p.96). The independents were assumed to have private information about the ideal choice of marketing activities (Hagiu and Wright, 2015a, p. 186,189; 2015b.p.170) and generate demand Hagiu and Wright, 2015a, p.186; 2015b, p.162). Customers make their affiliation and purchase decision (Hagiu and Wright, 2015b, p.166).

MSP operator fulfills responsibilities including selecting right products (Hagiu and Wright, 2015a, p.198, 196; 2015b, p.171; 2015c, p.3), and developing relationships with independents (Hagiu and Wright, 2015a, p.186; Hagiu and Altman, 2017, p.96,97). MSP operators assumed to have feedback systems in place (Hagiu and Wright, 2015b, p.171), and develop leadership roles in marketing and business management areas (Hagiu and Altman, 2017, p.100).

Both sides affiliate with the platform by making platform-specific investments (Hagiu and Wright, 2015b, p.163).

Figure 3. 1 Representation from corpus showing key elements and relationships



### 3.3 Research design

- Unit of analysis: a post-funding stage MSP startup operational in 2017
- Time period: 2012 – 2017
- Sample: nineteen companies deliberately chosen for most relevant data.

The sample chosen on the purpose of the study was drawn from online data and included in both databases [www.crunchbase.com](http://www.crunchbase.com) and [www.owler.com](http://www.owler.com).

### 3.4 Data acquisition

Foundational data were acquired as reported in the two online databases: [www.crunchbase.com](http://www.crunchbase.com) and [www.owler.com](http://www.owler.com). More specific informational data were sought in the websites of the selected companies. Foundational data included the funding details, estimated annual revenue, founding year and the city and country

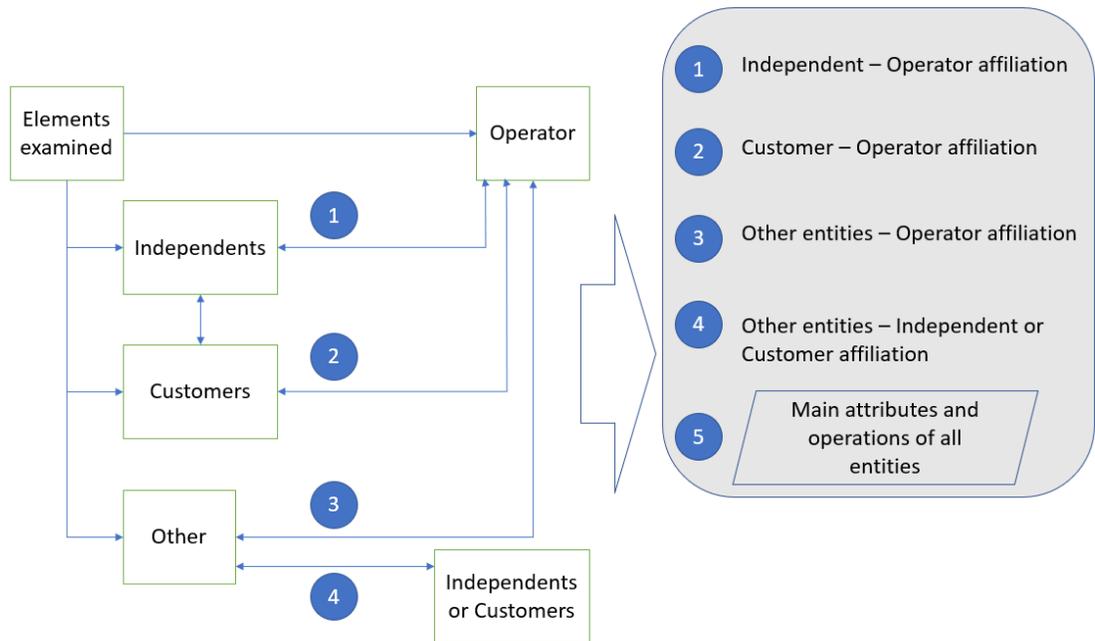
where the company was headquartered. Informational data included the information about agents: independents, customers, and the MSP operator, their affiliations, and related platform-specific investments. Any inequalities and differentiators to the above-sighted data were also recorded as a part of data acquisition from company websites.

### 3.5 Data analysis

Data analysis was based on Object Oriented Analysis (OOA) to the level of object modeling. This means developing a static structure of the system in terms of objects. It defines the objects, the classes into which objects can be grouped, and the relationships. As such MSP companies were analyzed to identify elements, and assign the elements to entities, namely, independents, customers and the operator, and draw relationships among entities. Further, elements that were identified based on data gathered related to inequalities and differentiators, were assigned to new entities. Subsequently, relationships were drawn to specify affiliations between entities, and main attributes and operations of all entities were identified.

Figure 3.2 shows the steps carried out in the data analyses.

Figure 3. 2 Representation of data analyses based on Object-Oriented Analysis technique



The operational measures for the theoretical constructs were based on the logic in corpus: independents, customers, and MSP operator and the affiliations among them. Data collection procedure maintained a chain of evidence (Yin, 2018) to make it explicit as possible to establish reliability of the operation of the study. Indicator data were tabulated as evidentiary base and provided in appendices in the thesis document.

Of the data gathered, the data corresponding to inequalities and differentiators with respect to logic in corpus were recorded, their relationships to main entities (independents, customers, and MSP operator) and responsibilities were identified and assigned as new elements. These elements were analysed and grouped into four entities which were then labeled as new agents.

Appendix 3 shows the recorded evidentiary data for 19 companies included in the sample and the assignment of elements, grouping of the entities, their relationships, and the labeling of the four entities.

### 3.6 Summary

Chapter 3 presented the method in which the research was conducted. It identified the theoretical approach, conceptual model which based the research, and provided a representation of the model from the corpus. Chapter described how the data were acquired, how data were analyzed, and the technique used with a representation of the application of the data analysis technique. The reliability of the study and the traceability of evidence were presented.

## 4. RESULTS

Chapter 4 is organized into seven sections. Section 4.1 describes the sample. Section 4.2 provides a model that captures the logic of the MSP provided in Hagi and Wright (2015a; 2015b; 2015c) and applications to specific strategies provided in Hagi and Altman (2017). Section 4.3 presents propositions anchored around the model. Section 4.4 identifies the new agents found from examining the data on MSPs. A revised representation, one drawn from corpus and data on MSP companies, is described in section 4.5, and new propositions are provided in section 4.6. Section 4.7 is a summary of the chapter.

### 4.1 Sample

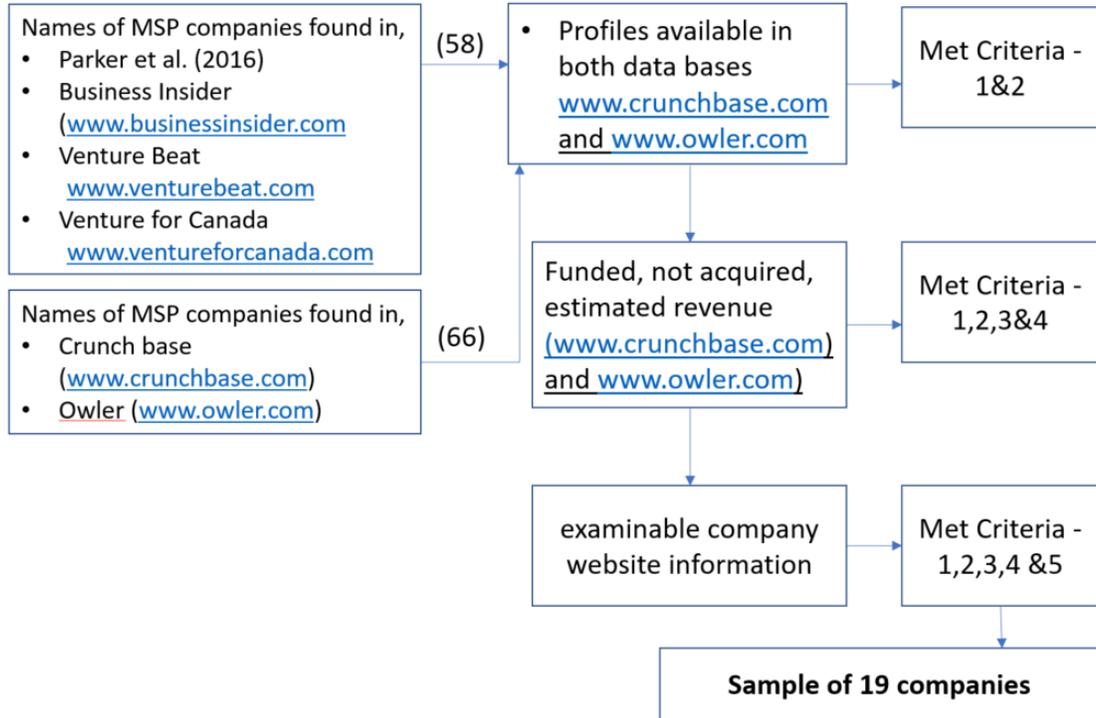
The sample includes 19 MSP companies. Each company met the following criteria for inclusion:

1. Founded between 2012 and 2017, and operational as of November 2017
2. Profile (including funding, and status) included in both databases:  
<https://www.crunchbase.com/> and <https://www.owler.com/>
3. Raised more than \$1 million, and not acquired by another business as indicated in the Crunchbase and Oowler databases
4. Reported expected annual revenue of \$1 Million or more as indicated in <https://www.owler.com/>
5. Provided examinable information regarding interaction and affiliations between sides in the company website

#### 4.1.1 Sample selection process

Figure 4.1 shows the sample selection process and the sources used to identify the sample. MSPs serve multiple groups or facilitate interactions between customers or groups (Hagiu and Altman, 2017). Names of MSP companies were found in Parker et al. (2016), Business Insider ([www.businessinsider.com](http://www.businessinsider.com)), Venture for Canada ([www.ventureforcanada.com](http://www.ventureforcanada.com)), Venture Beat ([www.venturebeat.com](http://www.venturebeat.com)), Crunchbase ([www.crunchbase.com](http://www.crunchbase.com)), and Owler ([www.owler.com](http://www.owler.com)). These companies were examined for selection criteria using the company details provided in the two databases Crunchbase, and Owler. Once a company meets criteria next step was to check whether sufficient information was available on the company website to gather data with respect to inspected elements. If sufficient information were not available, that company was removed from the list. Of the total of 124 companies examined, 19 companies that met sample criteria were selected to represent founding years from 2012-2017.

Figure 4. 1 Sample selection process satisfying five criteria and the sources where companies were drawn from



#### 4.1.2 Sample related information

For each of the 19 MSP companies in the sample, Table 4.1 provides the company’s name, web address, and founding year, a brief description of the transaction the MSP enables and estimated revenue. The estimated revenue refers to the trailing twelve months (TTM) revenue as reported by <https://www.owler.com/>. Some companies had names that were different to the name it is known about (ex: Instacart company name is Maplebear, Inc., but they call it Instacart). The corresponding corporate names of the companies are stated as found in the [www.bloomberg.com](http://www.bloomberg.com).

Table 4. 1 Companies launched and grown as multi-sided platforms between 2012-2017 included in the sample

	Company's name, "alias", and web address	Year founded	Transaction the MSP enables	Estimated revenue
1.	Maplebear, Inc.   "Instacart" <a href="http://www.instacart.com">www.instacart.com</a>	2012	Grocers sell groceries with a delivery service option to consumers	\$67.7M
2.	Tradeos, Ltd.   "Freightos" <a href="http://www.freightos.com">www.freightos.com</a>	2012	Shippers and forwarders/carriers generate quotes, share rates, and find lowest shipping rates and fastest routes for customers	\$5.8M
3.	Coursera, Inc.   "Coursera" <a href="http://www.coursera.org">www.coursera.org</a>	2012	Course providers/ Developers offer courses to learners	\$19.7M
4.	Cohealo Inc.   "Cohealo" <a href="http://cohealo.com">http://cohealo.com</a>	2012	Health systems/Institutions centralize clinical assets and improve access to care for medical facilities and clinicians	\$3.6M
5.	MLW Squared, Inc.   "Ahalogy" <a href="http://www.ahalogy.com">www.ahalogy.com</a>	2012	Brands and content creators uncover audience insights to deliver optimum engagement to consumers	\$2.9M
6.	Exitround, LLC   "Exitround" <a href="http://www.exitround.com">www.exitround.com</a>	2013	Company founders feature best company exposure and buyers acquire companies	\$1M

7.	DoorDash, Inc.   “DoorDash” <a href="http://www.doordash.com">www.doordash.com</a>	2013	Businesses sell food and other items and customers buy and order delivery	\$4M
8.	FarmLead Resources Ltd.   “Farmlead” <a href="https://farmlead.com">https://farmlead.com</a>	2013	Farmers and verified buyers list, negotiate and finalize grain deals	\$3.4M
9.	Guesty, Inc.   “Guesty” <a href="http://www.guesty.com">www.guesty.com</a>	2013	Property management hosts, Airbnb hosts with multiple accounts provide and manage services to guests	\$1M
10.	Pillow Homes, Inc.   “Pillow” <a href="http://www.pillowhomes.com">www.pillowhomes.com</a>	2014	Building owners allow compliant and transparent process for residents to host their apartment on short term rentals	\$2M
11.	Helping GmbH   “Helping” <a href="http://www.helping.de">www.helping.de</a>	2014	Cleaning aids offer household services and customers search and book cleaning aids on-demand online	\$19M
12.	Thrive Market, Inc.   “Thrive Market” <a href="http://www.thrivemarket.com">www.thrivemarket.com</a>	2014	Brands sell healthy foods and natural products at wholesale prices to members	\$1.3M
13.	Loop Financial, Inc.   “Lending Loop” <a href="http://www.lendingloop.ca">www.lendingloop.ca</a>	2014	Small businesses find affordable financing at fair interest rates from lenders	\$1.5M

14.	Proov, Inc.   “proov” <a href="http://www.proov.io">www.proov.io</a>	2015	Startups allow enterprises to test, track and analyze their solutions and enterprises carry out proof of concept	\$4M
15.	Outschool, Inc   “Outschool” <a href="https://outschool.com">https://outschool.com</a>	2015	Teachers offer and sell virtual classes and parents find, book and pay for children’s classes	\$2M
16.	Airsorted Limited   “Airsorted” <a href="http://www.airsorted.uk">www.airsorted.uk</a>	2015	Homeowners let their homes to guests without being a host	\$1M
17.	Mealpal, Inc.   “MealPal” <a href="http://www.mealpal.com">www.mealpal.com</a>	2016	Restaurants offer monthly subscription meal plans to members	\$5M
18.	MissionU PBC   “MissionU” <a href="http://www.missionu.com">www.missionu.com</a>	2016	Instructors and industry experts facilitate industry informed curriculum-based learning to students through live sessions	\$1M
19.	Snappr Pty. Ltd.   “Snappr” <a href="http://www.snappr.co">www.snappr.co</a>	2016	Photographers offer onsite services and customers book pre-vetted on demand photographers	\$1M

Sources: <https://www.crunchbase.com/>, <https://www.owler.com/>, <https://www.bloomberg.com> and company websites

Table 4.2 identifies the locations where the companies in the sample are headquartered as of 2017 and information on funds raised. For each company in

the sample, Table 4.2 provides the city, state/province/region, and country where the company is headquartered as well as the number of dollars raised, amount raised at the most recent round, funding type, and funding status.

The funding types shown in Table 4.2 include Seed, Series A, B, C, and D, Convertible note, and Debt Financing. Typically, seed funds are directed toward product development, market research, building a management team and preparing a business plan ([www.investopedia.com](http://www.investopedia.com)).

Series A and B refer to early-stage funding. Series A refers to the first round of external funds, and Series B refers to the second round of external funds. Series C and D funding are used to ramp up operations ([www.entrepreneur.com](http://www.entrepreneur.com)). A convertible note is a form of short-term debt that converts into equity, in a future financing round ([www.seedinvest.com](http://www.seedinvest.com)). Debt financing refers to raising money for working capital by selling bonds, bills, or notes to investors on the promise that principal and interest on the debt will be repaid ([www.investopedia.com](http://www.investopedia.com)).

Funding status shown in Table 4.2, includes Seed, Early Stage Venture (ESV), and Late Stage Venture. Seed is the first stage of venture capital funding. Early Stage Venture (ESV) is a second stage and funds a step up in capabilities and initiates commercial manufacturing and sales. Most companies in this stage have a product or service in testing or pilot production. Late Stage Venture (LSV) funding is provided when a company shows a significant revenue growth, but may not be showing profits ([www.investopedia.com](http://www.investopedia.com)).

