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E X C H A N G E

PLATFORM-DEPENDENT ENTREPRENEURS: PARTICIPANTS IN AN EXPANDING UNIVERSE OF PLATFORMS?

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The article *Platform-dependent entrepreneurs: Power asymmetries, risks, and strategies in the platform economy* drew on the intermediary business model to review the damaging actions that platform firms may employ with entrepreneurs. This exchange argues that platform firms may treat entrepreneurs differently on other platform types—particularly ones where complex relationships may cause participants and platforms to become mutually dependent, or where the platform’s position depends less on extracting revenue directly from participants. I suggest that particular business models might facilitate the use of alternative strategic actions that are more benign toward entrepreneurs. These situations can determine additional boundary conditions for this emerging entrepreneurship theory. I provide examples from three platform types where alternative platform behaviors can be observed: platforms based on a sharing economy model; platforms that cultivate product lines or a wider ecosystem of services; and platforms that build communities to support their business model. These situations can mitigate platform firms’ tendencies to treat platform participants as pure revenue sources (and can promote different treatments of platform participants). Many business models involve complex multi-actor relationships that can be designed to create different ways of generating revenue. These design affordances can then support broader strategic actions.

Cutolo and Kenney’s (2021) paper *Platform-dependent entrepreneurs: Power asymmetries, risks, and strategies in the platform economy* (hereafter, “the article”) provided a welcome perspective on an understudied entrepreneurial context. While platforms have become important parts of the economy, we know more about their architecting and formation from the perspective of a platform firm (or “platform”), and comparatively less about the actual platforms’ inner workings, or what effects platform firms’ actions have on their participants (where “participants” refers broadly to users of and contributors to platforms). Cutolo and Kenney focused on digital platform firms whose core

activity involves participants who engage in entrepreneurial activity as platform-dependent entrepreneurs (PDEs). This sets up clear boundary conditions for Cutolo and Kenney to show how platform firms can control their PDEs’ activities to support the platform firm’s profit-making goals. The article’s argument took its reference from some of the most successful digital commerce or content-providing platforms—ones where entrepreneurs and consumers are brought together as a market. Cutolo and Kenney’s primary emphasis was on how platform firms can exercise their power to extract value from their PDEs, largely by using the platforms’ technical architecture as a means of control and for creating dependencies that lock in the PDEs. These strategic intentions and corresponding design acts allow the platform firm to take advantage of the PDEs, and, indeed, recent news has continued to highlight the actions that well-known

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digital commerce-based platforms take to undermine their PDEs.¹

To scope their theory, Cutolo and Kenney narrowed their focus to multisided or intermediary digital platforms—that is, “matchmaker” platforms that “match buyers and sellers.” This is important, because even though other types of platforms may also employ coercive actions on PDEs, the multisided platform business model has characteristics that create pressures to be coercive. As Cutolo and Kenney noted, the intermediary form of business model depends on limiting information flow and cooperation between participants on both sides of the platform in order to preserve the value the platform firm wishes to appropriate from the market. For such a platform firm, the creation and maintenance of information asymmetries between both sides of the market are key; ideally, the firm’s customers or users are price takers, and the PDEs operate independently of one another. Cutolo and Kenney’s discussion of the range of damaging actions to PDEs was comprehensive, and the risks inherent in platforms’ architecture, as well as the resulting power imbalance, should be concerning to ethicists and scholars alike. These cautions are also applicable to nonintermediary platforms.

I will provide a complementary point of view that may help to scope the theory further by fleshing out the boundary conditions on the alternative side of the argument: the situations where platform firms *do not harm* their PDEs. Through a selection of examples, I aim to show how a platform firm’s relationships, commercial relationships, and exercise of power with its participants can be mitigated, if not shaped, by the business model the firm adopts. My argument is that the type of business model can cause the platform firm to engage in different, non-damaging types of strategic action. I will investigate several types of situations (and business models) that might explain why platform firms would pursue nondamaging acts toward PDEs. It should be noted that damaging actions are always a possibility for any platform, and that many matters, including the business model and platform’s design, and the firm’s

choice of strategic action, are ultimately determined by the strategic intent of the firm.

