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Managing the User Crowds: An Effectual Approach of Business Model Innovation and Platform Envelopment for Co-Creation on a New Multi-Sided Platform Firm

Adhi Setyo Santoso¹

¹ President University

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Abstract

The growth of Internet firms these days starts to catch the strategic management scholar attention. However, the study about how Internet platform achieves their performance with their unique business model is very limited. This research wants to fill this gap by platform envelopment attack typology to explain the strategic fit of business model innovation typology and envelopment attack typology. Finally, we proposed the same proposition as follows: Closed Proactive BMI Typology will lead to Complementary Envelopment Attacks Typology, Open Reactive BMI Typology will lead to Functional Unrelated envelopment attacks typology, and Open Proactive BMI Typology will lead to Weak Substitute envelopment attacks typology. Furthermore, economies of scope and user base overlap play a significant role in determining platform envelopment performance.

Keywords: Internet venture, Multi-sided platform, Platform strategy, Business model innovation, Business model typology, Platform envelopment.

1. Introduction

In the network economies, the Internet ventures business model relies on the user base that is embodied with network effects and switching costs. From a resource-based theory perspective, the user base can be considered as VRIO resources that determine the firm growth and overall performance when it has prominent dynamic capabilities to manage the platform (Eisenmann et al., 2011). The network effects can increase the value of the platform product or services since more users can enhance the reach of the application (Parker & Van Alstyne, 2005). They can also increase the user base significantly based on the bandwagon effect from the existing users' social network. On the other hand, when the users spend more time using the platform product or services, they will perceive high switching costs if they decide to move to another platform due to the investment in the learning curve, effort, and even capital in the existing platform.

This situation usually becomes the entry barrier for another platform in the same industry to compete. For this reason, most platform firms invest heavily in content or use the Schumpeterian approach to create more innovative products or services for achieving a position in the market (Oestreicher-Singer and Zalmansonn, 2013). However, there is an alternative to this approach called Platform Envelopment. Platform Envelopment does not take the Schumpeterian approach to gain the user base. It even uses the target platform's network effects by utilizing the platform's own functionality combined with the target platform's functionality.

In developed countries, these phenomena are common for the established MSP (multi-sided platform) firms for their business portfolio such as the envelopment attack of Windows Media Player on RealPlayer in the streaming media industry. Windows Media Player was bundled with Windows Operating System to perform this envelopment. Since most RealPlayer users use Windows Operating System, the bundling service that includes Windows Media Player for streaming media purposes looks more appealing to the users. In the end, the user base from RealPlayer moves to Windows Media Player.

In emerging markets, envelopment attacks often be used by startups to penetrate the market in the beginning. For example, in Indonesia, Food Panda (a food delivery platform), which has had a strong position in the market since 2012, closed their business several months ago because of the envelopment attacks from Go-Food. Go-Food service is bundled with Go-Ride (online motorbike taxi) service. Since the users, including Food Panda users, use Go-Ride frequently, there is no reason for them to use Food Panda with a standalone service anymore. Therefore, their users move to the Go-Food platform. The same envelopment case also happens in marketplace platforms. Bukalapak bundled with Bukapay conducts envelopment attacks on Forum Jual Beli Kaskus in order to offer a solution for safe online shopping through an intermediaries' payment system between buyer and seller.

These phenomena shed light on research on entry mode strategy. In this matter, the latecomers got an advantage by pulling users from the existing platform through a business model innovation approach. Furthermore, these cases also show that more than one service for startups may create a better chance to penetrate the market. Therefore, the theory that can be developed based on these phenomena can become the competing theory that mentions the best strategy for startups in high growth industry is using focus or limited services in the beginning (Hofer and Sandberg, 1987; Kunkel, 1991). On the other hand, it supports the findings that strategic breadth will perform effectively in the startup stage with a high-growth industry context (McDougall, Covon, Robinson, & Herron, 1994). However, there is still limited empirical study that explains the determinant factors for the performance of platform envelopment as well as its development.

Since envelopment attacks have several typologies, our research attempts to fill this gap by raising several research questions. How different platform envelopment attacks can be successful? How the platform envelopment attacks typology is developed? In order to answer the research question, we use the theory related to business model innovation (BMI) since the bundling strategy in conducting the envelopment attacks emerges as the result of BMI.