Table 4. 2 Companies included in the sample by location of headquarters and information on funds raised

Company's name   "alias" and web address	Headquartered in	Amount raised	Latest funding	Latest funding type	Funding status
Maplebear, Inc.   <b>"Instacart"</b> <a href="http://www.instacart.com">www.instacart.com</a>	San Francisco, California, United States	\$674.8M in 7 rounds	\$400M / Mar 2017	Series D	Late Stage Venture
Tradeos, Ltd.   <b>"Freightos"</b> <a href="http://www.freightos.com">www.freightos.com</a>	Mong Kok, Hong Kong	\$55.9M in 6 rounds	\$25M / Mar 2017	Series B	Early Stage Venture
Coursera, Inc.   <b>"Coursera"</b> <a href="http://www.coursera.org">www.coursera.org</a>	Mountain View, California, United States	\$210.1M in 7 rounds	\$64M / Jun 2017	Series D	Late Stage Venture
Cohealo Inc.   <b>"Cohealo"</b> <a href="http://cohealo.com">http://cohealo.com</a>	Boston, Massachusetts, United States	\$12.15M in 3 rounds	\$2M / Sep 2016	Series A	Early Stage Venture
MLW Squared, Inc.   <b>"Ahalogy"</b> <a href="http://www.ahalogy.com">www.ahalogy.com</a>	Cincinnati, Ohio, United States	\$10.2M in 4 rounds	\$3M / Jul 2016	Series unknown	Status unknown
Exitround, LLC   <b>"Exitround"</b> <a href="http://www.exitround.com">www.exitround.com</a>	San Francisco, California, United States	\$1.625M in 2 rounds	\$1.63M / Feb 2015	Seed	Seed
DoorDash, Inc.   <b>"DoorDash"</b> <a href="http://www.doordash.com">www.doordash.com</a>	San Francisco, California, United States	\$186.7M in 5 rounds	\$127M / Mar 2016	Series C	Late Stage Venture
FarmLead Resources Ltd.   <b>"Farmlead"</b>	Ottawa, Ontario Canada	\$7.28M in 2 rounds	\$6.5M / Mar 2017	Series A	Early Stage Venture

<a href="https://farmlead.com">https://farmlead.com</a>					
Guesty, Inc.   “ <b>Guesty</b> ” <a href="http://www.guesty.com">www.guesty.com</a>	San Francisco, California, United States	\$4.5M in 2 rounds	\$3M / May 2017	Series A	Early Stage Venture
Pillow Homes, Inc.   “ <b>Pillow</b> ” <a href="http://www.pillowhomes.com">www.pillowhomes.com</a>	San Francisco, California, United States	\$16.15M in 3 rounds	\$13.5M / Jun 2017	Series A	Early Stage Venture
Helpling GmbH   “ <b>Helpling</b> ” <a href="http://www.helpling.de">www.helpling.de</a>	Berlin, Berlin, Germany	\$72.74M in 4 rounds	\$10M / Mar 2017	Series C	Status unknown
Thrive Market, Inc.   “ <b>Thrive Market</b> ” <a href="http://www.thrivemarket.com">www.thrivemarket.com</a>	Los Angeles, California, United States	\$161.88 M in 4 rounds	\$10M / Oct 2016	Convert i-ble note	Early Stage Venture
Loop Financial, Inc.   “ <b>Lending Loop</b> ” <a href="http://www.lendingloop.ca">www.lendingloop.ca</a>	Toronto, Ontario, Canada	\$12M in 2 rounds	\$10M / Oct 2017	Debt financi ng	Status unknown
Proov, Inc.   “ <b>proov</b> ” <a href="http://www.proov.io">www.proov.io</a>	Herzlia B, Tel Aviv, Israel	\$21M in 2 rounds	\$14M / Aug 2017	Series B	Early Stage Venture
Outschool, Inc   “ <b>Outschool</b> ” <a href="https://outschool.com">https://outschool.com</a>	San Francisco, California, United States	\$1.52M in 2 rounds	\$1,4M/ Jun 2017	Seed	Seed
Airsorted Limited   “ <b>Airsorted</b> ” <a href="http://www.airsorted.uk">www.airsorted.uk</a>	London, England United Kingdom	\$1.88M in 5 rounds	\$1.5M/ Feb 2017	Seed	Seed
Mealpal, Inc.   “ <b>MealPal</b> ” <a href="http://www.mealpal.com">www.mealpal.com</a>	New City, New York, United States	\$35M in 2 rounds	\$20M / Sep 2017	Series B	Early Stage Venture

MissionU PBC   “MissionU” <a href="http://www.missionu.com">www.missionu.com</a>	San Francisco, California, United States	\$11.5M in 2 rounds	\$8.5 / Sep 2017	Series A	Early Stage Venture
Snappr Pty. Ltd.   “Snappr” <a href="http://www.snappr.co">www.snappr.co</a>	San Francisco, California, United States	\$2.38M in 3 rounds	\$2M / Sep 2017	Seed	Seed

Table 4.3 identifies the six countries where the sample companies were headquartered. Of the 19 companies, included in the sample, 15 or 78.9% were headquartered in North America.

Table 4.3 Breakdown of companies in sample by country

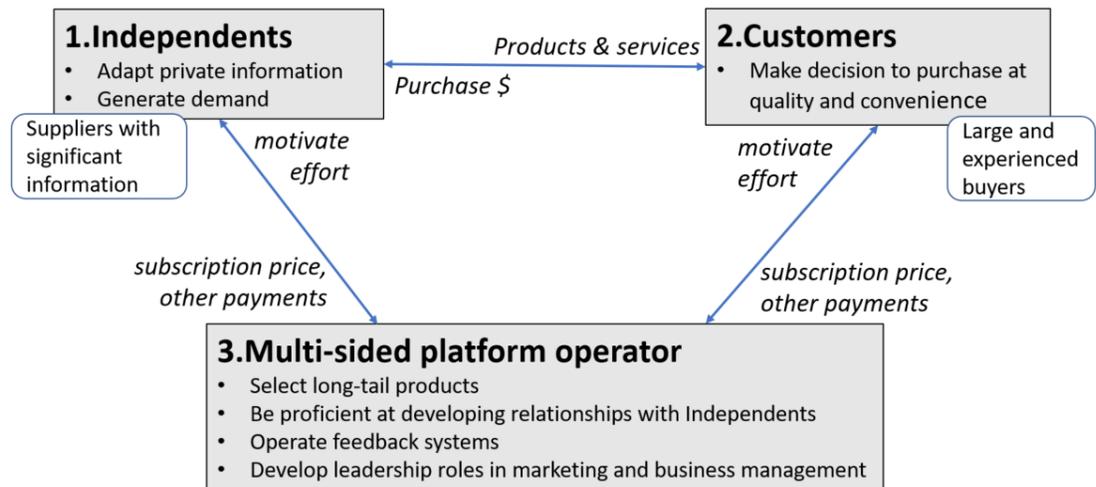
	Country	Number of companies in sample	Proportion
1.	United States	13	68.4%
2.	Canada	2	10.5%
3.	Israel	1	5.3%
4.	Hong Kong, China	1	5.3%
5.	United Kingdom	1	5.3%
6.	Germany	1	5.3%
	Total	19	100%

Appendix 1 provides information on funding and estimated revenue (\$1M or above) of each of the 19 companies included in the sample.

#### 4.2 Representation drawn from selected corpus

Figure 4.2 provides the researcher's representation of the logic of the MSP provided in Hagiu and Wright (2015a; 2015b; 2015c) and applications to specific strategies provided in Hagiu and Altman (2017).

Figure 4. 2 Representation of the logic of an MSP extracted from the selected corpus



The model is comprised of three agents and three affiliations. The three agents include the MSP operator (Operator), independent suppliers (Independents), and customers (Customers). The operator makes platform-specific investments to enable direct interaction between independents and customers, and the independents and customers make platform-specific investments to be able to directly interact with each other (Hagiu and Wright, 2015b, p.163).

#### 4.2.1 Agent 1: Independent

Independents have two key responsibilities: adapt to private information (i.e., develop skills, modify offers) and generate demand for their services (Hagiu and Wright, 2015b, p.162, 165).

#### 4.2.2 Agent 2: Customer

Customers have one key responsibility: deal with Independents directly without needing intermediaries to verify quality and convince them to buy (Hagiu and Wright, 2015b, p.163, 164).

#### 4.2.3 Agent 3: Operator

The operator has four key responsibilities:

- Select long-tail products (i.e., long shelf-life products)
- Be proficient at developing relationships with independents
- Operate feedback systems to overcome asymmetric information problems
- Develop leadership roles in marketing and business development

Operators select long-tail products i.e., products have a low marginal cost of handling and can stay a long time on the shelves before they sell (Hagiu and Wright, 2015a. p.196). Operators develop proficient relationships with independents (Hagiu and Wright. 2015a, p.162,167; Hagiu and Altman, 2017, p.96). Operators need to

develop the capability to curate these relationships to prevent conflicts among existing parties (Hagiu and Altman, 2017, p.97).

Operators use feedback systems to pool users' experience as a solution to overcome asymmetric information problems (Hagiu and Wright, 2015b, p.171). Success depends on incentives to users to share their experience and how feedback benefits the other users.

An MSP moves the operator from a product/service orientation to a relationship management orientation. The need to place relationships with people up-front requires operators to develop leadership roles in marketing and business development (Hagiu and Altman, 2017, p.97).

#### 4.2.4 Affiliation 1: Independent-Customer Affiliation

The affiliation between the independent and the customer is specified in terms of the:

- Investment that customer makes to be able to purchase from independents (Hagiu and Wright, 2015b, p.165)
- Investment that independents make to raise the number of clients for the service they offer (Hagiu and Wright, 2015b, p.165)

#### 4.2.5 Affiliation 2: Independent-Operator Affiliation

The affiliation between the independent and the operator is specified in terms of the:

- Investment that independent makes in the operator's platform including the subscription price or other payments to directly interact with customers (Hagiu and Wright, 2015b, p.163, 164)
- Investment that operator makes to motivate the independent's efforts and ensure that independents adapt their decisions to their private information (Hagiu and Wright, 2015b, p.162)

#### 4.2.6 Affiliation 3: Customer-Operator Affiliation

The affiliation between the customer and the operator is specified in terms of the:

- Investment that customer makes in the operator's platform including the subscription price or other payments to directly interact with independents (Hagiu and Wright, 2015b, p. 163,165).
- Investment the operator makes to motivate the customer's efforts and ensuring that quality and trust benefit customers (Hagiu and Wright, 2015b, p.172).

Appendix 2 provides the data for the three agents and three affiliations collected for the 19 companies included in the sample.

### 4.3 Propositions

Five propositions were developed anchored around the MSP logic model shown in Figure 4.2

1. MSPs enable affiliations between independents and customers anchored on the provision of complementary products with long shelf life and services that cannot be resold.
2. Independents set prices that enable them to adapt to private information that includes their costly effort and the nature of expectations with respect to other independents that join the platform.
3. Operators develop an affiliation with independents anchored on platform-specific investments including subscription price or fixed payments, and motivation efforts.
4. Operators develop an affiliation with customers anchored on platform-specific investments including subscription price, and the delivery of quality and trusted service.
5. Operators become proficient at developing relationships with independents, develop leadership roles in marketing and business development, and develop feedback systems to aggregate users' experience.

### 4.4 New elements drawn from data

Four new agents (i.e., actors other than Operator, Independent, and Customers) were identified by examining the data on the 19 companies in the sample. These

new agents were first denoted as Agent A, Agent B, Agent C, and Agent D according to functions and key responsibilities they indicated related to protocol of inquiry. In order to organize data on new agents, evidence dealing with themes/ideas were sought and the four new agents A, B, C, D were labeled as A- Third parties, B- Catalysts, C- Affiliates, and D- Sides on demand.

Appendix 3 provides the evidentiary data that represent findings on relationships between MSP operator and each of the new agents for the 19 companies included in the sample.

For each of the new agents identified, Table 4.4 lists its key responsibilities observed from the data, the number of companies where the agent was observed, the companies that included different agents and the company web addresses.

Table 4. 4 New agents identified by examining the data on 19 companies

New agent	Responsibilities	Number of companies where agent was observed	Companies that include the agent	Companies' web addresses
<b>Agent A:</b> Third parties	Provide amenities to attract and retain Catalysts; grow sides; offer additional services; handle regulatory and compliance; provide tracking and verification	12	DoorDash; Coursera; Thrive Market; Lending Loop; Airsorted; Helpling; Farmlead; Outschool;	<a href="http://www.doordash.com">www.doordash.com</a> <a href="http://www.coursera.org">http://www.coursera.org</a> <a href="https://thrivemarket.com/">https://thrivemarket.com/</a> <a href="https://www.lendingloop.ca/">https://www.lendingloop.ca/</a> <a href="https://www.airsorted.uk/">https://www.airsorted.uk/</a> <a href="https://www.helpling.de/">https://www.helpling.de/</a>

			Snappr; Ahalogy; Exitround; MissionU;	<a href="https://farmlead.com/">https://farmlead.com/</a> <a href="https://outschool.com/">https://outschool.com/</a> <a href="http://www.snappr.co">www.snappr.co</a> <a href="http://ahalogy.com">http://ahalogy.com</a> <a href="https://exitround.com/">https://exitround.com/</a> <a href="https://www.missionu.com">https://www.missionu.com</a>
<b>Agent B:</b> Catalysts	Strengthen affiliation between Independents and Customers; induce platform revenue creating more transactions	2	Instacart; DoorDash;	<a href="https://www.instacart.com">https://www.instacart.com</a> <a href="http://www.doordash.com">www.doordash.com</a>
<b>Agent C:</b> Affiliates	Grow number of participants that join sides and receive commissions and bonuses	5	Freightos; Coursera; Thrive Market; Lending Loop; MissionU;	<a href="https://www.freightos.com">https://www.freightos.com</a> <a href="http://www.coursera.org">http://www.coursera.org</a> <a href="https://thrivemarket.com/">https://thrivemarket.com/</a> <a href="https://www.lendingloop.ca/">https://www.lendingloop.ca/</a> <a href="https://www.missionu.com">https://www.missionu.com</a>
<b>Agent D:</b> Sides on Demand	Exploit potential opportunities that mutually benefit MSP and the sides on demand	3	Pillow; MissionU; Thrive Market;	<a href="http://www.pillow.com">http://www.pillow.com</a> <a href="https://www.missionu.com">https://www.missionu.com</a> <a href="https://thrivemarket.com/">https://thrivemarket.com/</a>

The four new agents fulfill their responsibilities by affiliating with the Operator. The agents and their affiliations are described in the subsections 4.4.1 to 4.4.8

#### 4.4.1 New agent 1: Third parties (Agent A)

Operators use third parties to grow sides, provide services, fulfill regulatory and compliance requirements, tracking and verification, and to provide amenities to Catalysts (Agent B). Operators do not want third parties to become a side that interacts directly with customers.

Twelve companies in the sample showed connections with third parties. four companies used third parties to grow sides, two companies provided additional services connecting with third parties, six companies fulfilled their regulatory and compliance requirements through third parties, four companies did tracking and verifications through third parties, and one company used third-party services to provide amenities to attract and retain their Catalysts.

#### 4.4.2 New Agent 2: Catalysts (Agent B)

Catalysts engage with independents and customers and represent the operator. The operator remunerates the catalysts for their service.

Two companies in the sample employed catalysts. The grocery sales and delivery company Instacart uses “Shoppers” who represent the category of catalysts that click, collect and deliver grocery items to customers devoting their free time and vehicle to gain an income. The food and goods delivery company DoorDash

receives orders and assigns “Dashers” who represent the category of catalysts that pick and deliver orders devoting their time and vehicle to gain an income. In addition to this income “Dashers” also become eligible to amenities provided by the operator through third-party services.

#### 4.4.3 New agent 3: Affiliates (Agent C)

Affiliates promote the operator’s business and help grow the independent and customer bases. Operators pay a commission or bonus to affiliates when the participants connected through affiliates interact with the sides to exchange value. Operators provide affiliates with website links, banners, and promotional items to attract new participants.

Five companies in the sample use affiliates to grow their businesses. Freightos affiliates refer shippers, and receives a bonus on their first booking; Coursera pays a commission to their affiliates on purchases made through affiliation; Thrive Market pays to their affiliates for every member they add; Lending Loop pays their affiliates a commission for referrals, while MissionU provides a cashback bonus to their affiliates as well as referred student, upon every student enrolled through such affiliation.

#### 4.4.4 New Agent 4: Side(s) on demand (Agent D)

Operators provide potential engagement opportunities for side(s) on demand. Independents or customers may benefit by increased direct or indirect network

effect resulted by this potential engagement between the MSP operator and the side(s) on demand. Three companies in the sample showed side(s) on demand. Pillow, a short-term rental company had potential rent seekers as a side on demand while the independents and customers that belonged to MSP were property owners and residents. MissionU had potential employers as a side on demand while independents and customers that belonged to MSP were educators and students. Thrive Market had the concept of one free membership offered to a deserved family for every member who signed up, and, a list of low-income families was sought as a side on demand.