The nature of digital platforms is such that their modularity and layers of technologies, together with their recombinative ability, create affordances that firms can use to extract value from users and PDEs. This also allows the same firms to design platform architectures that enact more benign or mutually beneficial (to participants) business models. I will examine three types of situations where platform firms adopt business models that embody such positive strategic actions. Two are extensions from the intermediary platform: that of a sharing economy model, and platforms that involve more in-depth cultivation efforts and ecosystems. The third consists of community-based platforms, which integrate features to support virtual communities. These three types are not mutually exclusive, since features from one type of situation may be incorporated into business models based on another type. Such business models may face lower pressures than pure intermediary platforms to extract value from their participants’ commercial and other activities.

INTERMEDIARIES AND THE SPECIAL CASE FOR SHARING ECONOMY PLATFORMS

The clearest illustration of Cutolo and Kenney’s argument (on platform firms’ damaging of PDEs) is given by firms such as Amazon that act as intermediaries (i.e., operate multisided platforms). If the type of business model influences the intermediary’s desire to exercise power and to damage its PDEs, then what variants might moderate this outcome? To simplify matters, my focus is on just two kinds of damaging actions: the platform firm entering the PDEs’ market and displacing them, and the exclusion of the PDEs from the platform.² To illustrate the converse, in the next three sections I will illustrate other business models (involving other orientations) that help channel different strategic actions, or that may possess the affordances to be able to be designed to be consonant with benign strategic actions.

One type of business model that might influence the outcome in the other (nonnegative) direction is a “sharing economy” type of transactional service

¹ The underlying assumption of PDEs is that they are economically rational units that have to “take” the platform’s prices. This also appears to constitute a kind of agency problem, as not only are platform firms the market makers but they stand to gain everything from the market’s activities, which causes some, if not many, firms to shape the market’s structure and principles to their own advantage.

² I will focus less on the other actions Cutolo and Kenney discussed, such as the platform firms’ changing of the rules of commerce and engagement to favor themselves. It is also worth noting that acquisition by platform firms is an alternate (and fairer) means for platform firms to appropriate the PDEs’ value.

(e.g., Airbnb and Uber). In this case, the platform firm is less likely to displace the PDEs, because the PDEs are vital to the platform's coverage of a particular geographic area, and each PDE provides a unit of a service in a peer-to-peer fashion (e.g., personal accommodations listed for rent on Airbnb). Network externalities are important for this type of business model because each PDE covers a small part of the regional coverage (or, if the "economy" concerns transportation, the links spanning a region). If a platform firm tries to compete with the individual PDEs, it has to take on the risk of asset ownership in a very fragmented market of "solo-entrepreneurs." By avoiding this risk, the platform firm can focus on scaling up and maintaining a system that balances the treatment of its PDEs with the platforms' needs, and that does not interfere with the PDEs' business objectives. Of course, it is still possible for platforms to game the situation, strategizing to undercut PDE revenues by various means, but the point I am suggesting is that an equilibrium arrangement may be struck between the platform firms' and PDEs' interests based on their mutual codependence.

The sharing economy model causes a second wrinkle in shaping the platform firm's strategic actions. Cutolo and Kenney pointed out that even in conditions of duopoly, such as exists between the Apple and Google platforms, platforms may exert pressures on their PDEs. They cited the example of Apple, which not only sets the terms for its App Store but also receives a large cut of the PDEs' revenue. A sharing economy model may weaken some of these implications, as the PDE's revenue may not be so high as to cause the platform to become predatory. At the same time, the same contract designs that enable easy entry of PDEs to the platform may also facilitate their easy exit. In multiple regions, Uber was easily challenged by local competition, such as Lyft in the United States, or Grab in selected Asian markets. In many cases of the latter, drivers started driving for both firms or started exiting the less profitable (for them) platform. Thus, in certain sectors, even with a duopoly or oligopoly, as long as there is market competition and a more transactive manner of entering and exiting platforms, the PDEs can balance the power in their favor (Davis, 2018).