The article structure will be started with a literature review of the research in Internet platforms in strategic management area as well as business model innovation to understand the state-of-the-art of research in this area. Finally, we will

continue with theoretical and conceptual development based on previous research.

2. Literature Review

In this section, we will examine the state-of-the-art of research about Internet platforms in strategic management areas and explore the limitation of the previous study as well as research opportunities to provide theoretical contributions. Furthermore, since platform envelopment attack is the result of BMI, we will also explore the current state of BMI research.

2.1. *Business Model Innovation*

In current research, there are several emerging common trends in the business models area (Zott et al., 2011). First, the business model has become a new unit analysis that has several indicators such as its innovativeness and architecture. Second, the business model has expanded into emphasizing a system level that explains in a holistic way how firms conduct their business. Third, firm activities have a significant role in various conceptualizations of proposed business models. Fourth, the current research for business models show that it explains value creation rather than only value capture.

Business model innovation is considered the key to firm performance among scholars. Many of them focus on the topic of BMI as the vehicle for corporate renewal and transformation (Demil & Lecocq, 2010; IBM Global Business Services, 2006; Ireland, Hitt, Camp, & Sexton 2001; Johnson, Christensen, & Kagermann, 2008; Sosna, Trevinyo-Rodríguez, & Velamuri, 2010). In a renewal or transformation process, Chesbrough (2010) and also Bouchikhi and Kimberly (2003) mention that the barriers to conducting BMI in existing firms include configurations of process and assets because of organizational inertia as well as the managers' cognitive inability to understand the potential value of the new business model.

2.2. *Platform Envelopment*

The strategic management research in the platform area has discussed the pricing decision of MSP firms to expand the user base as well as create large networks by utilizing their network effects (McIntyre & Srinivasan, 2016). This area also relates to the positive feedback of the users. The other area of the previous studies includes entry timing of firms (Eisenmann, 2006; Schilling, 2002; Shapiro & Varian, 1999), incumbent advantages such as firm size (Sheramata, 2004; Schilling, 2002), and also platform features and relative quality (Liebowitz and Margolis, 1994; McIntyre, 2011; Tellis, Yin & Niraj, 2009; Zhu and Iansiti, 2012).

These studies still have several limitations that have not been explored in current strategic management research. First, there are limited discussions about the firm-level strategies impact including platform quality and features as well as its entry timing (McIntyre and Subramaniam, 2009; Zhu and Iansiti, 2012). Second, these studies still only have the main focus on one side (individual users). On the other hand, the attention to complementors' perspectives is still limited (McIntyre & Srinivasan, 2016). Third, most of those studies adopted either static or cross-sectional views that have not

focused on the dynamical evolution of platform-complementor interaction over time (McIntyre & Srinivasan, 2016).

2.3. Business Model Innovation Typology and Platform Envelopment Typology

Successful firms that pursue proactive business model innovation (high radicality, high reach, high complexity) and also initiate close approaches that take and manage the risks within the business model innovation in their entire core business (Taran et al., 2015). In the Internet venture business model, the firm can take multiple roles as a platform provider in a certain network and also as either a supply-side platform member or a component supplier in another network (Eisenmann, 2011). The Internet ventures that choose complementary envelopment attacks typology will connect the complementary functionality with their core functionality closely. The complementary functionality itself is more likely developed based on their core competence. The bundling of the functionality will play a significant role in the platform's growth both in the main functionality as well as the complementary functionality. Hence, we can develop the proposition as follow:

P1a: Closed Proactive BMI Typology will lead to Complementary Envelopment Attacks Typology

The firms that pursue reactive business model innovation (low radicality, high reach, and low complexity or high radicality, low reach and high complexity) with open organizational setting tend to keep the risk in initiating BMI relatively low to prevent further effects if the innovation fails to meet the expectation or do not work properly (Taran et al., 2015). The platform that leverages components and users, but has unrelated main platform functions, usually unifies the functionality in one device through digital convergence (Greenstein and Khanna, 1997; Yoffie, 1997). Therefore, even though the envelopment fails, the attacker platform will not suffer significantly since the envelopment component is not the main function. Hence, we can develop the proposition as follow:

P1b: Open Reactive BMI Typology will lead to Functional Unrelated envelopment attacks typology

The firms that pursue proactive business model innovation (high radicality, high reach, high complexity) that adopt open organizational settings tend to establish a new business model outside of the core and existing business model (Taran et al., 2015). In order to limit the risks, they will form some external collaboration with a limited number of building blocks. Commonly, the Internet platform firm that conducts weak substitutes serves the same broad purpose as the target platform (Eisenmann et al., 2011). Oftentimes, the organization division that conducts the complementary functionality is apart from the division that conducts the core business models. Furthermore, this complementary function can be developed from joint venture initiatives with other companies by utilizing the competence of both parties. Hence, we can develop the proposition as follow:

P1c: Open Proactive BMI Typology will lead to Weak Substitute envelopment attacks typology

The summary of the Proposition 1 development can be depicted in Fig. 1.

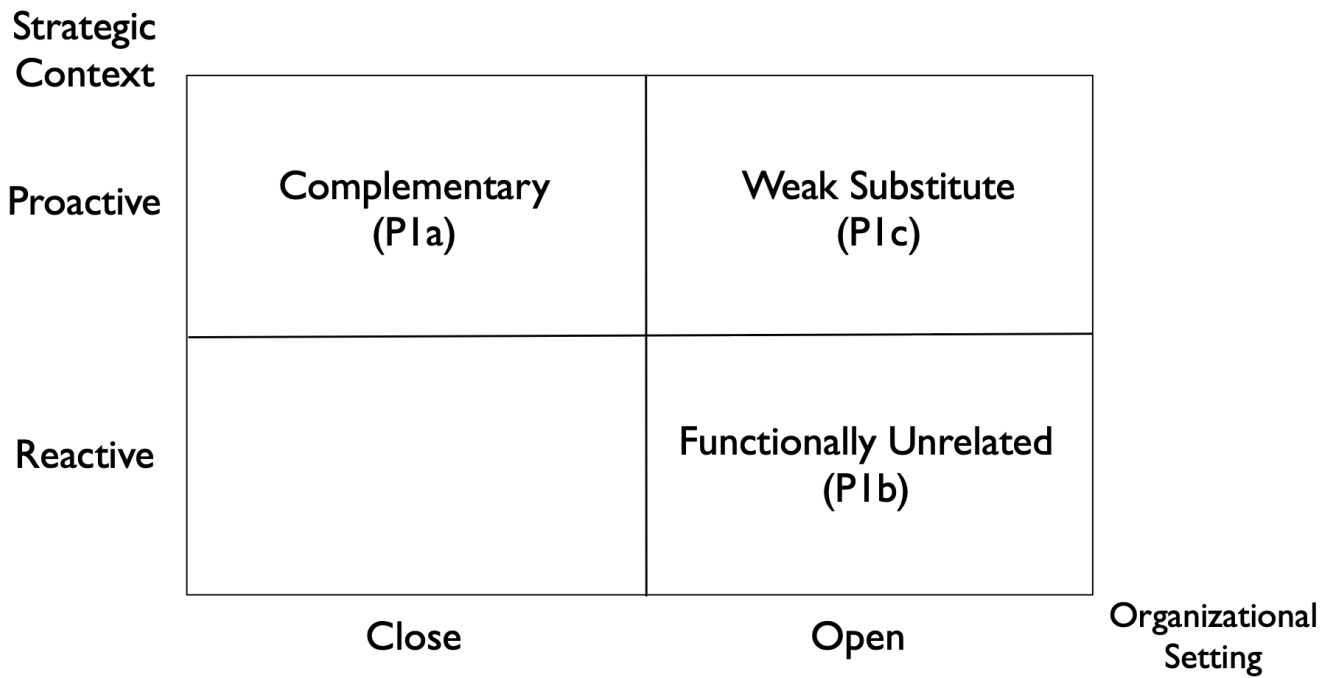


Fig. 1. Proposition 1 Development

2.4. Envelopment Attacks Typology and Platform Envelopment Performance

An envelopment attack will most likely succeed when the target platform users and attacker platform users overlap significantly, the attacker platform can maximize the benefits of price discrimination, or the economies of scope are high (Eisenmann et al., 2011). However, in complementary envelopment attack typology, since the common product design is optimized to reduce functional overlap (Ulrich, 1995; Sanchez and Mahoney, 1996), the target platform will not be aware of the envelopment attacks in the beginning. Hence, we can develop the proposition as follow:

P2a: *Complementary Envelopment Typology will be successful when the users overlap is high*

The user base overlap will have a significant role in the established platform with high penetration (Eisenmann et al., 2011). Therefore, the platforms already have a set of potential users that can be expanded into a new platform portfolio. In most cases, since the potential customers already become a member of both the attacker and target platform, there will be opportunities for tying the services with certain bundle prices that provide optimal prices compared to those when the products or services are sold separately in different platforms. Furthermore, in a pair of functionally unrelated platforms, the component overlaps as well as the economies of scope are meaningful and significant. Hence, we can develop the proposition as follow:

P2b: *Functionality Unrelated Envelopment Typology will be successful when the users overlap and economies of scope are high*

The nature of weak substitute envelopment attacks is that they serve a similar broad purpose but, since they rely on different technology compared to the target platform, they satisfy different user needs (Eisenmann et al., 2011).

Therefore, there may be some demand for both the attacker and target platform's unique functionality. As a result, in order to provide a compelling price for a bundle of weak substitutes, the attacker platform should realize the significant economies of scope. Since the weak substitutes attacker platform overlap in a certain level of functionality, there will be similar components and activities. Hence, we can develop the proposition as follow:

P2c: Weak Substitute Envelopment Typology will be successful when economies of scope are high

The summary of Proposition 2 building can be depicted in Fig. 2.

Platform Env Typology	Economic of Scope	Users Overlap	
		User Overlap High	User Overlap Low
		EoS High	EoS Low
Complementary			
Weak Substitute		P2b	
Functionally Unrelated		P2c	

Fig. 2. Proposition 2 Model Development

3. Conceptual Development and Discussion

In order to fill the gap in BMI as well as the Internet platform in strategic management literature that needs more exploration on an organizational setting for conducting BMI as well as the complementary aspect within the platform, we examine the BMI to understand the development of envelopment attacks typology. Since some strategic actions may be the results of certain BMI approaches, we choose BMI Typology from Taran, Boer, and Lindgren (2015) to explain why there are several types of envelopments attack that can be developed. This BMI Typology is derived from Miles and Snow's (1978) Typology by examining and combining the organizational setting and strategic context in various BMI approaches. In an organizational setting matter, it is divided into two types, open and closed. An open organizational setting means the innovation is conducted far from the organization that has responsibility for the core business model. The approach could be creating a new division up until initiating a joint venture. On the other hand, a closed organizational setting means the innovation is developed close to the core business and also its core organization or even the BMI is

developed within it.

The strategic context has three dimensions that measure the scale of the innovativeness of BMI, radicality, reach, and complexity. Radicality measures the scale from the extent of the change as a result of innovation departing from existing processes, products or services (Chandy & Tellis, 2000). It has three scale levels, high, medium, and low. Reach measures the change of innovation in terms of the recipient of BMI (new to whom). It has scaled from the closer to the further recipient from the firm reach includes company, market, industry, and the world (Rogers, 1983). Finally, complexity measures the change in the business model building blocks on seven levels (Osterwalder et al., 2005). Based on this scale, the strategic context itself is divided into two types, proactive and reactive.

In terms of platform markets, the strong switching costs as well as high switching costs often strengthen the incumbent barrier of entry for the standalone rivals (Farrell and Saloner, 1985; Katz and Shapiro, 1985; Klemperer, 1987). Therefore, in order to overcome the barrier of entry, the new attackers' platform providers should take the Schumpeterian approach by offering innovative and revolutionary functionality (Henderson and Clark, 1990; Bresnahan, 1999). On the other hand, platform envelopment initiates the entry from a new attacker platform into another platform's market by bundling its own platform's functionality with the target platform's functionality (Eisenmann et al, 2011). As a result, the attacker platform can leverage the common components as well as the shared user relationship.