#### 4.4.5 New Affiliation 1: Third Parties - Operator Affiliation

The affiliation between the third parties and the operator is specified in terms of the:

- Investment that third parties make in the operator's platform to be able to sell (products/services to catalysts), provide (additional services, regulatory and compliance requirements, tracking verification services to operator to complete MSP transactions), or increase their reputation (adding participants to sides)
- Investment that operator makes to purchase and attract third party products and services

#### 4.4.6 New Affiliation 2: Catalysts - Operator Affiliation

The affiliation between the catalysts and the Operator is specified in terms of the:

- Investment that catalysts makes to be able to serve independents and customers on behalf of the operator (devoting free time and their own vehicle)
- Investment that operator makes to motivate catalysts' effort and pay compensation for their services

#### 4.4.7 New Affiliation 3: Affiliates - Operator Affiliation

The affiliation between the affiliates and the operator is specified in terms of the:

- Investment that affiliates makes to find new entrants to join the platform (promotions, advertising, and leveraging network)
- Investment the operator makes to motivate the affiliates' effort and pay commissions and bonuses for their services

#### 4.4.8 New Affiliation 4: Sides on Demand - Operator Affiliation

The affiliation between the sides on demand and the operator is specified in terms of the:

- Investments the sides on demand make exploiting opportunities with operator's platform (opportunity cost)

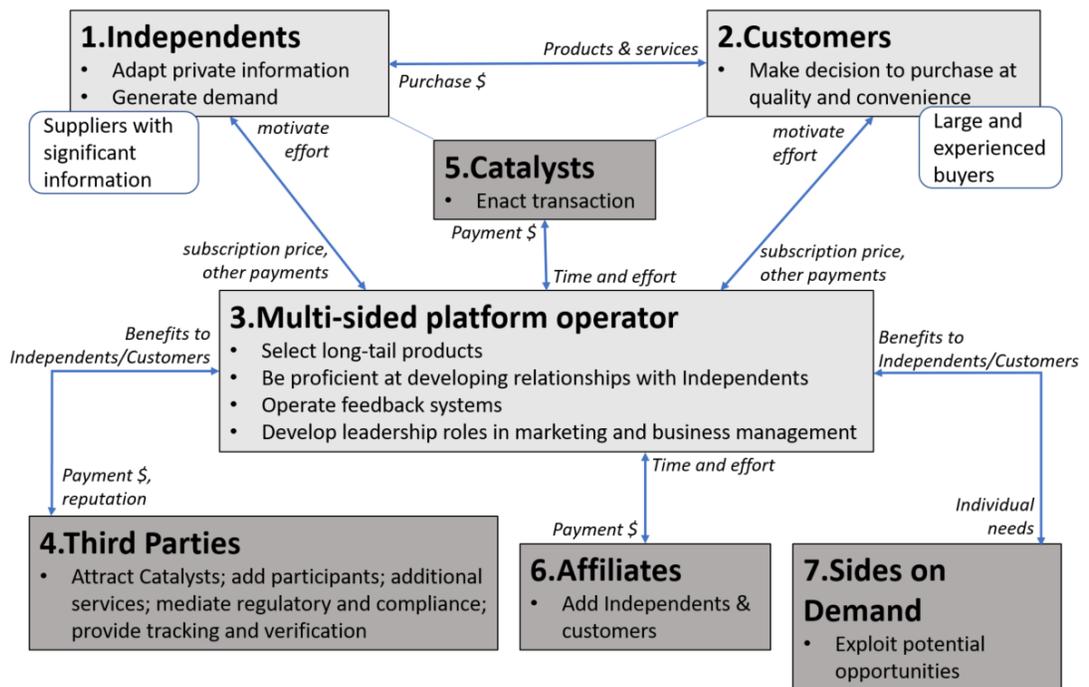
- Investments the operator makes to attract and motivate sides on demand (marketing, information)

Appendix 4 provides the data for the four new agents and four new affiliations collected for the 19 companies included in the sample.

#### 4.5 Representation drawn from corpus and data

Data examined from the sample added four new agents. Figure 4.3 builds on Figure 4.2 and adds the four new agents indicated as 4,5,6, and 7.

Figure 4.3 Representation drawn from corpus and data



#### 4.6 Propositions around the new model

Four new propositions were developed anchored around the new model:

1. Operators employ catalysts as an interface between the operator and each of the sides to enhance the affiliation between independents and customers and induce platform revenue through increased interactions.
2. Operators pay commissions and bonuses to affiliates to grow their number of independents and customers.
3. Operators engage third parties to provide services, but do not enable them to interact directly with customers.
4. Operators interact with sides in waiting to shape opportunities that benefit independents and/or customers.

#### 4.7 Summary

Chapter 4 presented the results obtained by analyzing 19 MSP companies. The analysis was based on MSP logic discussed in Hagiwara and Wright (2015a; 2015b; 2015c) and applications to specific strategies provided in Hagiwara and Altman (2017). Sample criteria and selection process, and the company information provided background to companies that were examined. Representation drawn from the corpus was explained in terms of agents and affiliations discussed in Hagiwara and Wright (2015a; 2015b; 2015c) and applications to specific strategies provided in Hagiwara and Altman (2017). Four new agents were found by examining 19 companies, and the affiliation between each of these new agents and the operator were

described. These new agents did not directly interact in a trade or exchange with customers and therefore distinguished from the definition of an independent that affiliated with the Operator. The representation drawn from the corpus incorporated examined data and included 7 agents and affiliations. Four propositions were developed anchored on new agents and affiliations.

The results present research findings of four new agents and affiliations. In line with the expected deliverables, (i) a representation from corpus that explains the logic of an MSP (ii) a set of propositions developed anchored around the representation from the corpus, (iii) new findings from examining data on 19 MSP startup companies during their growth stage, (iv) a representation that incorporates data on startups to explain the logic of an MSP and (v) a set of new propositions developed anchored around the new model representing new agents and affiliations were presented.

## 5. DISCUSSION

Chapter 5 is organized into eight sections. Section 5.1 details the Hagiu and Wright formulation of an MSP and lead the discussion into significant findings of this research. Section 5.2 discusses the new agent, Third Parties. Section 5.3 discusses the new agent Catalysts. Section 5.4 discusses the new agent, Affiliates followed by the section 5.5 discussion on the new agent, Sides on Demand. Section 5.6 qualifies direct interactions based on results, section 5.7 links the research with reviewed literature, and section 5.8 concludes.

### 5.1 MSP logic from corpus and findings of the research

Researcher's examination of the corpus of MSP, aimed at detailing Hagiu and Wright formulation of a MSP. An intermediary's choice between functioning as a marketplace or reseller and how to optimally position an intermediary between two different modes (Hagiu and Wright, 2015a), the economic trade-offs that drive the decision related to alternatives of functioning as a vertically integrated (VI) firm, reseller or an input supplier (Hagiu and Wright, 2015b), and the firm's control of service provision versus the agent's control of the service provision (Hagiu and Wright, 2015c) were examined. These mathematically supported discussions along with the applications of strategies (Hagiu and Altman, 2017) provided the base for examining the 19 companies.

Companies in the sample were qualified as MSP companies provided that they served multiple groups and facilitated interactions between customers or groups

(Hagiu and Altman, 2017, p.96). Hagiu and Wright (2015b, p.163) definition confirms the two key features of MSPs as;

- Enabling direct interactions between two or more distinct sides, and
- Each side being affiliated with the platform

The companies in the sample were examined to identify the distinct sides, namely, independents and customers, and the affiliations between independents and customers, and between each of them and the operator. The term “direct interaction” implies that independents and customers retain control over the key terms of the interaction (Hagiu and Wright, 2015b, p.163) to the extent that sides retain residual control rights (ownership) over the goods traded (Hagiu and Wright, 2015b, p,170). The key terms of the interaction could be the pricing, bundling, marketing and delivery of the goods or services traded, the nature and quality of the products and services, and the terms and conditions (Hagiu and Wright, 2015b, p.163).

The term “affiliation” implies that each side being affiliated with the platform makes platform specific contributions as a necessity for them to be able to directly interact with each other (Hagiu and Wright, 2015, p.163) and these investments could be a fixed access fee, expenditure of resources, or an opportunity cost.

The independents and the customers in each of the companies in the sample were affiliated to the platform and had direct interactions exchanging value for the products and services provided through the platform. Examination of the sample revealed that there were other entities that engaged with the platform in addition

to those that were identified as independents and customers. These entities demonstrated affiliation with the operator, without having any direct interaction with customers. Each of these entities provided resources or held an opportunity cost as an investment while the operator either compensated money value or satisfied a need in return, demonstrating the affiliation. While affiliation by the sides help distinguish MSPs from Input suppliers (Hagiu and Wright, 2015b, p.164), affiliation alone is not sufficient to create a MSP (Hagiu and Wright, 2015b, p.164). Since there were no direct interactions found between these entities and either independents or customers, the new entities were identified as four new agents that enhance the functionality of the MSP operator. The four new agents were identified as (A) Third Parties, (B) Catalysts, (C) Affiliates, and (D) Side(s) on demand.

## 5.2 New agent 1: Third parties

Of the 19 companies examined, 12 companies had affiliated with third parties in a variety of four ways: to grow sides; provide services; fulfill regulatory and compliance requirements; tracking and verification, and provide amenities to another entity. Figure 5.1 shows the connection between MSP operator and the third parties.

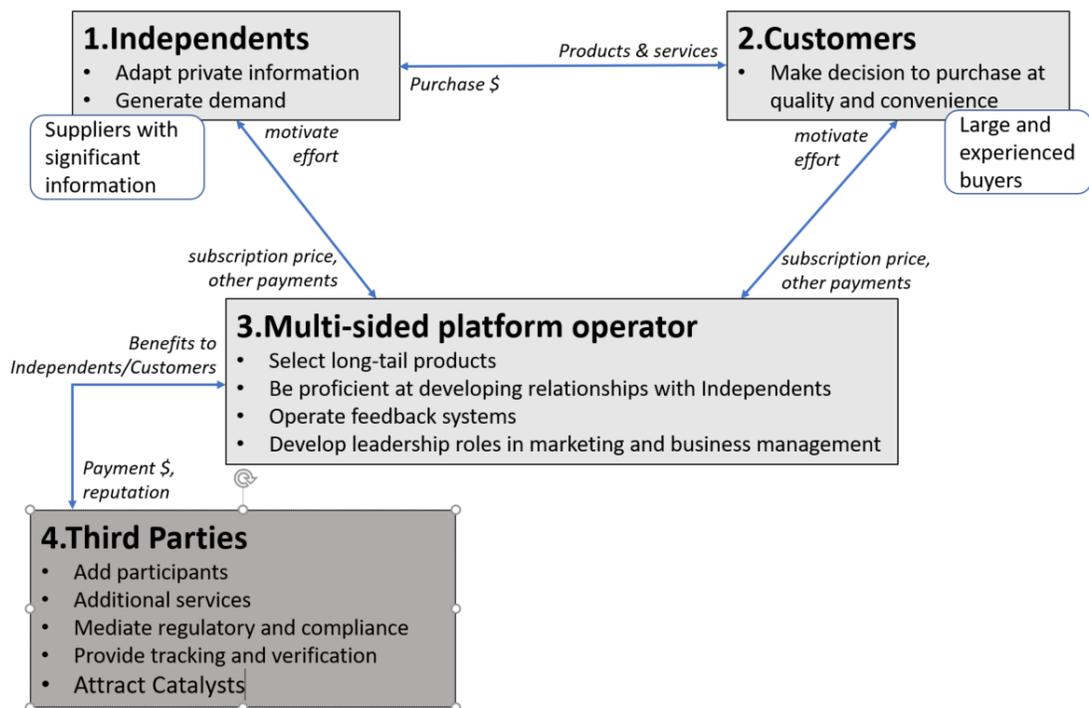
The affiliation between the third parties and the operator is specified in terms of the:

- Investment that third parties make in the operator's platform to be able to sell (products/services to catalysts), provide (additional services,

regulatory and compliance requirements, tracking verification services to operator to complete MSP transactions), or increase their reputation (adding participants to sides)

- Investment that operator makes to purchase and attract third party products and services

Figure 5. 1 Representation of the affiliations between MSP operator and third parties



### 5.2.1 Affiliation with third parties to add participants:

MSP Operators grew their side(s) by affiliating with third parties. Independents' profits depend on how many other MSP suppliers join and if doing so gives them non-negative profits (Hagiu and Wright, 2015a, p.190), and Independents care to capture value through indirect network effects (Hagiu and Wright, 2015b, p.164).

MSP operator by affiliating with third parties grow the number of independents as well as customers on each side. Coursera affiliate with businesses, governments, and organizations providing flexible pricing, customized offering, progress tracking and real-time analytics in the expectation these third parties select Coursera to provide learning opportunities to their employees as a part of their employee development programs. Thrive Market connects with non-profit organizations to qualify needy families as recipients of an opportunity to receive free memberships, and conduct advocacy campaigns. Lending Loop affiliate with distributor and referral partners expecting them to introduce their partners and business owners to Lending Loop services. Airsorted affiliate with cleaners to impress customers and grow customer side.

#### 5.2.2 Affiliation with third parties to provide additional services to their customers:

MSP operators offer additional services to their customers, by affiliating with third parties. Helping provides other household services to their customers through partner companies when customers book on demand cleaners from Helping. Farm Lead affiliate with grain testing labs to provide grain testing facilities to farmers so that farmers can gain competitive prices for their tested grains. Lending Loop also allows small businesses to purchase products through financing by affiliating with vendor partners, in addition to finding affordable financing for their businesses through Lending Loop.

### 5.2.3 Affiliation with third parties to handle regulatory and compliance requirements

MSP Operators handle regulatory and compliance matters by affiliating with third parties. This enables independents and customers complete regulatory requirements and also find out if the contracting independents and customers comply the standards. Lending Loop uses a Canadian Chartered Bank to handle all money that is stored on the platform and registered as an Exempt Market Dealer in all provinces and territories. DoorDash conducts satisfactory background checks and checks Dashers' clean driving records. Helping insured cleaning aids who are tested for skills competence, and snappr obtains insurance for photographers to cover all bookings, photography equipment theft-damage-loss, public liability and for professional indemnity. By affiliating with third parties to provide the regulatory and compliance needs that are necessary, enhances direct interactions between the independents and customers.

### 5.2.4 Affiliation with third parties to track and verify

MSP Operators use third-party tracking and verification as a feedback measure. Ahalogy uses third-party tracking to select best high engagement creation. Exitround facilitates consultation with a Target Acquisition Curator for company acquirers, their Customers side. MissionU partners with leading companies to ensure students learn what's needed to succeed in the job, and Coursera affiliate with beta testers who are enthusiastic in helping to explore courses before they

open to the public, and give feedback to instructors. These companies using third-party services enhance the quality of product/service to independents and customers.

#### 5.2.5 Affiliation with third parties to provide amenities to Catalysts

MSP Operators provide amenities to attract and retain catalysts by affiliating with third parties. DoorDash provides to “Dashers”, a commercial auto insurance, access to health care coverage, subsidized member fee for an application for tracking their revenue and expenses for tax purposes, and access to daily pay company to receive wages, by affiliating with third parties. These amenities attract and retain Dashers who deliver orders placed by customers.

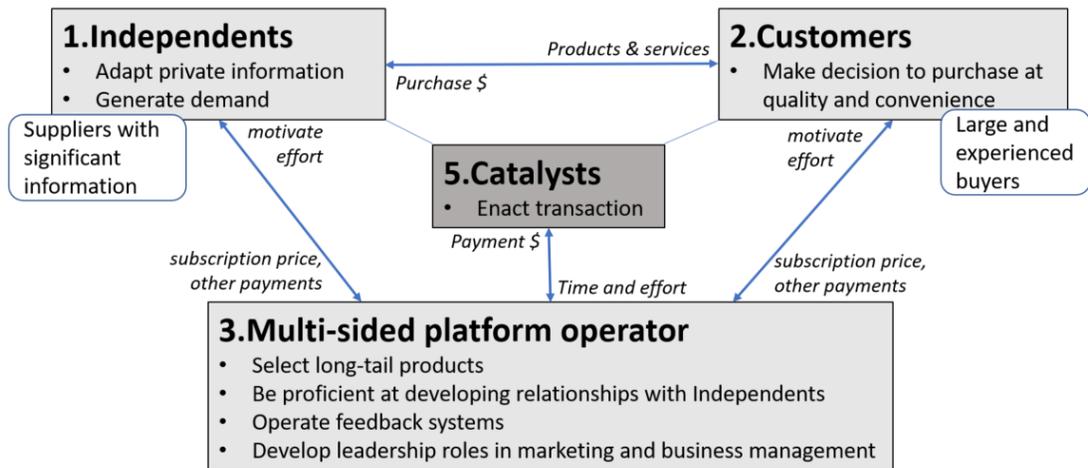
#### 5.3 New Agent 2: Catalysts

Formulation of the direct interaction between the independents and customers defined in an MSP (Hagiu and Wright 2015b, p.163) seems to be incomplete for delivery MSPs without catalysts, as observed in the sample. The two delivery MSPs Instacart and DoorDash, both used catalysts to pick and deliver orders. Catalysts engage with independents and customers and represent the operator. The operator remunerates the catalysts for their service. Figure 5.2 shows the connection between MSP operator and catalysts.

The affiliation between the catalysts and the operator is specified in terms of the:

- Investment that catalysts make to be able to serve independents and customers on behalf of the operator (devoting free time and their own vehicle)
- Investment that operator makes to motivate catalysts' effort and pay compensation for their services

Figure 5. 2 Representation of the affiliation between MSP Operator and Catalysts



Catalysts enhance the affiliation between sides, as well as help induce revenue to independents by providing good customer service. The grocery sales and delivery company Instacart uses “Shoppers” who act as catalysts that click, collect and deliver grocery items. The food and goods delivery company DoorDash receives orders and assigns “Dashers” who act as catalysts that pick and deliver orders. In both these companies, the interaction between independents and customers would not be completed without the presence of catalysts.

#### 5.4 New Agent 3: Affiliates

Of the 19 companies examined, five companies affiliated with affiliates to grow sides. Affiliates promote operator's business and help grow the independent and customer bases. Figure 5.3 shows the connection between MSP operator and the affiliates.