THE PLATFORM AS CULTIVATOR OF PLATFORM-DEPENDENT ENTREPRENEURS AND ECOSYSTEMS

A larger population of platforms comes into the picture when we consider business models that are

not purely intermediaries in retail commerce terms (such as Amazon) or in transactional terms (such as sharing economy services), but rather that expend substantial efforts on cultivating a suite of goods and services in competition with other platforms. The key characteristic is the cultivation of either deeper, more complex, contractual relationships, or the cultivation of more complex ecosystems. While these platforms were not the main focus of the authors, an examination of selected examples from these two types of business model can help to establish more boundaries on platform firms' behavior.³

In the first case, the platform can focus on cultivating its PDEs' offerings, taking revenue from them, and offering scarce resources or services to the PDE in return. The typical example of this sort of cultivation is the videogame consoles market. Videogame console manufacturers tend to cultivate a select number of titles from PDEs to provide a unique proposition to their platforms, but will also rely on the "long tail" effect from other PDEs engaged in multi-homing. Independent developers (i.e., studios) often lack other resources, such as funds to finance development costs, and intellectual property (IP). To bridge this gap and achieve their goals, console makers such as Microsoft have publishing arms that work with such PDEs by supplying access to costly IP licenses that the publishers have acquired, or by financing the PDEs' development costs. Those publishers may even acquire a limited number of independent developers and their franchises to help distinguish their platform from others. For instance, Microsoft acquired Bungie (the creator of the *Halo* series) to ensure continued development of that defining game title for the Xbox. By and large, however, such acquisitions are made in a friendly or mutually acceptable (to the entrepreneur) manner, and, in the interests of cultivating a longer tail, the publishers do not attempt to displace the software sales of other studios on their platforms. One of the key differences between the situations examined by Cutolo and Kenney's article and this case are the involved nature of the work and the depth of the

³ There is a difference between the cultivator model and Cutolo and Kenney's notion of curating, but I have used cultivator to emphasize the additional services or assistance that the platform provides, and to identify a specific type of business model. Some cultivator models involve the use of the digital platform to cultivate participants' creative and entrepreneurial activities, as well as to embody features of the community models, but these are addressed in the following section.

contractual relationships. Not only does it allow developers to prenegotiate the best possible contracts up front with the platform firms (e.g., publishers) but the contracts acknowledge the mutually dependent situation that the contracting PDEs and platforms find themselves in with this kind of market.

A second possible reason for why platform firms may treat their PDEs differently (than suggested by the article) may come from the fact that many platforms are becoming ecosystems and diversifying their revenue sources within an ecosystem of PDEs. As a more mutually dependent organizational form, ecosystems may contain more opportunities to explore for revenue and other returns than standardized platforms might offer. Console manufacturers now make a large part of their money from ecosystems on services such as online subscriptions and complementary goods such as peripherals, with the console itself becoming a loss leader for most firms. While platforms like the App Store depend on a single means for earning the platforms' revenue, ecosystems may offer platform firms more ways to earn revenue by engaging with ecosystem partners.

PLATFORMS THAT HOST COMMUNITIES, AND COMMUNITIES AS MARKETS

Communities are by now an important part of most users' online existence, but the concept of communities continues to be less theorized in management research.⁴ Cutolo and Kenney illustrated their PDE arguments with examples of how platform firms hinder PDEs' interactions within the platforms' communities. Cutolo and Kenney noted that the intermediary platform is pressured by its business model to monetize community activities for the platform's own revenue. There are other instances, however, where a platform's business model depends on individuals or PDEs to create user-generated content (UGC) (Boudreau & Jeppesen, 2015), and many of these do not end in grief for the participants. Thus, it might be useful to look at the conditions under which the platform's success is tied to strategic actions that improve its

community's well-being (however that is defined). While the communities in the example used in the article, YouTube, are not really communities in the traditional sense of the term, there are many other platforms for which community members' relationships are richer, and the members' interactions deeper. We need to understand how community members' interactions can support platforms and constructively relate to the platforms' business model. Generally, as community members' social and economic interactions become more intricate, they may naturally be deepening their investments (broadly speaking) in the platform, arguably creating a mutual codependence of platform and community. While it is possible for the platform to engage in damaging actions, as noted by the authors (with their discussion of Amazon's antiquarian booksellers), the community's power itself can also be a deterrent.

