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Strategic learning for digital market pioneering: Examining the transformation of Wishberry's crowdfunding model

Gaurav Gupta*, Indranil Bose

Indian Institute of Management Calcutta, Joka, Kolkata 700104, India

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ABSTRACT

Pioneering digital firms are often built on novel business models that differentiate them from their competition. Striving for the right business model is a challenge for entrepreneurs. In their digital endeavors, firms often experiment with multiple business models before converging on to a specific, focused model that they choose to pursue. An intriguing question in this domain is how do digital market pioneers gain strategic knowledge for the transformation of their business models? We develop an integrative framework that identifies strategic learning and its impact on the digital model adopted by the firm, as a core driver for business model transformation. We examine this framework through a case study of Wishberry, a crowdfunding startup in India that was the pioneer in this domain in India. Its active scanning of the business environment led to strategic learnings that helped transform its business model which was at the core of its sustained market advantages. The insights for this study, which are primarily focused on digital entrepreneurship, extend the theoretical frameworks of strategic learning to the context of market pioneers. The learnings from this study will help entrepreneurs design agile business models that are reactive to market needs.

1. Introduction

Heterogeneity of digital infrastructures offers the capability to develop novel models of doing business while simultaneously providing greater value for all stakeholders (Tilson et al., 2010). Businesses built on such infrastructures ease the entry of entrepreneurs with novel business models into the market. The idea of utilizing digital infrastructures to develop fundamentally new business models has rapidly gained traction in entrepreneurship literature recently (Mollick, 2014; Rayna and Striukova, 2016). Technologies like cloud computing have not only disrupted conventional businesses but have also resulted in standardization of nascent industries. These novel approaches to entrepreneurship have coincided with the recent trend of small ventures utilizing digital technologies to extend their core capabilities. For example, Etsy, an online marketplace for handmade goods that brings buyers and sellers together and provides recommendations for buyers, has adopted the cloud infrastructure to analyze data from its nearly one billion monthly website views. It is observed that “the cost flexibility afforded through cloud provides Etsy access to tools and computing power that might typically only be affordable for larger retailers” (Berman et al., 2012). While the premise of new business models offering competitive advantage as a result of adoption of digital infrastructure has been explored for existing businesses (Berman et al., 2012;

Marston et al., 2011), it is unclear whether these digital infrastructural capabilities offer novel sources of advantage for fundamentally new businesses in pioneering markets as well. This is a gap in extant literature that we aim to address in this research.

Although no competitive advantage lasts forever, firms that succeed in building durable first-mover advantages tend to dominate their product categories for many years, from a market's infancy until well into its maturity. However, even when a firm cannot build a durable first-mover advantage, it may obtain some benefits from early entry and enjoy short-term benefits of monopoly (Robinson and Min, 2002). Until the arrival of other entrants, pioneering firms can avail a period of market monopoly to develop industry standards and market preferences which can continue to exist as brand loyalty or higher switching cost later (Kalyanaram et al., 1995). However, building such sources of strategic advantage requires the firm to continuously scan the business environment and learn from it actively. Strategic learning is the process by which firms learn the skills and competencies necessary to realize the intended business objectives and make appropriate adjustments in their operating model or develop new strategies for the same (Mintzberg and Waters, 1985). Firms need to identify, assess, and evaluate their own capabilities and further enhance them with continued operating experience. While doing so, they need to identify the affordances (or constraints) of their existing infrastructural capabilities.

* Corresponding author.

E-mail addresses: gauravg13@email.iimcal.ac.in (G. Gupta), bose@iimcal.ac.in (I. Bose).<https://doi.org/10.1016/j.techfore.2018.06.020>Received 7 December 2017; Received in revised form 30 April 2018; Accepted 10 June 2018
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Conventionally, the high costs of uncertainty involved in the process of learning dissuade entrepreneurial firms from pioneering into new markets. Digital infrastructures allow new ventures to re-appropriate their existing resources for new functionalities due to disentanglement between their form and function. But “what are the factors that influence a firm’s strategic choices on digital product platforms?” (Yoo et al., 2010, p. 731). Our study is motivated by calls from scholars like Tilson et al. (2010) and Giones et al. (2017) to examine the implications of building a new venture on digital artefacts and how they engage with the business model to develop sustainable business in such a context. Digital entrepreneurship like Youtube is an interesting example of disruptive business model transformation as a result of affordances of the digital infrastructure. Youtube launched as a video dating website called ‘Tune in Hook Up’, but it soon realized that the market was not ready for this product. Its digital nature allowed it to abandon most of its existing business capabilities swiftly and utilize its infrastructure primarily for streaming videos. However, the process of learning involved in developing a successful business model is complex and often ambiguous. Hence, we seek to examine this process in the context of digital entrepreneurship. In line with this objective, the guiding research question for this study is:

How do pioneering digital ventures gain strategic knowledge for successful transformation of their business models?