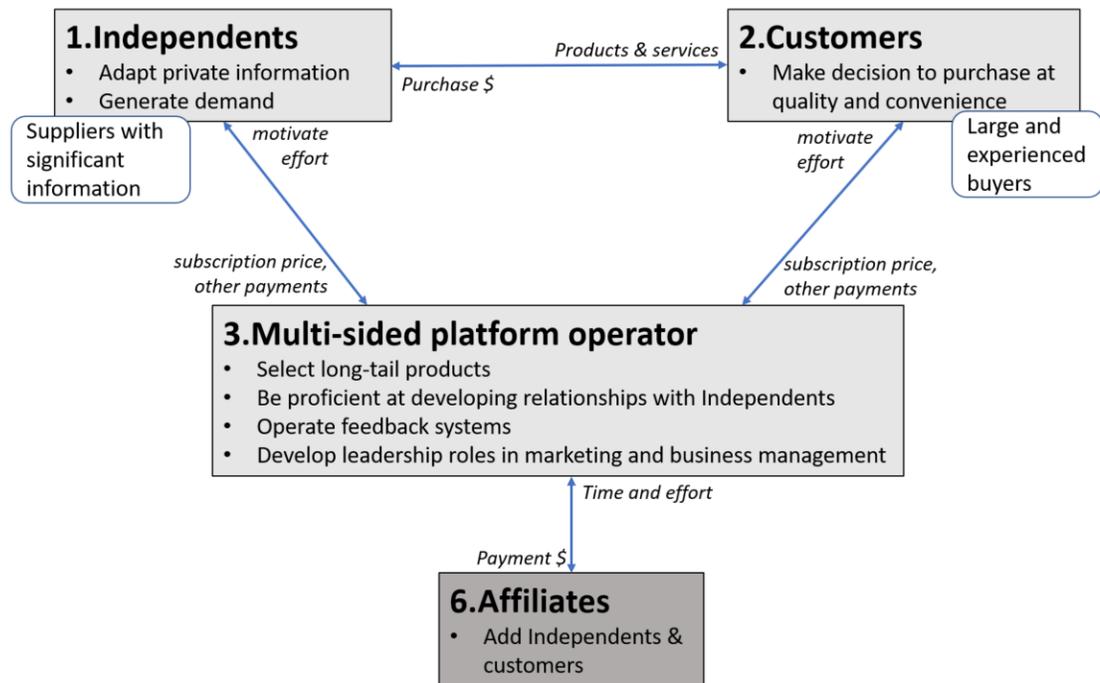
Operators pay a commission or bonus to affiliates when the participants connected through affiliates interact with the sides to exchange value. Operators provide affiliates with website links, banners, and promotional items to attract new participants. Five companies in the sample used affiliates to grow their businesses. Freightos affiliates sign up, refer shippers to Freightos website and receive \$100 bonus on the shipper's first booking. Coursera pays a 20% commission to their affiliates on purchases made through affiliation. Thrive Market pays their affiliates \$25 for every member they add. Lending Loop pays their affiliates a commission for referring a lending partner upon publishing content and refer readers to Lending Loop, while MissionU provides a cashback bonus to their affiliates as well as referred student, upon every student enrolled through an affiliation.

The responsibility of the affiliates seems obvious, but the affiliation helps MSP Operator add participants to Independents' and Customers' sides. As noted in section 5.2.1 independents' profits depend on how many other suppliers join and if doing so gives them non-negative profits (Hagiu and Wright, 2015a, p.190), and independents care to capture value through indirect network effects (Hagiu and Wright, 2015b, p.164).

The affiliation between the affiliates and the operator is specified in terms of the:

- Investment that affiliates makes to find new entrants to join the platform (promotions, advertising, and leveraging network)
- Investment that operator makes to motivate the affiliates' effort and pay commissions and bonuses for their services

Figure 5.3 Representation of the affiliation between MSP Operator and Affiliates



### 5.5 New Agent 4: Side(s) on demand

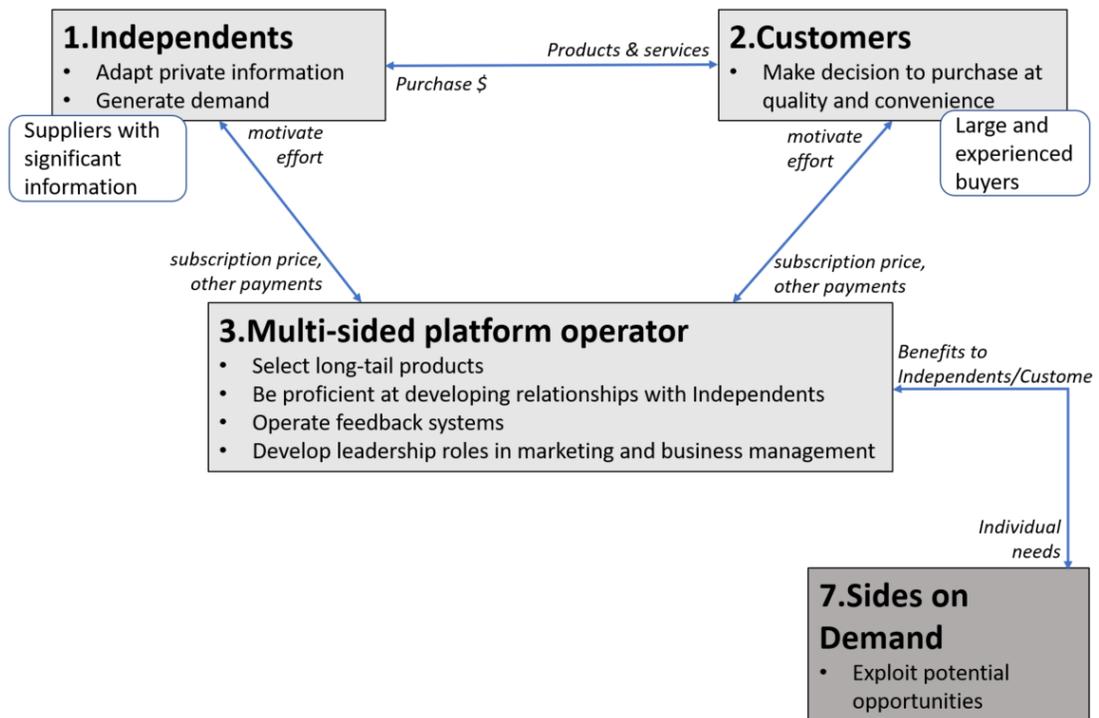
MSP Operators provide potential engagement opportunities to external entities who seek to fulfill their needs. By creating such an affiliation, operators enable direct or indirect network effects that benefit independents and/or customers.

Figure 5.4 shows the connection between MSP operator and the sides on demand.

The affiliation between the sides on demand and the operator is specified in terms of the:

- Investments the sides on demand make exploiting opportunities with operator’s platform
- Investments the operator makes to attract and motivate sides on demand

Figure 5. 4 Representation of the affiliation between MSP Operator and the Sides on Demand



Three companies in the sample showed side(s) on demand. Pillow, a short-term rental company had potential rent seekers as a side on demand while the independents and customers that belonged to MSP were property owners and residents. Operator affiliated with rent seekers found potential customers for

residents who want to rent their homes on short-term, and residents shared the revenue with property owners who allowed them to rent their homes as a special condition in their leasing agreement. MissionU had potential employers as a side on demand while independents and customers that belonged to MissionU MSP were educators and students. MissionU affiliate with employers to provide an opportunity for students to find jobs. Thrive Market had the concept of one free membership offered to a deserved family for every member who signed up and engaged one side on demand, a list of low-income families who could be the recipients of this opportunity.

With Pillow and MissionU examples, sides on demand complete a business cycle benefitting Customers, while in Thrive Market, sides on-demand help grow sides benefitting indirect network effects to independents

## 5.6 Direct interactions

In this paper, MSP is recognized as defined by Hagiu and Wright (2015b, p.163), that enable direct interactions between independents and customers and that independents and customers are affiliated with the platform. Direct interactions, therefore, exists between independents and customers and they retain control over key terms of the interaction. Independents and customers make platform-specific investments in order for them to be able to interact with each other (Hagiu and Wright, 2015b, p.163).

In the examination of the sample of 19 companies, the direct interaction between independents and customers were identified by answering the question “what transaction do MSP enable?” as listed in Table 4.1. This transaction is enabled through affiliations between (a) Independents and Customers, (b) Independents and Operator, and (c) Customer and Operator. The affiliation between independents and operator and the affiliation between customers and operator explained how the direct interactions were enabled in each MSP. The affiliation between independents and customers then demonstrated the control over direct interaction. Direct interactions between independents and customers set MSPs apart from resellers, and vertically integrated firms and platform affiliation by independents and customers set MSPs apart from input suppliers (Hagiu and Wright, 2015b, p.164).

As shown in the representation drawn from the corpus in Figure 4.2, independents bear the attributes of having significant information advantage (Hagiu and Wright, 2015a, p.198) and customers bear the attribute of being large and experienced buyers (Hagiu and Wright, 2015b, p.172). For the direct transaction to take place, independents must decide their affiliation based on their private information (Hagiu and Wright, 2015b, p.162,167), which are non-transferable, and the chosen transferable action that suits them to adapt their decisions to their private information. At the same time, customers must decide their affiliation and purchase decisions (Hagiu and Wright, 2015b, p.166, 188). This affiliation is strengthened by the independents effort to grow their private information and

thereby generate demand, to attract more customers for their offer. Independents' affiliation with the operator must provide motivation effort for the independent to best adapt their decisions to their private information (Hagiu and Wright, 2015a, p.186) and select transferable actions that control key terms of the interaction. This enables the direct transaction between independents and customers, where independents can provide service directly to customers, and customers act their purchase decision.

## 5.7 Discussion of results relating to literature

This section discusses relating to literature, the effect of holding private information and control rights over the transferable decision, network effects, and the hybrid modes of operation.

The emphasis on independents' private information does not guarantee that independents only hold important private information. Both sides, independents and the operator may have private information that helps adapt their decisions on the effectiveness of transferable actions (Hagiu and Wright, 2015b, p.169). They conduct activities (ex: marketing, advertising) to generate demand and attract clients. Independents do not take into account the other independents that join when choosing their marketing activities (Hagiu and Wright, 2015a, p.191).

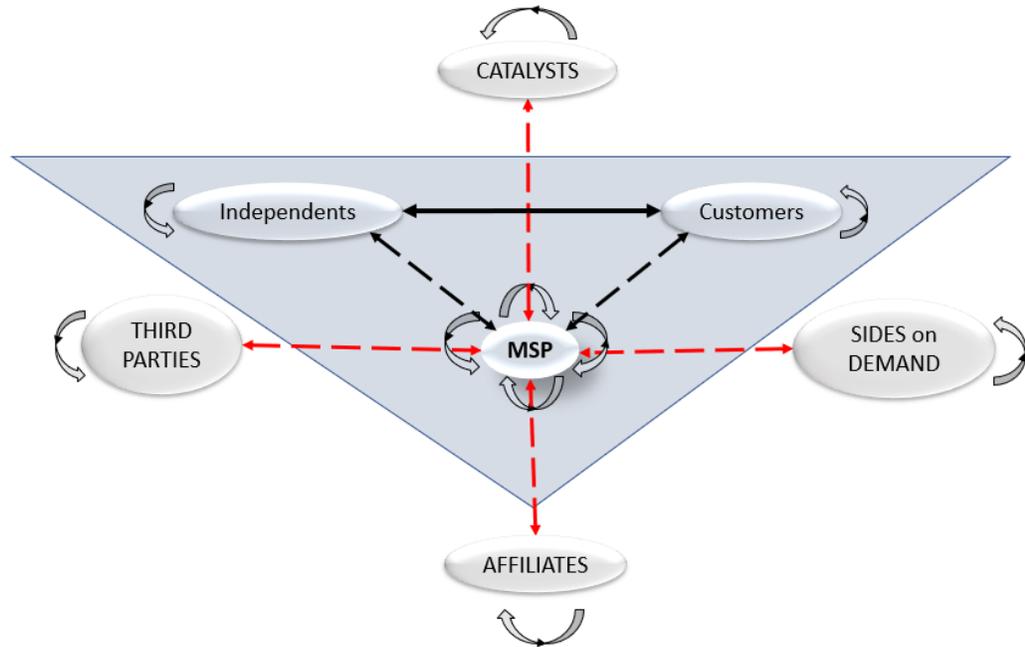
Therefore, some marketing activities which may not be specific to independents private information may best carry out by the operator thus retaining some control rights on the transferable decision with the operator. The sample demonstrated the

affiliations that operators could exercise in order to meet best interests of multiple independents. This helps mitigate the pessimistic expectations of independents who would potentially join. These affiliations tell us that MSPs do not exist in isolation. Although some control rights over transferable actions are being allocated to independents, the operator has a responsibility to provide motivation and the tools and techniques to ease the direct interaction between independents and the customers. This does not rule out the importance of private information by the independents but enhances the direct interaction between independents and customers.

An independent's profit increases when more independents join the side, and this depends on how positive their expectations are in deciding to join the side. Network effects merely don't decide or define an MSP but create and capture economic value (Hagiu and Wright, 2015b, p.171), thus significantly affects participants' decision to join. Because of the network effects, users will pay more to access a bigger network and the margins improve and users grow, as opposed to traditional businesses where growth beyond some point lead to diminishing returns (Eisenmann et al., 2006). The affiliations found between operator and the four new entities, namely, third parties, catalysts, affiliates, and the sides on demand, create network effects that benefit the direct interaction between the independents and customers. This result connects Evans and Schmalensee (2016) suggestion of MSPs generating their customers and enabling interactions as opposed to ordinary businesses attracting customers and selling on profits. Figure 5.5 shows the

affiliations that were observed in the sample, that supports the direct interaction between the independents and customers.

Figure 5. 5 Affiliations between all agents that enhance the direct interaction between Independents and Customers



Conforming the discussion about handing over some control rights over transferable actions to either party, the companies in the sample showed a tendency towards a hybrid mode of operation. This elaborates Hagiu and Wright (2015a, p.192,193) recommending adopting a hybrid structure involving reseller mode when (i) the operator has an information advantage over independents and (ii) to overcome pessimistic expectation formed by potential independents' decision to join. However, the direct interaction between independents and customers based on residual control rights (ownership) over the goods traded promotes the

investment made by independents. As Incentive Systems theory of the firm explains, the ownership of assets is not contractible and provides incentives that cannot be replicated via contract (Gibbons, 2005, p.207). Allocation of control rights to independents and operator over certain decisions can be explained according to Property Rights theory of the firm as parties share surplus from their specific investments and that becomes an incentive to their platform investments (Gibbons, 2005, p.205). Further, the total surplus will be available to share because the integration decision determines ex-ante investments.

## 5.8 Summary

Chapter 5 discussed the results highlighting the main findings. Detailing from a corpus of the formulation of an MSP followed by an explanation of four new agents and their affiliation with the platform. Direct interactions were qualified as applicable in this research, and results were discussed relating to literature.

## 6. CONCLUSION

Chapter 6 consists of 3 sections. Section 6.1 highlights the importance of the research. Section 6.2 provides limitations of the research, and Section 6.3 suggests future work.

### 6.1 Importance

The data gathered by examining 19 MSP startup companies demonstrated direct interactions between sides and their affiliation with the operator. It also revealed that MSPs do not operate in isolation but create an affiliation with other entities that enhance the direct interaction between the independents and customers. MSP startups in the sample raised funding ranging from \$1.52M (Outschool, founded in 2016) to \$674.8M (Instacart, founded in 2012), and reported trailing twelve months revenue of \$1M or above. Four new agents and affiliations that were not present in the corpus were existing in the growth stage MSP startups that were examined. Of the 19 MSP startups in the growth stage 15 companies demonstrated any one or several of the affiliations between MSP operator and the new agents. This main contribution adds new knowledge with respect to growth stage MSP startups.

This research interprets and advance extant literature to explain the affiliations among independent suppliers, customers, and MSP operator, and the research findings introduce four agents and their affiliation with MSP operator that enable the growth of a MSP startup. A model that explains these affiliations provides a set of propositions. The results also imply that MSPs do allocate control rights over

transferable actions in two important ways: (i) allowing residual control rights to independents over the goods traded expecting independents to take control of the key terms of the transaction, and, (ii) retaining control rights over some actions that benefit sides over and above the actions performed by the independents. As such the four new agents belong affiliations with the operator, without having direct interactions with either independents or customers. New agents and their affiliation with the MSP operator strengthens the affiliation and increase the interactions between the independents and customers, thereby enabling the MSP startups to grow during the growth stage.

## 6.2 Limitations

The research sample consisted of 19 companies and considered a small sample. A larger sample would have helped determine more interactions and visibility of variations. Researcher's own judgment about interpreting the website information to decide MSP companies and determine affiliations between entities limits scope. Finally, the pool included companies launched at different years, therefore generalization will not be feasible on the data obtained from a company launched in 2012 and one launched in 2016.

## 6.3 Suggestions for future work

Propositions were developed from the representation from the corpus as well as the representation after sample data were incorporated. Future researchers may

develop testable hypotheses from these propositions. Future researchers may suggest a taxonomy of MSPs, a classification into subcategories based on affiliations. Another important area of research would be to clarify funding/growth relationship of MSP startups during the growth stage.

MSPs have become an important element in creating economic value, and contribution of this research towards finding a logic for MSP startups during their growth stage brought in four new agents and explanatory model providing insights to startup teams. It is important for entrepreneurs to build capabilities and leverage their network to affiliate with agents other than the sides that directly interact to exchange value. Ability to attract external resources enhance MSP startup outcomes. MSP startups during their growth stage, do not operate in isolation restricting its affiliations to sides who directly interact with each other but also affiliate with other entities to enhance those direct interactions – a revelation that is not explained in the literature about the logic of the growth of MSPs.