We examine two kinds of situation where platforms have incentives to engage with communities productively: the community that is a side activity to the platform, and the community that is central to the platform's goals. In the first, communities provide additional experience value to the participants as an extension of the product or service value they obtained at the point of purchase or consumption. Many firms by now recognize that online communities are an important, if not dominant, aspect of online users' lives, and that helping users incorporate extensions of their real-world experience on a platform can be a powerful means to maintain the psychological connection of participants to the firms' services and brand.⁵ In this way, communities are valued by firms for contributing to the firms' viability in different ways than revenue alone.

The second type of situation is illustrated by communities that engage in creative and entrepreneurial activities that are still aligned to the platforms' goals. It may benefit platforms to balance their own interests with the welfare of those communities, and not to directly monetize those activities.⁶ Some examples of creative platforms are ones like the virtual

⁴ It is worth noting that while Adler, Kwon, and Heckscher's (2008) article (on collaborative notions of community in the professions), has been cited over 600 times, most of the citing articles are not in well-attended areas of management research, or are in particular research contexts where the community form of organization is more apparent—for example, coworking spaces.

⁵ The community concept is long-standing. The idea of firms tapping onto communities predates the Internet, with firms like Harley-Davidson nurturing communities of owners (Schouten & McAlexander, 1995).

⁶ The strategic intent of the firm can vary widely, and while some platforms may choose to restrict the notion of community to a very basic impoverished view, it is conceivable for platform firms to be marshaled for social and other purposes, even while they promote

world *Second Life*, where PDEs and users created UGC that added to the vitality of the platform's offerings or internal "economies." *Second Life* started as a platform for collaboration, but key changes to content rules and platform design then helped to create a thriving market for UGC (Au, 2009). This situation reflected traditional markets, where underlying social or network structures and "thick" social relationships (in the sense of richer communication channels) provide an underlying resilience to the economy. Inventive and entrepreneurial individuals became engaged in creative activity, with successful individuals growing larger groups and businesses (within the world) that sold content or other virtual goods and services to other participants.⁷ Another example that is in between *Second Life* and the console example discussed earlier is the online version of the game *Minecraft*. In its online version, an ecosystem has spawned over the game, with PDEs hosting on their own servers additional complementary UGC such as minigames, roleplaying games, and communities.⁸ In this case, the ecosystem has

entrepreneurship or markets, in ways that mimic social enterprises and B Corporations.

⁷ While some online games have an internal market for reallocating goods amongst players, *Second Life* overtly encourages entrepreneurs to earn virtual currency by creating their own content to sell to other users; currency that can then be extracted as real-world currency through an exchange rate. *Second Life* started as an exercise founded on free community-based creation, but had trouble incentivizing users to develop enough content for a world that was mainly to be based on UGC. Its developer, Linden Labs, was advised by the legal scholar, Lawrence Lessig, to allow entrepreneurial content creators to retain their intellectual property rights (Au, 2009). This spawned a huge industry in *Second Life* where a significant number of participants became content creators and small-scale entrepreneurs. One particularly successful entrepreneur made *Business Week's* cover as the world's first real-life millionaire from virtual world activities (Au, 2009: 152). She did this essentially by creating a platform within a platform to buy and sell virtual real estate connected to the virtual world.