The envelopment attacks have three types include complementary, weak substitute, and unrelated functionality. There are several results possibilities from the envelopment attacks. First, the target platform is largely or fully displaced. Second, the attacker platform entry successfully but the target platform maintained its position. Third, the attacker platform failed entry or trending poorly. In some cases, after the attacker platform failed to enter, the attacker firms acquire the target platform such as in eBay Billpoint vs Paypal case as well as Google Video vs Youtube case.

In general, the conceptual model for this study can be depicted in Fig. 3.

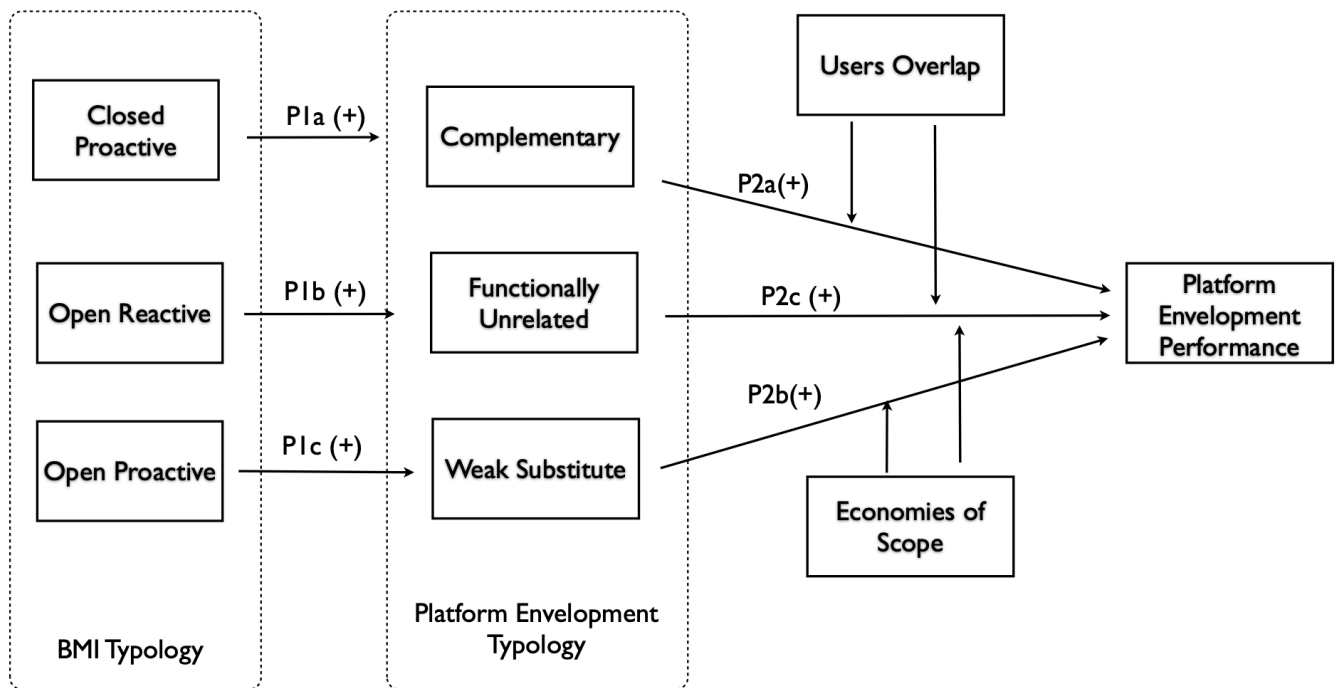


Fig. 3. Conceptual Model

4. Conclusion

The proposition from this study shows that by understanding the business model innovation typology that Internet ventures exploit, they can adjust the suitable envelopment attacks typology to achieve a strategic fit that leads to platform envelopment performance. Furthermore, this study can fulfill the demand for the business model conceptual distinction with other concepts such as ecosystem, organizational forms, activity systems, value chain and also value networks (Zott, Amit, & Massa, 2011). This approach will have a significant role, especially for the startups in emerging economic contexts such as in Southeast Asia that have high growth opportunities but also have limited resources in the early stages.

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