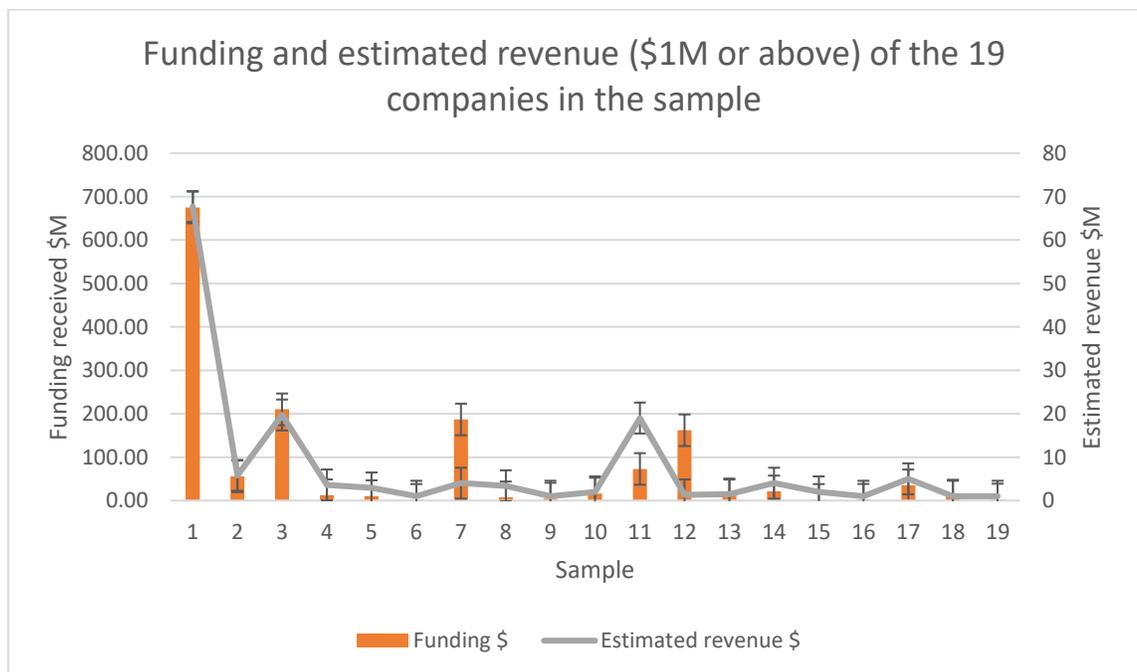
APPENDICES

**Appendix 1:** Funding and estimated revenue for 19 companies included in the sample

	Company's name, "alias", and web address	Year founded	Estimated revenue	Amount raised	Latest funding	Latest funding type	Funding status
1	Maplebear, Inc.   "Instacart" <a href="http://www.instacart.com">www.instacart.com</a>	2012	\$67.7M	<u>\$674.8M</u> in 7 rounds	\$400M / Mar 2017	Series D	Late Stage Venture
2	Tradeos, Ltd.   "Freightos" <a href="http://www.freightos.com">www.freightos.com</a>	2012	\$5.8M	<u>\$55.9M</u> in 6 rounds	\$25M / Mar 2017	Series B	Early Stage Venture
3	Coursera, Inc.   "Coursera" <a href="http://www.coursera.org">www.coursera.org</a>	2012	\$19.7M	<u>\$210.1M</u> in 7 rounds	\$64M / Jun 2017	Series D	Late Stage Venture
4	Cohealo Inc.   "Cohealo" <a href="http://cohealo.com">http://cohealo.com</a>	2012	\$3.6M	<u>\$12.15M</u> in 3 rounds	\$2M / Sep 2016	Series A	Early Stage Venture
5	MLW Squared, Inc.   "Ahalogy" <a href="http://www.ahalogy.com">www.ahalogy.com</a>	2012	\$2.9M	<u>\$10.2M</u> in 4 rounds	\$3M / Jul 2016	Series unknown	Status unknown
6	Exitround, LLC   "Exitround" <a href="http://www.exitround.com">www.exitround.com</a>	2013	\$1M	<u>\$1.625M</u> in 2 rounds	\$1.63M / Feb 2015	Seed	Seed

7	DoorDash, Inc.   "DoorDash" <a href="http://www.doordash.com">www.doordash.com</a>	2013	\$4M	<u>\$186.7M</u> in 5 rounds	\$127M / Mar 2016	Series C	Late Stage Venture
8	FarmLead Resources Ltd.   "Farmlead" <a href="https://farmlead.com">https://farmlead.com</a>	2013	\$3.4M	<u>\$7.28M</u> in 2 rounds	\$6.5M / Mar 2017	Series A	Early Stage Venture
9	Guesty, Inc.   "Guesty" <a href="http://www.guesty.com">www.guesty.com</a>	2013	\$1M	<u>\$4.5M</u> in 2 rounds	\$3M / May, 2017	Series A	Early Stage Venture
10	Pillow Homes, Inc.   "Pillow" <a href="http://www.pillowhomes.com">www.pillowhomes.com</a>	2014	\$2M	\$16.15M in 3 rounds	13.5M / Jun 2017	Series A	Early Stage Venture
11	Helping GmbH   "Helping" <a href="http://www.helping.de">www.helping.de</a>	2014	\$19M	\$72.74M in 4 rounds	€10M / Mar 2017	Series C	Status unknown
12	Thrive Market, Inc.   "Thrive Market" <a href="http://www.thrivemarket.com">www.thrivemarket.com</a>	2014	\$1.3M	<u>\$161.88M</u> in 4 rounds	\$10M / Oct 2016	Convertible note	Early Stage Venture
13	Loop Financial, Inc.   "Lending Loop" <a href="http://www.lendingloop.ca">www.lendingloop.ca</a>	2014	\$1.5M	<u>\$12M</u> in 2 rounds	\$10M / Oct 2017	Debt financing	Status unknown
14	Proov, Inc.   "proov" <a href="http://www.proov.io">www.proov.io</a>	2015	\$4M	\$21M in 2 rounds	14M / Aug 2017	Series B	Early Stage Venture

15	Outschool, Inc   "Outschool" <a href="https://outschool.com">https://outschool.com</a>	2015	\$2M	\$1.52M in 2 rounds	\$1,4M/ Jun, 2017	Seed	Seed
16	Airsorted Limited   "Airsorted" <a href="http://www.airsorted.uk">www.airsorted.uk</a>	2015	\$1M	\$1.88M in 5 rounds	£1.5M/ Feb, 2017	Seed	Seed
17	Mealpal, Inc.   "MealPal" <a href="http://www.mealpal.com">www.mealpal.com</a>	2016	\$5M	\$35M in 2 rounds	\$20M / Sep 2017	Series B	Early Stage Venture
18	MissionU PBC   "MissionU" <a href="http://www.missionu.com">www.missionu.com</a>	2016	\$1M	\$11.5M in 2 rounds	\$8.5 / Sep 2017	Series A	Early Stage Venture
19	Snappr Pty. Ltd.   "Snappr" <a href="http://www.snappr.co">www.snappr.co</a>	2016	\$1M	\$2.38M in 3 rounds	\$2M / Sep 2017	Seed	Seed



**Appendix 2:** Data for the three agents and three affiliations collected for 19 companies included in the sample

S1: **Instacart (2012)** <https://www.instacart.com>

Direct interaction:		<b>grocers</b> sell groceries with a delivery service option to <b>buyers</b> online
Affiliation between sides	Y	Grocery stores and customers
Independents' platform specific investment:	Y	Grocers issue coupons, promotional offers
Customers' platform specific investment:	Y	purchase \$, delivery cost \$, Instacart fee \$
MSP Operator's platform-specific investments:	Y	<ul style="list-style-type: none"> <li>- Operates e-commerce platform</li> <li>- to Grocers: access to the Instacart framework, operations, logistics, and user interface, and labor</li> <li>- a network of shoppers;</li> <li>- to Customers: dashboard of storefronts, delivery by personal shoppers, free delivery on a first order, regular/ express service option, customized offers (coupons, promotions), website content (recopies, lists), mobile app;</li> <li>- To Shoppers: fees for pick up and delivery \$</li> </ul>
Independents with significant information generating demand:	Y	Grocers, Grocers issue coupons, promotional offers
Large and experienced buyers:	Y	Customers buying groceries
Product or service: complementary products with long shelf life	Y	complementary products, not resold
Operate feedback systems:	Y	Customer feedback   social media   Blog   Shopper support   contact us
Proficient relationships with independents:	Y	Partner grocers
Leadership roles in marketing and business development:		

S2: **Freightos (2012)** <https://www.freightos.com>

Direct interaction:		<b>Shippers &amp; forwarders/carriers</b> generate quotes, share rates, and find lowest shipping rates & fastest routes for <b>e-commerce customers</b> through Software-as-a-Service platform
Affiliation between sides	Y	Shippers   forwarders/carriers   and e-commerce retailers
Independents' platform specific investment:	Y	Shippers' – @2% of secured order +transaction fee   forwarders/Carriers' – buy on Freightos marketplace; book from Freightos vendors
Customers' platform specific investment:	Y	e-commerce retailers' – sell on Freightos marketplace;
MSP Operator's platform-specific investments:	Y	<ul style="list-style-type: none"> <li>- Provide Freightos AcceleRate SaaS technology and free freight shipping tools on site; free access to platform</li> <li>- to Shippers: quick quotes, speedy response</li> <li>- to Forwarders/Carriers: fewer wait times</li> <li>- to E-Commerce retailers: automated pricing</li> <li>- to Affiliates: reward \$, personalized web link</li> </ul>
Independents with significant information generating demand:	Y	Shippers generating quick quotes, speedy responses using MSP provided tech & tools
Large and experienced buyers:	Y	e-commerce retailers
Product or service: complementary products with long shelf life	Y	complementary products with long shelf life; cannot be resold or reused
Operate feedback systems:	Y	Freight Tools   Social media   Contact us   Events
Proficient relationships with independents:		
Leadership roles in marketing and business development:		

S3: **Coursera (2012)** <http://www.coursera.org>

Direct interaction:		<b>course providers</b> offer courses to a diverse audience of <b>learners</b> online
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Affiliation between sides	Y	Educators/Developers providing courses   Learner support and Learners
Independents' platform specific investment:	Y	Educators provide content, facilitate courses; co-brand certificates;
Customers' platform specific investment:	Y	Learners <ul style="list-style-type: none"> <li>- Learn for fee \$, audit courses for free;</li> <li>- Volunteer as Mentors – foster discussion;</li> <li>- Volunteer as translators – translate video subtitles</li> </ul>
MSP Operator's platform-specific investments:	Y	<ul style="list-style-type: none"> <li>- Learners: Open to everyone; 100% online or downloadable content with iOS &amp; Android apps; website help; accommodations for learners; Sharable Course and Specialization Certificates; free-trial promotion; subscription plans;</li> <li>- Educators:</li> <li>- Learner support:</li> <li>- Developers: access to data feed – metadata; commission paid on any course purchase originating from their project;</li> <li>- Affiliates: 20% commission on purchases made through affiliation; Coursera banners and text links; newsletter feed; access to Coursera product merchandiser feed;</li> <li>- Business, Gov &amp; Org: flexible pricing options, customized offering</li> <li>- Learner support - Academic and technical support for learners; foster discussion</li> </ul>
Independents with significant information generating demand:	Y	Educators   Developers offer courses
Large and experienced buyers:	Y	Learners
Product or service: complementary products with long shelf life	Y	complementary products with long shelf life; cannot be resold
Operate feedback systems:	Y	Community Blog   Social media   Course review and rating   Blog   Contact us
Proficient relationships with independents:	Y	Developers
Leadership roles in marketing and		

business development:		

S4: Cohealo (2012) <http://www.cohealo.com>

Direct interaction:		<b>health system providers</b> optimize the use of clinical assets and <b>medical facilities</b> improve access to care by centralizing clinical assets through a cloud-based platform
Affiliation between sides	Y	Health system providers and Medical facilities
Independents' platform specific investment:	Y	Health systems/Medical institutions' - liberate their equipment in support of clinical teams across communities
Customers' platform specific investment:	Y	Medical facilities' – improve access to care
MSP Operator's platform-specific investments:	Y	<ul style="list-style-type: none"> <li>- Provide cloud-based platform supporting logistics capabilities, and analytics; centralizes all medical equipment and its data on one platform to track a health system's equipment across facilities; access to data through an intuitive app;</li> <li>- Health system providers and medical facilities: On-demand access to every asset in the system; Alerts when new technology is added to the system; benefit from optimized spend, accelerated cash flow</li> <li>- Medical facilities: customized dashboard; electronic records to quickly access and locate any piece of medical equipment; Real-time data and usage analytics, benefit from optimizing access to care</li> </ul>
Independents with significant information generating demand:	Y	Health system providers liberate assets,
Large and experienced buyers:	Y	Medical facilities (patients and clinician)
Product or service: complementary products with long shelf life	Y	complementary products with long shelf life; cannot be resold or reused
Operate feedback systems:	Y	Social media   Customer support   chat

Proficient relationships with independents:		
Leadership roles in marketing and business development:		

S5: **Ahalogy (2012)** <http://ahalogy.com>

Direct interaction:		<b>Brands &amp; content creators</b> grow customers and <b>consumers</b> maximise their experience through audience insights uncovered using category trend data
Affiliation between sides	Y	Brands & content creators   Users/Influencers
Independents' platform specific investment:	Y	Brands & content creators – \$ subscription per category;
Customers' platform specific investment:	Y	Users/Influencers' – indirectly, provide category content data
MSP Operator's platform-specific investments:	Y	<ul style="list-style-type: none"> <li>- Deliver category trend data, authentic influencer content, and social optimization technology; measurable impressions; provide third-party tracking;</li> <li>- Brands &amp; Agencies: offer MUSE to track content (free during planning) and BRANDABLES to uncover audience insights; Sign up for free + request a demo</li> </ul>
Independents with significant information generating demand:	Y	Brands & content creators through engagement metrics
Large and experienced buyers:	Y	Users/Influencers
Product or service: complementary products with long shelf life	Y	complementary products with a long shelf life
Operate feedback systems:	Y	Social media   contact us
Proficient relationships with independents:	Y	Influencers
Leadership roles in marketing and business development:		

S6: **Exitround (2103)** <https://exitround.com>

Direct interaction:		<b>company founders</b> (sell-side companies) feature best company exposure and <b>buyers</b> acquire companies using proprietary software algorithm
Affiliation between sides	Y	Acquirers   sell-side companies
Independents' platform specific investment:	Y	Sell-side companies – optimization efforts;
Customers' platform specific investment:	Y	Acquirers pay 1% of the deal or minimum fee \$20k to MSP operator
MSP Operator's platform-specific investments:	Y	<ul style="list-style-type: none"> <li>- proprietary software algorithms (free services initially);</li> <li>- sell-side: feature companies for exposure, optimize profile, explore opportunities</li> <li>- acquirers: ideal match, consultation with curators</li> <li>- curators:?</li> </ul>
Independents with significant information generating demand:	Y	Sell-side companies
Large and experienced buyers:	Y	Experienced acquirers
Product or service: complementary products with long shelf life	Y	complementary products with a long shelf life
Operate feedback systems:	Y	Social media   Blog   Contact us
Proficient relationships with independents:		
Leadership roles in marketing and business development:		

S7: **DoorDash (2013)** [www.doordash.com](http://www.doordash.com)

Direct interaction:		<b>businesses</b> sell food and other items and <b>customers</b> buy and order delivery online
Affiliation between sides	Y	Restaurant   Dashers   Customers
Independents' platform specific investment:	Y	Restaurants' - (don't know how);
Customers' platform specific investment:	Y	Customers (don't know how)

MSP Operator's platform-specific investments:	Y	<ul style="list-style-type: none"> <li>- receive orders, directs them to the restaurant, and assign a dasher</li> <li>- Dashers: delivery \$ and perks</li> <li>- Restaurants: web interface, mobile app, delivery logistics, exclusive dasher service;</li> <li>- Customers: delivery status algorithm</li> </ul>
Independents with significant information generating demand:	Y	Restaurants (don't know how)
Large and experienced buyers:	Y	Customers
Product or service: complementary products with long shelf life	Y	Complementary, cannot be resold
Operate feedback systems:	Y	Uses "Delight Score" system   Blog   Social media   support   Glassdoor
Proficient relationships with independents:		
Leadership roles in marketing and business development:		

S8: **FarmLead (2013)** <https://farmlead.com>

Direct interaction:		<b>farmers</b> and <b>verified buyers</b> list, negotiate and finalize grain deals online
Affiliation between sides	Y	Farmers and grain buyers
Independents' platform specific investment:	Y	Farmers' - free to post; increase seller ratings by adding photos and grain specs sheets; a connection fee of \$1/MT for the first 80MT, and \$0.25/MT for every MT thereafter
Customers' platform specific investment:	Y	Buyers' - a connection fee of \$1/MT for the first 80MT, and \$0.25/MT for every MT thereafter
MSP Operator's platform-specific investments:	Y	MSP' <ul style="list-style-type: none"> <li>- Watchlists and notifications; grain tests and negotiations including basis negotiations; market analysis, seminars &amp; conferences; CEO's daily note on price drivers;</li> <li>- To farmers: Grain calculator, and access to grain testing labs – created GrainTests.com</li> </ul>
Independents with significant information generating demand:	Y	Farmers

Large and experienced buyers:	Y	Grain buyers
Product or service: complementary products with long shelf life	Y	Complementary, with long shelf-life
Operate feedback systems:	Y	Chat   Contact us   Social media   Events   Support using intercom
Proficient relationships with independents:		
Leadership roles in marketing and business development:		

S9: **Guesty (2013)** [www.guesty.com](http://www.guesty.com)

Direct interaction:		<b>property management companies &amp; Airbnb hosts with multiple accounts</b> efficiently manage all of their businesses with <b>guests</b> in one platform through cloud-based software solution
Affiliation between sides	Y	Property management companies and Airbnb hosts with multiple accounts (HOSTS)   Guests
Independents' platform specific investment:	Y	HOSTS' - an "Account" to manage multiple properties; a percentage fee on pre-existing bookings and a commission charge for new bookings; Options: pay for PMS software only and receptionist service as an extra, or in a bundle with receptionist service; extra add-on services for fee; booking cancellation fee \$3
Customers' platform specific investment:	Y	Guests' - cancellation subject to host' cancellation policy
MSP Operator's platform-specific investments:	Y	MSP' <ul style="list-style-type: none"> <li>- PRODUCT: property management software; channel management; unified inbox; automation tools; powerful reporting; staff management app; personalized website; payment processing; 24/7 guest communication</li> <li>- To hosts: distribute the listings of all major OTAs; guarantees that owner will never miss a booking and increases visibility; all information on Guesty dashboard; Assign and manage entire team's tasks and work schedule; maximize revenue; centralize and automate hosts' activities</li> <li>- One-on-one live demo on request   Academy</li> </ul>