⁸ *Minecraft* had set up servers that allowed "platforms within a platform" to operate separately with richly customized content and experiences, which they eventually charged users for (while *Minecraft* simply charges users the one-time fee for an account). Interestingly, the App Store also has publishers which act as aggregators that curate multiple apps (e.g., game titles) on their own online platforms. These intermediaries all secrete some power in their own right, and theoretically have the power to negotiate better terms with the platform firm.

expanded well beyond the boundaries of the original game.⁹ In both these cases, economic and social activities support one another. The success of UGC platform firms such as *Second Life's* Linden Labs and *Minecraft's* Mojang Studios is predicated on having paying participants, so those firms do not compete with their PDEs. In fact, the PDEs' businesses can be conceived as an extra "layer" on their platform, providing the complementary goods and services necessary for other participants' experiences.

A last type of creative community platform is represented by *Lego Ideas*, which enhances the creative capacities and community spirit of a community whose purpose is to crowdsource ideas. The platform assists the Lego corporation's business ends in a fashion that also mutually supports the community members' goals. The platform was partly intended by Lego to crowdsource prototypes of ideas for new Lego concepts, and, eventually, kits, creating financial benefits for successful concept creators while offering members a sense of community. Members help one another to learn and critique their ideas, and to make interesting projects more visible to Lego's management. There are numerous other idea-generating platforms based on communities that are only partially commerce-oriented, including the 3D printer manufacturer Makerbot's Thingiverse 3D printing community, and the project-funding platform, Kickstarter.¹⁰ These examples illustrate that platform firms can engage in multiple types of strategic actions that do not have to "crowd out" their PDEs, and that with careful architecture and rule design, they can create mutual benefits for all involved: the platform firm, the PDEs, and the other participants.¹¹ In general, these examples show that there are multiple feasible ways to design business models that both enhance the community's capacity

⁹ The *Minecraft* ecosystem example was originally raised by Mathieu-Claude Charboud in a conversation with the author.

¹⁰ Thingiverse was set up by Makerbot to increase the diffusion of 3D printing, so the templates created by the participant-entrepreneurs are fully owned by their creators. Since Makerbot treats the community as a means of diffusing the practice of 3D printing, the company's goals are aligned with the community's activities.

¹¹ Other works have suggested that particular network effects can help platforms to organize economic activity by way of peer production (Benkler, 2017), and can enable communities to become alternatives to corporate forms of production (Davis, 2016). More often than not, platform firms utilize communities to provide a stickiness that can enhance customer experience and retention.

(in this case, for creativity), and benefit the firm. In these contexts, then, theories of PDEs can be adjusted to reflect the effect of business models and the broader and multifaceted goals contained within them. It may be useful to reflect on how this modifies Cutolo and Kenney's approach. The community effect tends to be stronger when the platform is founded on principles such as community and social collaboration, or uses the community for promoting other means and operations within the firm. A platform firm may still decide that some key community-generated products and services are vital to be part of its core value proposition or internal (platform's) suite of offerings (or ecosystem), and it may acquire the PDEs to accomplish that end. This occurred when, after Microsoft acquired *Minecraft* in 2016, it also acquired an educational *Minecraft* mod (application) from *Minecraft's* ecosystem: *ComputerCraftEdu*.

TOWARD A BROADER VIEW OF PLATFORM FIRMS' STRATEGIC ACTIONS

In summary, the article's focus on a power-dependent view of entrepreneurs and platform firms was a needed theoretical development. However, like all stylized models or theories, there is some cost of not being able to explain other kinds of platform action and effects on participants. I have laid out a few types of situations containing dimensions that affect or contextualize a suite of other strategic actions by platform firms. These involve certain types of business model containing elements from the sharing economy form of business model, a cultivation model (involved, for instance, in creating more complex ecosystems), and community forms of organization. These may mitigate the negative tendencies of intermediary or other business models, or may become part of the way the platform is designed to achieve mutually beneficial ends to PDEs and community. In this way, then, a theory of entrepreneurship for platforms could have negative and positive aspects to draw from. Ultimately, a firm's strategic intent—in applying and designing that particular business model and its implementation in architecture and code—is what eventually

dictates its relationships with platform participants, and its desire to design the business model and architectures to create those desired relationships.

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