Independents with significant information generating demand:	Y	Hosts
Large and experienced buyers:	Y	Guests
Product or service: complementary products with long shelf life	Y	Complementary, long shelf-life
Operate feedback systems:	Y	Contact us   Events   Social media   blog   reviews
Proficient relationships with independents:		
Leadership roles in marketing and business development:		

S10: **Pillow (2014)** <http://www.pillow.com>

Direct interaction:		<b>building owners</b> allow compliant, transparent short-term revenue-shared rentals and <b>residents</b> earn an extra income with an end-to-end hosting solution through automated property and guest management services
Affiliation between sides	Y	Building owners   Property Managers   Residents Service providers   Renters
Independents' platform specific investment:	Y	Building owners' – agree to allow hosting, Residents and Property managers' – list vacant homes;
Customers' platform specific investment:	Y	Residents' – sign up for hosting; share income with owners; Renters' – rental charges \$ (side in waiting)
MSP Operator's platform-specific investments:	Y	MSP' <ul style="list-style-type: none"> <li>- automate marketing, guest management, key exchange, and turnover service; dashboard summary for unit level detail for entire property portfolio; Live demo</li> <li>- to building owners: monitor platform usage; access to reporting dashboards;</li> </ul>

		- to residents: advocate end-to-end hosting solution, a full-service solution;
Independents with significant information generating demand:	Y	Residents and Property Managers by listing space
Large and experienced buyers:	Y	Short-term rent seekers
Product or service: complementary products with long shelf life	Y	Complementary, with long shelf-life
Operate feedback systems:	Y	Social media
Proficient relationships with independents:		
Leadership roles in marketing and business development:		

S11: **Helping (2014)** <https://www.helping.de>

Direct interaction:		<b>cleaning aids</b> offer household services and <b>customers</b> search and book cleaning aids on demand online
Affiliation between sides	Y	Cleaners   Customers
Independents' platform specific investment:	Y	Cleaners' - accept and manage orders online using Helping app;
Customers' platform specific investment:	Y	Customers' - provide cleaning agents; regular cleaning @ € 13,90 /h; one time cleaning @ € 19,90 /h
MSP Operator's platform-specific investments:	Y	MSP' <ul style="list-style-type: none"> <li>- provide tested and insured cleaning aids; operates the platform, accepts booking requests; handles Rebookings and cancellations of customers;</li> <li>- Customers: no platform usage fee; cleaning aids insured against liability, security; good conduct and the trade license; payments 20% tax deductible; arrange special requests with cleaning staff; priorities checklist; Guide + FAQ</li> <li>- Cleaners: get cleaning jobs in their area; earnings into their accounts every two weeks;</li> </ul>

Independents with significant information generating demand:	Y	Cleaners
Large and experienced buyers:	Y	Customers
Product or service: complementary products with long shelf life	Y	Complementary, cannot be resold
Operate feedback systems:	Y	Blog   Social media   Customer reviews on cleaners   Feedback on website: common and individual feedback on cleaners; rating system
Proficient relationships with independents:		
Leadership roles in marketing and business development:		

S12: Thrive Market (2014) <https://thrivemarket.com>

Direct interaction:		<b>brands</b> sell healthy foods and natural products at wholesale prices to <b>members</b> online
Affiliation between sides	Y	Brands and Families (+ beneficiary families)
Independents' platform specific investment:	Y	Brands' - 25-50% off retail prices
Customers' platform specific investment:	Y	Families' - Annual membership \$59.95. donate from savings at the checkout for a beneficiary's cart;
MSP Operator's platform-specific investments:	Y	MSP' - wholesale prices, and to sponsor free memberships; offer custom educational content; <ul style="list-style-type: none"> <li>- To families: free 30-day membership trial; register for free, 15% off the first purchase; annual membership – 20% off first 3 purchases; orders over \$49 ships free;</li> <li>- To beneficiary families: free membership;</li> <li>- Affiliate partners: \$25 for introducing a friend; a custom link, sample posts, banners, and images; a secure account with a dashboard to track progress</li> <li>- Free trial + Guide + FAQ</li> </ul>

Independents with significant information generating demand:	Y	Brands
Large and experienced buyers:	Y	Families
Product or service: complementary products with long shelf life	Y	Complementary, cannot be resold
Operate feedback systems:	Y	Contact us   Social media   Blog   Chat
Proficient relationships with independents:		
Leadership roles in marketing and business development:		

S13: **Lending Loop (2014)** [www.lendingloop.ca](http://www.lendingloop.ca)

Direct interaction:		<b>lenders</b> risk managed lending and <b>small businesses</b> affordable financing through online process
Affiliation between sides	Y	Small businesses and Lenders
Independents' platform specific investment:	Y	Business' – origination fee + interests rates depending on credit ratings; commitment of \$25 for returned payment, and 15% of outstanding amount for late payments beyond 7 days
Customers' platform specific investment:	Y	Lenders' - minimum \$200 purchase of securities (notes); 1.5% annual servicing fee repayments; commitment to loans in \$25 incremental; connect QuickBooks account for auto uploading;
MSP Operator's platform-specific investments:	Y	MSP' <ul style="list-style-type: none"> <li>- assess lender's investor preferences and risk tolerance, investment objectives and current financial position; evaluate the loan request, assign risk rating, to creditworthy borrowers;</li> <li>- For lenders: deposit monthly payments collected from borrowers;</li> <li>- For borrowers: "borrower's Guide"</li> <li>- For partners: Distributor Ps – provide for their clients LL services; Referral Ps – commission; Affiliate Ps – commission; Vendor Ps – sales;</li> <li>- Refer a lender: \$25</li> </ul>

Independents with significant information generating demand:	Y	Businesses
Large and experienced buyers:	Y	Lenders
Product or service: complementary products with long shelf life		Complementary, long shelf-life
Operate feedback systems:	Y	Blog   Social media   Contact us   File complaint
Proficient relationships with independents:		
Leadership roles in marketing and business development:		

S14: **proof (2015)** <http://proof.io>

Direct interaction:		<b>startups</b> and <b>enterprises</b> facilitate proof-of-Concept process through Pilot-as-a-service platform
Affiliation between sides	Y	Enterprises and Startups
Independents' platform specific investment:	Y	Startups' – provide access to testing environment, maintain accuracy, quality, and legality
Customers' platform specific investment:	Y	Enterprises' – provide access to testing environment, perform at least one POC during six months, facilitating POC through the Platform - free of charge; fees for additional services - KPI suites, predictive analyses
MSP Operator's platform-specific investments:	Y	<p>MSP'</p> <ul style="list-style-type: none"> <li>- Provide Pilot-as-a-Service platform - to facilitate PoC's; provide License to access and use the services; various data sets;</li> <li>- Enterprises: access to pre-screened startups/ ISVs and PoC opportunities;</li> <li>- Startups: Access to PoC ready enterprises and everything needed to run a winning PoC - RFPs, APIs, data, systems, etc.; dedicated company profile page; Enterprise's complete system specs; Direct chat channel; Remote connection to the testing environment</li> </ul>

Independents with significant information generating demand:	Y	Startups
Large and experienced buyers:	Y	Enterprises
Product or service: complementary products with long shelf life	Y	Complementary, cannot be resold
Operate feedback systems:	Y	Events   Contact us   Social media   Blog
Proficient relationships with independents:		
Leadership roles in marketing and business development:		

S15: **Outschool (2015)** <https://outschool.com>

Direct interaction:		<b>teachers</b> offer and sell virtual classes and <b>parents (on behalf of children)</b> find, book and pay for classes online
Affiliation between sides	Y	Teachers   Learners (parents)
Independents' platform specific investment:	Y	Teachers' - determine their class offerings; market, sell and conduct their Classes; obtain all licenses and permissions required; agree on revenue rules
Customers' platform specific investment:	Y	Parents' - find and book Classes; pay all applicable fees for Classes; post public reviews about classes
MSP Operator's platform-specific investments:	Y	MSP' <ul style="list-style-type: none"> <li>- the availability of the Site; serve as the limited agent of each Teacher for accepting payments from a Parent; reject, remove any Classes from the marketplace, edit the class description; screen teachers; Video + FAQ</li> <li>- teachers: transfer the Teacher Fees to their Paypal account;</li> <li>- parents: act on behalf of the Parent, for the adequacy and satisfactory service by teachers</li> </ul>

Independents with significant information generating demand:	Y	Teachers
Large and experienced buyers:	Y	Parents of the learners
Product or service: complementary products with long shelf life	Y	Complementary, cannot be resold
Operate feedback systems:	Y	Social media   Contact us   Parents' reviews on classes   direct contact with teachers   Support using intercom
Proficient relationships with independents:		
Leadership roles in marketing and business development:		

S16: **Airsorted (2015)** [www.airsorted.uk](http://www.airsorted.uk)

Direct interaction:		<b>Home owners</b> let their homes to <b>guests</b> without being a host
Affiliation between sides	Y	Hosts and Guests
Independents' platform specific investment:	Y	Hosts' - 12%+VAT commission to MSP on the rental, or agree to a guaranteed monthly rent from MSP
Customers' platform specific investment:	Y	Guests' - pay rent for the stay
MSP Operator's platform-specific investments:	Y	MSP' <ul style="list-style-type: none"> <li>- Hosts: home inspection, lockbox, listing creation: professional photography and SEO; organize professional cleaners, linens, and towels; Guest vetting; account management; price optimization</li> <li>- Guests: guest communication; 24hrs check-in; replenishments; provide cleaning service;</li> </ul>
Independents with significant information generating demand:	Y	MSP on behalf of Hosts
Large and experienced buyers:	Y	Guests

Product or service: complementary products with long shelf life	Y	Complementary, long shelf-life
Operate feedback systems:	Y	Guests' reviews using Trustpilot   Social media   Contact us (number)
Proficient relationships with independents:		
Leadership roles in marketing and business development:		

S17: **MealPal (2016)** [www.mealpal.com](http://www.mealpal.com)

Direct interaction:		<b>restaurants</b> offer monthly subscription meal plans to <b>members</b> online
Affiliation between sides	Y	Restaurants and members
Independents' platform specific investment:	Y	Restaurants' – gift cards, commitment to offer a signature dish daily;
Customers' platform specific investment:	Y	Members' - Membership Fees
MSP Operator's platform-specific investments:	Y	MSP' - subscription meal plans for <\$6 per meal; promotional plans, trial membership
Independents with significant information generating demand:	Y	Restaurants
Large and experienced buyers:	Y	People who need to buy meals almost every day
Product or service: complementary products with long shelf life	Y	Complementary, cannot be resold
Operate feedback systems:	Y	Social media   Contact us
Proficient relationships with independents:		
Leadership roles in marketing and business development:		

S18: **MissionU (2016)** <https://www.missionu.com>

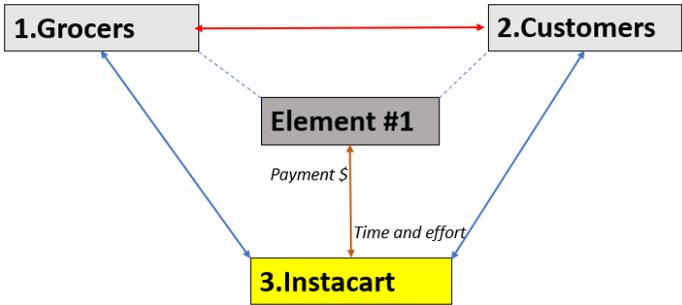
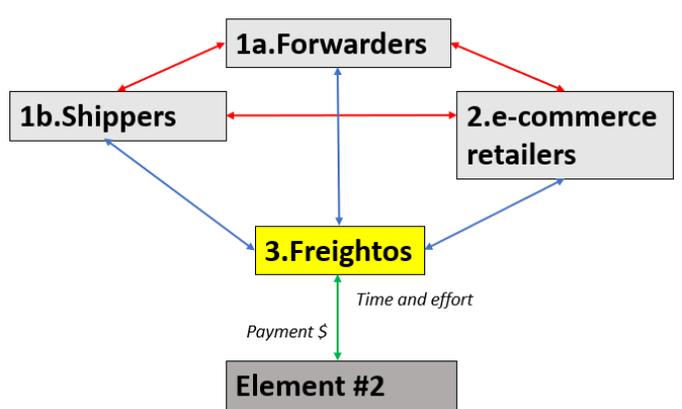
Direct interaction:		<b>Instructors &amp; industry experts</b> facilitate industry informed curriculum based learning to <b>students</b> through live sessions online
Affiliation between sides	Y	Students   Experts   Academics   Employers (side in waiting)
Independents' platform specific investment:	Y	Experts & Academics' – teach, craft curriculum; Employers' – real time projects for students
Customers' platform specific investment:	Y	Students' – ex-post contribution of 15% of their income for 3 years
MSP Operator's platform-specific investments:	Y	MSP' <ul style="list-style-type: none"> <li>- uniquely immersive, collaborative, and efficient learning experience, industry informed curriculum;</li> <li>- students: in-person activities, structured projects, team projects, technical skills, work experience, resume build &amp; career launch; Program + sign up   How to apply</li> <li>- experts &amp; Academics:?</li> <li>- Ambassadors: cash back bonus for referrals</li> <li>- Employers: get access to graduates</li> </ul>
Independents with significant information generating demand:	Y	Experts: MSP: MissionU process
Large and experienced buyers:	Y	Students
Product or service: complementary products with long shelf life	Y	Complementary, cannot be resold
Operate feedback systems:	Y	Social media   though hot jar   Contact us
Proficient relationships with independents:	Y	Partner companies   Employers
Leadership roles in marketing and business development:		

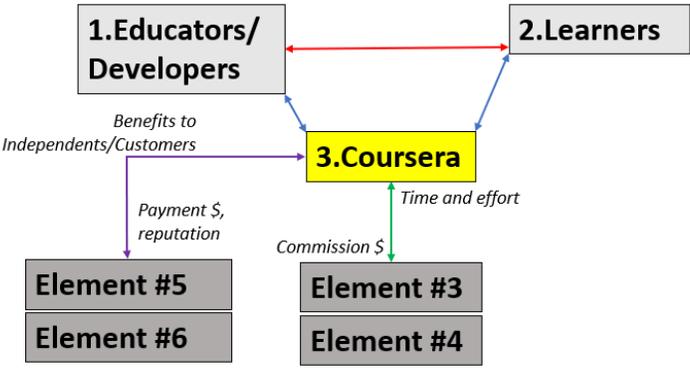
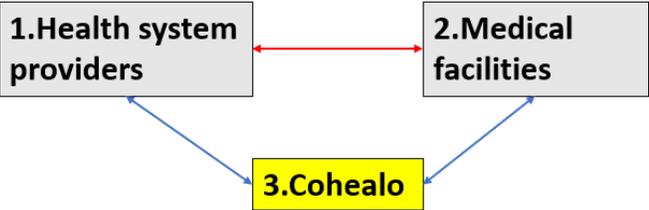
S19: **Snappr (2016)** [www.snappr.co](http://www.snappr.co)

Direct interaction:		<b>photographers</b> offer onsite services and <b>customers</b> book pre-vetted on demand photographers online
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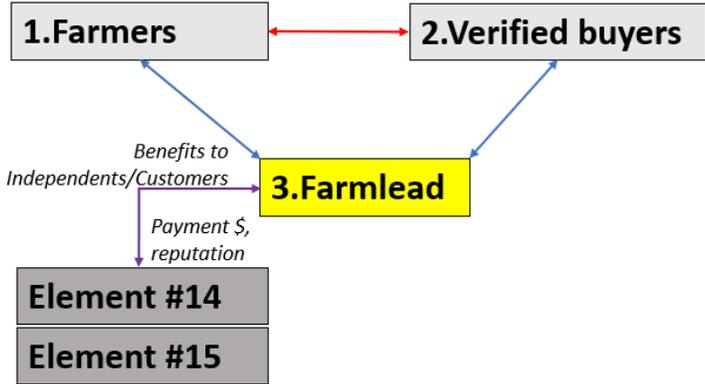
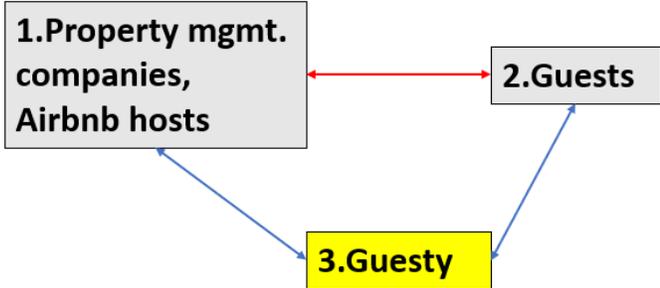
Affiliation between sides	Y	Photographers and subjects (customers)
Independents' platform specific investment:	Y	Photographers' – Snappr fee \$; complete the shoot, submit the edited photos, and get paid; must own professional level equipment; 12 months of Non-Circumvention Period @ opt-out fee of USD5,000
Customers' platform specific investment:	Y	Customers' - register with Snappr; full payment upfront
MSP Operator's platform-specific investments:	Y	MSP' - facilitate the availability of the Site; serve as the limited agent of each Photographer for the purpose of accepting payments from customer; <ul style="list-style-type: none"> <li>- Photographers: fortnightly payments; provide insurance for all bookings, photography equipment theft-damage-loss, public liability and professional indemnity (in Australia);</li> <li>- Customers: option to choose photographers; discounts for bulk purchases; full copyright ownership; receive photos online within 3 days, 7-10 days on print; can book up to 12 hours in advance; act on behalf of the Subject for satisfactory service by the photographer; How it works + FAQ</li> </ul>
Independents with significant information generating demand:	Y	pre-vetted pro photographers
Large and experienced buyers:	Y	Customers who need photographing occasions
Product or service: complementary products with long shelf life	Y	Complementary, long shelf-life
Operate feedback systems:	Y	Social media   contact photography expert   chat   google review   Contact us
Proficient relationships with independents:		
Leadership roles in marketing and business development:		

**Appendix 3:** evidentiary data to findings on relationships among three main agents and each of the new agents for the 19 companies included in the sample

<p><b>Evidentiary base</b> (below relationship diagrams were constructed based on data gathered from websites of each of the 19 companies in the sample)</p>	<p><b>Responsibilities of associated entity</b></p>
 <p><a href="http://www.instacart.com">www.instacart.com</a>  <b>Element #1:</b> “shoppers” (<a href="http://www.instacart.com">www.instacart.com</a>) devote free time and vehicle to click, collect and deliver groceries to customers, and receive from Instacart fees for pick up and delivery</p>	<p><b>Element #1:</b> (Agent B) Strengthen affiliation between Independents and Customers; induce platform revenue creating more transactions</p>
 <p><a href="http://www.freightos.com">www.freightos.com</a>  <b>Element #2:</b> “Freightos affiliates” (<a href="http://www.freightos.com">www.freightos.com</a>) refer shippers to Freightos, and receive reward \$ and personalized weblink from Freightos</p>	<p><b>Element #2:</b> (Agent C) Grow number of participants that join sides and receive commission</p>

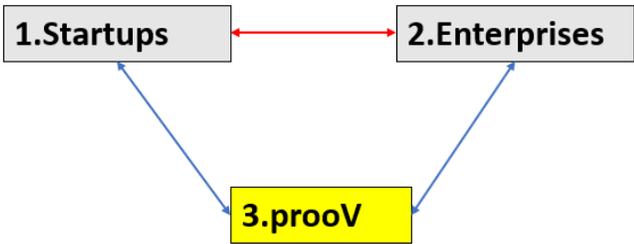
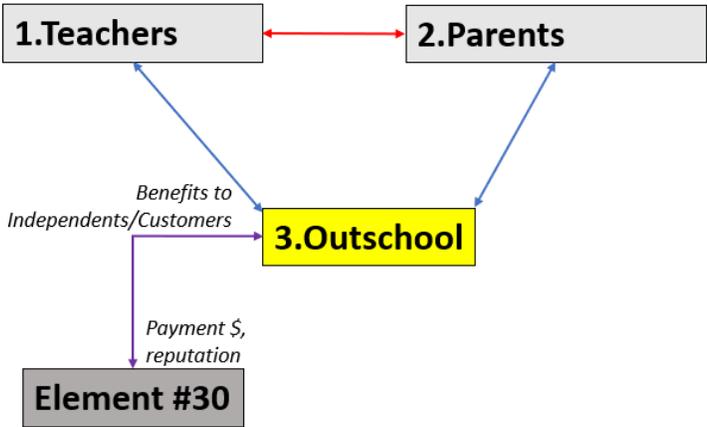
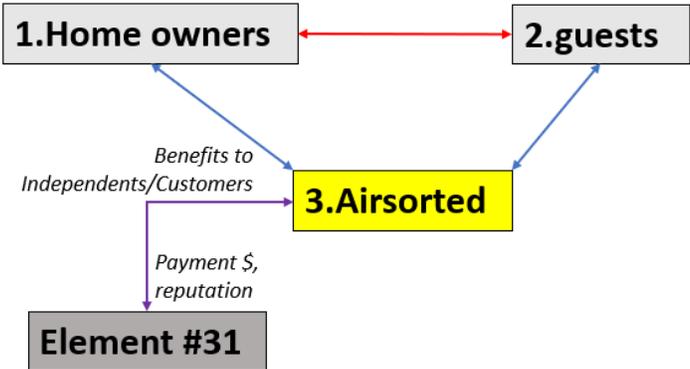
 <p><a href="http://www.coursera.org">http://www.coursera.org</a></p> <p><b>Element #3:</b> “Affiliates” (<a href="http://www.coursera.org">www.coursera.org</a>) add participants (sell courses) and receive from Coursera a 20% commission on purchases made through affiliation, and receive from Coursera - banners and text links, newsletter feed, and access to Coursera merchandiser feed</p> <p><b>Element #4:</b> “Developers” (<a href="http://www.coursera.org">www.coursera.org</a>) get Coursera catalog metadata and list courses on their website/application through Coursera affiliate program, and receive access to data feed and commission on any course purchases originated</p> <p><b>Element #5:</b> “businesses, governments and organizations” (<a href="http://www.coursera.org">www.coursera.org</a>) sponsor learning communities, and receive flexible pricing options, progress tracking and analysis tools, and customised course offerings from Coursera</p> <p><b>Element #6:</b> “Beta testers” (<a href="http://www.coursera.org">www.coursera.org</a>) enthusiastic in helping to improve course quality explore courses before launch to give feedback verification to instructors and get early access to courses</p>	<p><b>Element #3 and Element #4:</b> (Agent C) Grow number of participants that join sides and receive commission</p> <p><b>Element #5 and Element #6:</b> (Agent A) Grow sides; provide tracking and verification; offer additional services;</p>
 <p><a href="http://www.cohealo.com">www.cohealo.com</a></p>	<p>No new elements found</p>

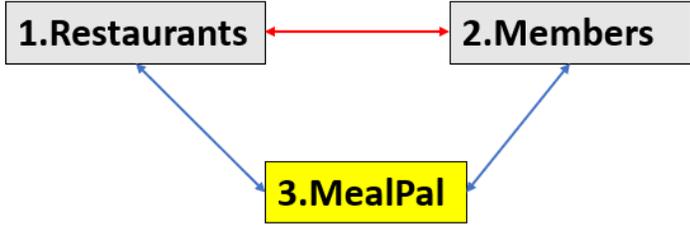
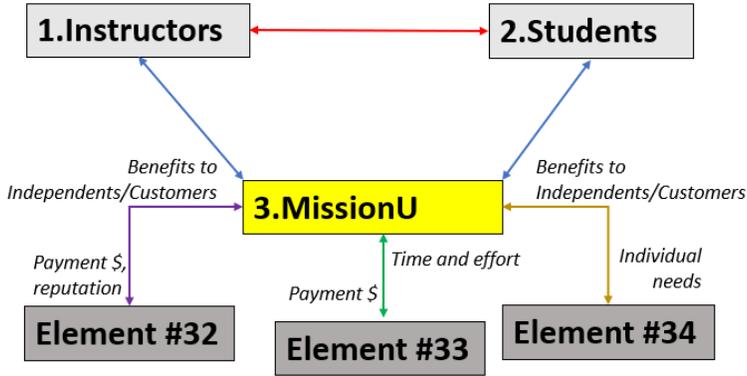
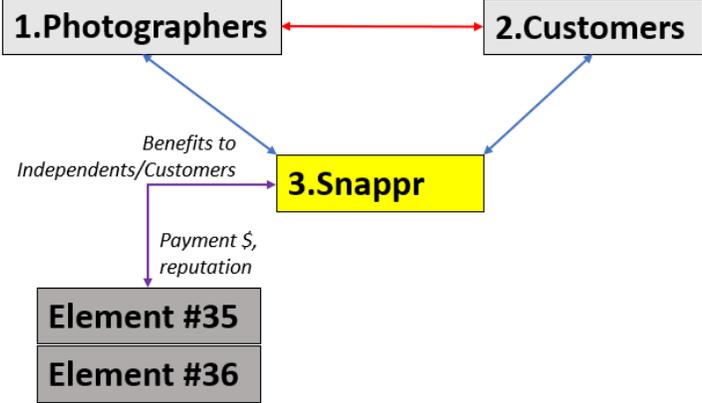
<p><a href="http://ahalogy.com">http://ahalogy.com</a></p> <p><b>Element #7:</b> “third party tracking” (<a href="http://ahalogy.com">http://ahalogy.com</a>) to to select best high engagement creation</p>	<p><b>Element #7:</b> (Agent A) Provide tracking and verification</p>
<p><a href="https://exitround.com">https://exitround.com</a></p> <p><b>Element #8:</b> “target acquisition curators” (<a href="http://www.exitround.com">www.exitround.com</a>) provide new companies verification to buyers</p>	<p><b>Element #8:</b> (Agent A) Provide tracking and verification</p>
<p><a href="http://www.doordash.com">www.doordash.com</a></p>	<p><b>Element #9:</b> (Agent B) Strengthen affiliation between Independents and Customers; induce platform revenue creating more transactions</p>

<p><b>Element #9:</b> “Dashers” (<a href="http://www.doordash.com">www.doordash.com</a>) devote free time and vehicle to pick up and deliver groceries and other goods; receives fees for delivery from DoorDash and other amenities through connected companies</p> <p><b>Element #10:</b> provide amenities - auto insurance to “Dashers”</p> <p><b>Element #11:</b> provide amenities - health coverage to “Dashers”</p> <p><b>Element #12:</b> provide amenities – everlance app to “Dashers” for revenue and expenses tracking</p> <p><b>Element #13:</b> provide amenities - daily pay membership at a concession rate to “Dashers”</p>	<p><b>Element #10, Element #11, Element #12 and Element #13:</b> (Agent A) Provide amenities to attract and retain “Dashers”;</p>
 <p><a href="https://farmlead.com">https://farmlead.com</a></p> <p><b>Element #14:</b> provide buyers verification and credit checks</p> <p><b>Element #15:</b> “Grain testing labs” (<a href="http://www.farmlead.com">www.farmlead.com</a>) to test grains for quality</p>	<p><b>Element #14 and Element #15:</b> (Agent A) Handle regulatory and compliance; offer additional services</p>
 <p><a href="http://www.guesty.com">www.guesty.com</a></p>	<p>No new elements found</p>

<p><a href="http://www.pillow.com">www.pillow.com</a>  <b>Element #16:</b> “short term rent seekers” (<a href="http://www.pillow.com">www.pillow.com</a>)  exploit potential opportunities to rent space</p>	<p><b>Element #16:</b>  (Agent D)  Exploit potential opportunities that mutually benefit MSP and the sides on demand</p>
<p><a href="https://www.helping.de">https://www.helping.de</a>  <b>Element #17:</b> provide other household related services  <b>Elements #18:</b> check safety record of “cleaning aids” (<a href="http://www.helping.de">www.helping.de</a>)</p>	<p><b>Element #17 and Element #18:</b>  (Agent A)  offer additional services; handle regulatory and compliance</p>
<p><a href="https://thrivemarket.com">https://thrivemarket.com</a>  <b>Element #19:</b> Distribute free memberships through “Non-Profit Organizations”</p>	<p><b>Element #19 and Element #20:</b>  (Agent A)  Grow side; offer additional services  <b>Element #21:</b>  (Agent C)  Grow number of participants that join sides and receive commission</p>

<p><b>Element #20:</b> parties that help advocacy campaigns</p> <p><b>Element #21:</b> parties that spread the word to drive members and receive from Thrive Market bonus \$, a custom web link, sample posts, banners and images, and a secure account with progress dashboard</p> <p><b>Element #22:</b> “potential recipients of free memberships” a list of families</p>	<p><b>Element #22:</b> (Agent D) Exploit potential opportunities that mutually benefit MSP and the sides on demand</p>
<div data-bbox="341 619 1039 1060" data-label="Diagram"> </div> <p><a href="http://www.lendingloop.ca">www.lendingloop.ca</a></p> <p><b>Element #23:</b> “Distributor partners” (<a href="http://www.lendingloop.ca">www.lendingloop.ca</a>) introduce their clients to Lending Loop services</p> <p><b>Element #24:</b> “Vendor partners” (<a href="http://www.lendingloop.ca">www.lendingloop.ca</a>) sell products to businesses through Lending Loop financing</p> <p><b>Element #25:</b> provide regulatory compliance through “Canadian Chartered Bank” (<a href="http://www.lendingloop.ca">www.lendingloop.ca</a>) to handle all money that is stored through platform</p> <p><b>Element #26:</b> provide compliance by registering as an “Exempt Market Dealer” (<a href="http://www.lendingloop.ca">www.lendingloop.ca</a>) in all provinces and territories</p> <p><b>Element #27:</b> “Referral partners” (<a href="http://www.lendingloop.ca">www.lendingloop.ca</a>) refer business owners to Lending Loop and receive commission</p> <p><b>Element #28:</b> “Affiliate partners” (<a href="http://www.lendingloop.ca">www.lendingloop.ca</a>) publish content and refer readers to Lending Loop and receive commission</p>	<p><b>Element #23, Element #24, Element #25 and Element #26:</b> (Agent A) Grow sides; offer additional services; handle regulatory and compliance</p> <p><b>Element #27, Element #28 and Element #29:</b> (Agent C) Grow number of participants that join sides and receive commissions and bonuses</p>

<p><b>Element #29:</b> “Refer a lender” (<a href="http://www.lendingloop.ca">www.lendingloop.ca</a>) refers lenders to Lending Loop and receive bonus \$</p>	
 <p><a href="http://proov.io">http://proov.io</a></p>	<p>No new elements found</p>
 <p><a href="https://outschool.com">https://outschool.com</a></p> <p><b>Element #30:</b> provide security screening and verification of the teachers</p>	<p><b>Element #30:</b> (Agent A) Handle regulatory and compliance</p>
 <p><a href="http://www.airsorted.uk">www.airsorted.uk</a></p> <p><b>Element #31:</b> provide “cleaners services” and impress guests’ motivation</p>	<p><b>Element #31:</b> (Agent A) Grow sides and provide additional services</p>

 <p><a href="http://www.mealpal.com">www.mealpal.com</a></p>	<p>No new elements found</p>
 <p><a href="https://www.missionu.com">https://www.missionu.com</a></p> <p><b>Element #32:</b> partnering with leading companies to verify that students learn what’s needed to succeed in the job</p> <p><b>Element #33:</b> “MissionU Ambassadors” (<a href="http://www.missionU.com">www.missionU.com</a>) refer students and gets cashback bonus from MissionU</p> <p><b>Element #34:</b> potential employers that may provide future employment opportunities to students</p>	<p><b>Element #32:</b> (Agent A) Provide tracking and verification</p> <p><b>Element #33:</b> (Agent C) Grow number of participants and receive bonus \$</p> <p><b>Element #34:</b> (Agent D) Exploit potential opportunities that mutually benefit MSP and the sides on demand</p>
 <p><a href="http://www.snappr.co">www.snappr.co</a></p> <p><b>Element #35:</b> parties that verify pre-vetted photographers (<a href="http://www.snappr.co">www.snappr.co</a>)</p>	<p><b>Element #35 and Element #36:</b> (Agent A) Provide tracking and verification; provide additional services</p>

<b>Element #36:</b> parties that provide professional indemnity insurance for photographers, and insurance covering photography equipment and bookings	
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<b>New entity and their responsibilities</b>	<b>Labeled as theme</b>	<b>Frequency of occurrence</b>
<b>Agent A:</b> Provide amenities to attract and retain Catalysts; grow sides; offer additional services; handle regulatory and compliance; provide tracking and verification	<b>Agent A:</b> Third parties	23 elements found in 12 companies
<b>Agent B:</b> Strengthen affiliation between Independents and Customers; induce platform revenue creating more transactions	<b>Agent B:</b> Catalysts	2 elements found in 2 companies
<b>Agent C:</b> Grow number of participants that join sides and receive commissions and bonus \$ from operators	<b>Agent C:</b> Affiliates	8 elements found in 5 companies
<b>Agent D:</b> Exploit potential opportunities that mutually benefit MSP and the sides on demand	<b>Agent D:</b> Sides on demand	3 elements found in 3 companies

**Appendix 4:** Data for the four new agents and four new affiliations collected for 19 companies included in the sample

S1: **Instacart (2012)** <https://www.instacart.com>

Direct interaction:		<b>grocers</b> sell groceries with a delivery service option to <b>buyers</b> online
MSP Operator's platform-specific investments:		<ul style="list-style-type: none"> <li>- Operates e-commerce platform</li> <li>- to Grocers: access to the Instacart framework, operations, logistics, and user interface, and labor - a network of shoppers;</li> <li>- to Customers: dashboard of storefronts, delivery by personal shoppers, free delivery on a first order, regular/ express service option, customized offers (coupons, promotions), website content (recopies, lists), mobile app;</li> </ul> <p>To Shoppers: fees for pick up and delivery \$</p>
Employ Catalysts:	Y	Shoppers: devote free time and vehicle; click & collect, and deliver receives fees for pick up and delivery \$
Use Affiliates:	N	
Use third-party relationships	N	
Engage sides on demand:	N	
New observations from data		<i>MSP affiliates with Catalysts to create and enhance an affiliation between the independents and the customers</i>
Enable vs. Control		

S2: **Freightos (2012)** <https://www.freightos.com>

Direct interaction:		<b>Shippers &amp; forwarders/carriers</b> generate quotes, share rates, and find lowest shipping rates & fastest routes for <b>e-commerce customers</b> through Software-as-a-Service platform
MSP Operator's platform-specific investments:		<ul style="list-style-type: none"> <li>- Provide Freightos AcceleRate SaaS technology and free freight shipping tools on site; free access to platform</li> <li>- to Shippers: quick quotes, speedy response</li> <li>- to Forwarders/Carriers: fewer wait times</li> <li>- to E-Commerce retailers: automated pricing</li> <li>to Affiliates: reward \$, personalized web link</li> </ul>

Employ Catalysts:	N	
Use Affiliates:	Y	Affiliates – refer shippers to Freightos receives reward \$, personalized web link
Use third-party relationships	N	
Engage sides on demand:	N	
New observations from data		<i>MSP provides technology and tools that (i) enable independents to generate more revenue, faster; (ii) bring ease and convenience to customers</i>
Enable vs. Control		Shippers give MSP, a percentage of revenue

S3: Coursera (2012) <http://www.coursera.org>

Direct interaction:		<b>course providers</b> offer courses to a diverse audience of <b>learners</b> online
MSP Operator’s platform-specific investments:		<ul style="list-style-type: none"> <li>- Learners: Open to everyone; 100% online or downloadable content with iOS &amp; Android apps; website help; accommodations for learners; Sharable Course and Specialization Certificates; free-trial promotion; subscription plans;</li> <li>- Educators:</li> <li>- Learner support:</li> <li>- Developers: access to data feed – metadata; commission paid on any course purchase originating from their project;</li> <li>- Affiliates: 20% commission on purchases made through affiliation; Coursera banners and text links; newsletter feed; access to Coursera product merchandiser feed;</li> <li>- Business, Gov &amp; Org: flexible pricing options, customized offering</li> </ul>
Employ Catalysts:	N	
Use Affiliates:	Y	Affiliates – sell courses receives from MSP - 20% commission on purchases made through affiliation; Coursera banners and text links; newsletter feed; access to Coursera product merchandiser feed;
Use third-party relationships	Y	Experts & Enthusiasts – voluntarily explore courses and give feedback/ verification; Business, Governments, and Organizations; sponsor learning communities, progress tracking, and analytics

		Receives from MSP - flexible pricing options, customized offering
Engage sides on demand:	N	
New observations from data		<i>MSP operators increase revenue and cohesiveness between sides by expanding products and services around the core business; MSP grows its customer side by affiliating with third parties</i>
Enable vs. Control		MSP distributes payments

S4: Cohealo (2012) <http://www.cohealo.com>

Direct interaction:		<b>health system providers</b> optimize the use of clinical assets and <b>medical facilities</b> improve access to care by centralizing clinical assets through a cloud-based platform
MSP Operator's platform-specific investments:		<ul style="list-style-type: none"> <li>- Provide cloud-based platform supporting logistics capabilities, and analytics; centralizes all medical equipment and its data on one platform to track a health system's equipment across facilities; access to data through an intuitive app;</li> <li>- Health system providers and medical facilities: On-demand access to every asset in the system; Alerts when new technology is added to the system; benefit from optimized spend, accelerated cash flow</li> </ul> <p>Medical facilities: customized dashboard; electronic records to quickly access and locate any piece of medical equipment; Real-time data and usage analytics, benefit from optimizing access to care</p>
Employ Catalysts:	N	
Use Affiliates:	N	
Use third-party relationships	N	
Engage sides on demand:	N	
New observations from data		<i>Create new value dimension by motivating independents to liberate their assets to a larger network (optimal use)</i>
Enable vs. Control		

S5: **Ahalogy (2012)** <http://ahalogy.com>

Direct interaction:		<b>Brands &amp; content creators</b> grow customers and <b>consumers</b> maximise their experience through audience insights uncovered using category trend data
MSP Operator's platform-specific investments:		<ul style="list-style-type: none"> <li>- Deliver category trend data, authentic influencer content, and social optimization technology; measurable impressions; provide third-party tracking;</li> <li>- Brands &amp; Agencies: offer MUSE to track content (free during planning) and BRANDABLES to uncover audience insights; Sign up for free + request a demo</li> </ul>
Employ Catalysts:	N	
Use Affiliates:	N	
Use third-party relationships	Y	Third party tracking – best high engagement creation
Engage sides on demand:	N	
New observations from data		<i>Grow customers of the independents by connecting with their customers' (customer's customers) data</i>
Enable vs. Control		

S6: **Exitround (2103)** <https://exitround.com>

Direct interaction:		<b>company founders</b> (sell-side companies) feature best company exposure and <b>buyers</b> acquire companies using a proprietary software algorithm
MSP Operator's platform-specific investments:		<ul style="list-style-type: none"> <li>- proprietary software algorithms (free services initially);</li> <li>- sell-side: feature companies for exposure, optimize profile, explore opportunities</li> <li>- acquirers: ideal match, consultation with curators</li> <li>- curators:?</li> </ul>
Employ Catalysts:	N	
Use Affiliates:	N	
Use third-party relationships	Y	Target acquisition curators – consultation with buyers
Engage sides on demand:	N	

New observations from data		<i>MSP invest to groom the independents in order to be bought by the acquirers (customer). Customer invests \$</i>
Enable vs. Control		

S7: DoorDash (2013) [www.doordash.com](http://www.doordash.com)

Direct interaction:		<b>businesses</b> sell food and other items and <b>customers</b> buy and order delivery online
MSP Operator's platform-specific investments:		<ul style="list-style-type: none"> <li>- receive orders, directs them to the restaurant, and assign a dasher</li> <li>- Dashers: delivery \$ and perks</li> <li>- Restaurants: web interface, mobile app, delivery logistics, exclusive dasher service;</li> <li>Customers: delivery status algorithm</li> </ul>
Employ Catalysts:	Y	Dashers' – pick up and delivery; spare time and car Receives from MSP - delivery \$ and perks
Use Affiliates:	N	
Use third-party relationships	Y	Perks to Dashers - Auto Insurance   Health care coverage   Everlance App   Daily Pay
Engage sides on demand:	N	
New observations from data		<i>MSP's employ Catalysts to enhance the affiliation between the independents and the customers; MSP provides amenities to attract and retain their agents, by affiliating with third parties</i>
Enable vs. Control		

S8: FarmLead (2013) <https://farmlead.com>

Direct interaction:		<b>farmers</b> and <b>verified buyers</b> list, negotiate and finalize grain deals online
MSP Operator's platform-specific investments:		MSP' <ul style="list-style-type: none"> <li>- Watchlists and notifications; grain tests and negotiations including basis negotiations; market analysis, seminars &amp; conferences; CEO's daily note on price drivers;</li> <li>- To farmers: Grain calculator, and access to grain testing labs – created GrainTests.com</li> </ul>
Employ Catalysts:	N	
Use Affiliates:	N	

Use third party relationships	Y	Buyers verification and credit check, Grain testing labs service
Engage sides on demand:	N	
New observations from data		<i>MSP earns a variable fee upon transaction while payment method is agreed upon directly between the buyer and the seller</i>
Enable vs. Control		

S9: **Guesty (2013)** [www.guesty.com](http://www.guesty.com)

Direct interaction:		<b>property management companies &amp; Airbnb hosts with multiple accounts</b> efficiently manage all of their businesses with <b>guests</b> on one platform through a cloud-based software solution
MSP Operator's platform-specific investments:		<p>MSP'</p> <ul style="list-style-type: none"> <li>- PRODUCT: property management software; channel management; unified inbox; automation tools; powerful reporting; staff management app; personalized website; payment processing; 24/7 guest communication</li> <li>- To hosts: distribute the listings of all major OTAs; guarantees that owner will never miss a booking and increases visibility; all information on Guesty dashboard; Assign and manage entire team's tasks and work schedule; maximize revenue; centralize and automate hosts' activities</li> <li>- One-on-one live demo on request   Academy</li> </ul>
Employ Catalysts:	N	
Use Affiliates:	N	
Use third party relationships	N	
Engage sides on demand:	N	
New observations from data		<i>MSP enables HOSTs to thrive a business by providing a product portfolio; MSP does not connect with third parties but allows hosts to connect with third-party channels for bookings and manage interactions with third party services;</i>
Enable vs. Control		

S10: **Pillow (2014)** <http://www.pillow.com>

Direct interaction:		<b>building owners</b> allow compliant, transparent short-term revenue-shared rentals and <b>residents</b> earn an extra income with an end-to-end hosting solution through automated property and guest management services
MSP Operator's platform-specific investments:		MSP' <ul style="list-style-type: none"> <li>- automate marketing, guest management, key exchange, and turnover service; dashboard summary for unit level detail for entire property portfolio; Live demo</li> <li>- to building owners: monitor platform usage; access to reporting dashboards;</li> </ul> to residents: advocate end-to-end hosting solution, a full-service solution;
Employ Catalysts:	N	
Use Affiliates:	N	
Use third party relationships	N	
Engage sides on demand:	Y	MSP affiliates with sides on demand to actuate MSP customers' business
New observations from data		
Enable vs. Control		

S11: **Helping (2014)** <https://www.helping.de>

Direct interaction:		<b>cleaning aids</b> offer household services and <b>customers</b> search and book cleaning aids on-demand online
MSP Operator's platform-specific investments:		MSP' <ul style="list-style-type: none"> <li>- provide tested and insured cleaning aids; operates the platform, accepts booking requests; handles Rebookings and cancellations of customers;</li> <li>- Customers: no platform usage fee; cleaning aids insured against liability, security; good conduct and the trade license; payments 20% tax deductible; arrange special requests with cleaning staff; priorities checklist; Guide + FAQ</li> </ul> Cleaners: get cleaning jobs in their area; earnings into their accounts every two weeks;
Employ Catalysts:	N	
Use Affiliates:	N	

Use third-party relationships	Y	provides other household-related services through partner companies; cleaners safety records, trade licenses
Engage sides on demand:	N	
New observations from data		<i>MSP enables a marketplace for professionals to do business, ensure quality and trust, and control transactions</i>
Enable vs. Control		

S12: Thrive Market (2014) <https://thrivemarket.com>

Direct interaction:		<b>brands</b> sell healthy foods and natural products at wholesale prices to <b>members</b> online
MSP Operator's platform-specific investments:		MSP' - wholesale prices, and to sponsor free memberships; offer custom educational content; <ul style="list-style-type: none"> <li>- To families: free 30-day membership trial; register for free, 15% off the first purchase; annual membership – 20% off first 3 purchases; orders over \$49 ships free;</li> <li>- To beneficiary families: free membership;</li> <li>- Affiliate partners: \$25 for introducing a friend; a custom link, sample posts, banners, and images; a secure account with a dashboard to track progress</li> <li>- Free trial + Guide + FAQ</li> </ul>
Employ Catalysts:	N	
Use Affiliates:	Y	Affiliates: spread the word – drive members
Use third-party relationships	Y	Distribute free memberships through NPOs; Advocacy campaigns;
Engage sides on demand:	Y	Identify and maintain a list of potential recipients for free-membership;
New observations from data		<i>MSP reach out to larger community (side) by fulfilling a social need, (free memberships and donor \$ to low income families)</i>
Enable vs. Control		

S13: Lending Loop (2014) [www.lendingloop.ca](http://www.lendingloop.ca)

Direct interaction:		<b>lenders</b> risk managed lending and <b>small businesses</b> affordable financing through the online process
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MSP Operator's platform-specific investments:		<p>MSP'</p> <ul style="list-style-type: none"> <li>- assess lender's investor preferences and risk tolerance, investment objectives and current financial position; evaluate the loan request, assign risk rating, to creditworthy borrowers;</li> <li>- For lenders: deposit monthly payments collected from borrowers;</li> <li>- For borrowers: "borrower's Guide"</li> <li>- For partners: Distributor Ps – provide for their clients LL services; Referral Ps – commission; Affiliate Ps – commission; Vendor Ps – sales;</li> <li>- Refer a lender: \$25</li> </ul>
Employ Catalysts:	N	
Use Affiliates:	Y	<p>Referral Ps – refer business owners to LL; Affiliate Ps – publish content and refer readers to LL;</p> <p>Refer a lender: refer a friend to LL for lending</p>
Use third-party relationships	Y	<p>Partners' - Distributor Ps – introduce their clients to LL services; Vendor Ps – sell products to businesses through LL financing;</p> <p>uses a Canadian Chartered Bank to handle all money that is stored through platform; registered as an Exempt Market Dealer in all provinces and territories;</p>
Engage sides on demand:	N	
New observations from data		<i>MSP uses third parties to handle regulatory and compliance matters</i>
Enable vs. Control		

S14: **proofV (2015)** <http://proof.io>

Direct interaction:		<b>startups and enterprises</b> facilitate proof-of-Concept process through Pilot-as-a-service platform
MSP Operator's platform-specific investments:		<p>MSP'</p> <ul style="list-style-type: none"> <li>- Provide Pilot-as-a-Service platform - to facilitate PoC's; provide License to access and use the services; various data sets;</li> <li>- Enterprises: access to pre-screened startups/ ISVs and PoC opportunities;</li> <li>- Startups: Access to PoC ready enterprises and everything needed to run a winning PoC - RFPs, APIs, data, systems, etc.; dedicated company profile page; Enterprise's complete system specs; Direct chat</li> </ul>

		channel; Remote connection to the testing environment
Employ Catalysts:	N	
Use Affiliates:	N	
Use third party relationships	N	
Engage sides on demand:	N	
New observations from data		<i>MSP invest to groom the independents in order to be bought by the enterprises (customer). Customer invests \$; operators sometimes lay down mandatory requirements (prerequisites) for sides to participate</i>
Enable vs. Control		

S15: Outschool (2015) <https://outschool.com>

Direct interaction:		<b>teachers</b> offer and sell virtual classes and <b>parents (on behalf of children)</b> find, book and pay for classes online
MSP Operator's platform-specific investments:		MSP' <ul style="list-style-type: none"> <li>- the availability of the Site; serve as the limited agent of each Teacher for accepting payments from a Parent; reject, remove any Classes from the marketplace, edit the class description; screen teachers; Video + FAQ</li> <li>- teachers: transfer the Teacher Fees to their Paypal account;</li> <li>- parents: act on behalf of the Parent, for the adequacy and satisfactory service by teachers</li> </ul>
Employ Catalysts:	N	
Use Affiliates:	N	
Use third party relationships	Y	Screening and verification of teachers
Engage sides on demand:	N	
New observations from data		<i>MSP enables a marketplace for professionals to do business, and control transactions; operators sometimes lay down mandatory requirements (prerequisites) for sides to participate;</i>

		<i>MSP serves as the limited agent for independent side, teachers, and acts on behalf of the subject (consumer) for satisfactory service by teachers</i>
Enable vs. Control		

S16: **Airsorted (2015)** [www.airsorted.uk](http://www.airsorted.uk)

Direct interaction:		<b>Homeowners</b> let their homes to <b>guests</b> without being a host
MSP Operator's platform-specific investments:		MSP' <ul style="list-style-type: none"> <li>- Hosts: home inspection, lockbox, listing creation: professional photography and SEO; organize professional cleaners, linens, and towels; Guest vetting; account management; price optimization</li> <li>- Guests: guest communication; 24hrs check-in; replenishments; provide cleaning service;</li> </ul>
Employ Catalysts:	N	
Use Affiliates:	N	
Use third party relationships	Y	Cleaners service to impress customers
Engage sides on demand:	N	
New observations from data		<i>MSP manages assets and generates demand on behalf of one side to attract the customer side</i>
Enable vs. Control		

S17: **MealPal (2016)** [www.mealpal.com](http://www.mealpal.com)

Direct interaction:		<b>restaurants</b> offer monthly subscription meal plans to <b>members</b> online
MSP Operator's platform-specific investments:		MSP' - subscription meal plans for <\$6 per meal; promotional plans, trial membership
Employ Catalysts:	N	
Use Affiliates:	N	
Use third party relationships	N	
Engage sides on demand:	N	

New observations from data		<i>MSP decides the fee structure and offer long-term commitment to attracting customers (increase switching costs to members)</i>
Enable vs. Control		

S18: **MissionU (2016)** <https://www.missionu.com>

Direct interaction:		<b>Instructors &amp; industry experts</b> facilitate industry informed curriculum-based learning to <b>students</b> through live sessions online
MSP Operator's platform-specific investments:		MSP' <ul style="list-style-type: none"> <li>- uniquely immersive, collaborative, and efficient learning experience, industry informed curriculum;</li> <li>- students: in-person activities, structured projects, team projects, technical skills, work experience, resume build &amp; career launch; Program + sign up   How to apply</li> <li>- experts &amp; Academics:?</li> <li>- Ambassadors: cash back bonus for referrals</li> <li>- Employers: get access to graduates</li> </ul>
Employ Catalysts:	N	
Use Affiliates:	Y	Affiliates (MissionU ambassadors) refer students; gets a cash back bonus in return
Use third-party relationships	Y	Partner with leading companies to verify students learn what's needed to succeed in the job
Engage sides on demand:	Y	Connect with employers to provide future employment opportunities to students
New observations from data		<i>MSP invests in customers expecting to capture revenue ex-post: Customers' platform specific contribution is contractual and ex-post</i>
Enable vs. Control		

S19: **Snappr (2016)** [www.snappr.co](http://www.snappr.co)

Direct interaction:		<b>photographers</b> offer onsite services and <b>customers</b> book pre-vetted on demand photographers online
MSP Operator's platform-specific investments:		MSP' - facilitate the availability of the Site; serve as the limited agent of each Photographer for the purpose of accepting payments from customer;

		<ul style="list-style-type: none"> <li>- Photographers: fortnightly payments; provide insurance for all bookings, photography equipment theft-damage-loss, public liability and professional indemnity (in Australia);</li> <li>- Customers: option to choose photographers; discounts for bulk purchases; full copyright ownership; receive photos online within 3 days, 7-10 days on print; can book up to 12 hours in advance; act on behalf of the Subject for satisfactory service by the photographer; How it works + FAQ</li> </ul>
Employ Catalysts:	N	
Use Affiliates:	N	
Use third party relationships	Y	Pre-vetted photographers; professional indemnity insurance, and insurance over photography equipment and bookings
Engage sides on demand:	N	
New observations from data		<i>MSP serves as the limited agent for independent side, photographers, and acts on behalf of the subject (consumer) for satisfactory service by photographer; operators sometimes lay down mandatory requirements (prerequisites) for sides to participate</i>
Enable vs. Control		

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