We examine the process of business model transformation of pioneering digital ventures through learning and experience, resulting in the extension of their digitalization. We respond to our stated research question by studying the market pioneering strategy of Wishberry, an online crowdfunding startup in India. It launched as a marriage gift registry service but the extant sociocultural conditions and the lack of supporting market structures for any form of crowdfunding compelled the founders to re-examine its business model. The case explores the role of digital technologies in supporting its incremental business pivots leading to its gradual transformation to a thriving rewards-based creative crowdfunding platform. We examine the gradual transformation of Wishberry’s digital business model using an analytical framework that is based on the concepts of digitalization, market pioneering, strategic learning, and business model transformation. The framework examines the role of strategic learning in developing digital platform capabilities for bringing about such a transformation. The framework aims to inform scholars about the unique role of digital infrastructure for the attainment of market dominance (Bodily and Venkataraman, 2004) and the strategy involved in doing so. This study also informs practice by highlighting some principles for competing for digital businesses using market pioneering (Hirt and Willmott, 2014). It provides useful cues for businesses about how to develop reactive business models. Also, the richness of description of the case study provides valuable insights to young entrepreneurs of digital ventures.

2. Theoretical framework

2.1. Digitalization of business

2.1.1. Digital innovation

Digital innovations combine physical and digital products to create new value. The development of new value implies destruction of existing value in some instances and recombination of some values in others. Digital innovation requires firms to revisit the core organizing logic of their business and their use of the digital infrastructure for novel outcomes. When Yoo et al. (2010) followed the Schumpeterian definition of digital innovation that is focused on product innovation with digital technologies in an anchoring role, they clearly refocused the trajectory of scholarship in this domain by highlighting the prominence of the characteristics of this form on the innovation outcomes. Since then, the information systems discipline has focused on the unique characteristics of digital technologies that are crucial for digital innovation.

Characteristics like reprogrammability, homogenization of data, and self-referential nature of digital technologies, make these innovations unique. Reprogrammability allows for the segregation of the form from the physical embodiment of the resource. Homogenization of data refers to the common interface made of bits and bytes in which all digital content are processed and exchanged between devices. These characteristics derive from the technical architecture of digital infrastructures, and they support the redesign of value creation, delivery, and capture processes (Autio et al., 2018). Businesses need to be aware of such changes in their environment and the potential for development of new opportunities, to remain competitive.

2.1.2. Digital business models

A business model represents a firm’s essential value creation and capture activities in a reduced and abstract form (Teecce, 2010). Digital infrastructures have provided firms with the potential to experiment with novel forms of value creation mechanisms. But these advantages can only be harnessed by the firm if it is able to redefine its business logic, including its form, appropriately. Otherwise, the firm may be burdened with balancing between conventional processes with digital affordances, leading to inefficient implementation of a business model.

The novelty offered by the adoption of digital technologies in business contexts has led to the acknowledgement of the distinction between digital business models and conventional business models. For digital business models “the underlying business logic deliberately acknowledges the characteristics of digitization and takes advantage of them, both in interaction with customers and business partners, and in its internal operation” (Bärenfänger and Otto, 2015, p. 18). They equip the firm with a renewed set of dynamic capabilities (like agility) that boost its attempts at creation of market dominance and sustenance of that dominant position.

2.1.3. Digital infrastructure affordances

The theory of affordances, proposed by Gibson (1979), which was later adapted to the context of information technology by Gaver (1991), provides a promising lens to explore the variations in the use of information technology for digital businesses. Nambisan et al. (2017, p. 230) have described these affordances as the “action potential offered by the digital technology”. Of particular interest, in this study, are the properties of innovative technologies that allow development of new business designs that have the potential to threaten conventional businesses. These affordances help firms adapt to changes in their operating environment while developing competitive advantage in their domain.

One important affordance of digital platforms is flexibility. Digitization of product and service components of the business allow for greater flexibility by separating function from the form (Yoo et al., 2010). This reduces the importance of asset specificity in delivering business value. The flexibility in these digital infrastructures is a result of the malleability of software implementing the logic laid down over the physical layer of interconnected hardware (Tilson et al., 2010). Flexibility is especially useful for entrepreneurial ventures that are characterized by swift and often risky entrepreneurial experiments (Nambisan, 2017).

Modularity is a key component for such flexibility in digital infrastructures. Modularity is defined as the “degrees by which interfaces between components are standardized and specified to allow for greater reusability and sharing of (common) components” (Agarwal et al., 2015, p. 492). In case of digital platforms, modularity provides design flexibility, i.e., “the degree to which a firm is unconstrained by previous design decisions in making new ones” (Henfridsson et al., 2014, p. 29). It aids business model transformation by decoupling various digital infrastructure design components leading to novel platform outcomes.

Another important affordance is generativity. It refers to the capability of digital platforms to allow a recombination of elements and assembly, extension, and redistribution of functionality (Yoo et al.,

2010). Digital platforms are built using layers of technology components interacting with each other. Modularity and generativity allow digital platforms to be repurposed to generate new entrepreneurial outcomes. Together these digital platform affordances contribute to the dynamic emergence and evolution of entrepreneurial opportunities and outcomes (Nambisan, 2017). These affordances enable new ventures to reinvent how they create, deliver, and capture value, thereby enabling new ventures to disrupt incumbents with radically new business models (Prahalad and Ramaswamy, 2003).

2.1.4. Digital capabilities

A resource-based view of information systems resources suggests that a firm can develop competitive advantage if it not only controls access to valuable, rare, inimitable and non-substitutable resources but also possesses the capability to combine, develop, and utilize these resources for meaningful outcomes that are aligned with the firm's objectives (Mata et al., 1995). Digitization of products and services introduces novel capabilities to those resources. These capabilities are presented in the form of hybrid products or services to end customers or in the form of market capitalizing agility to the firm. Digital capabilities allow firms to earn superior rents for the new digital products and services offered from the reappropriation of conventional resources with digital artefacts. While these capabilities offer competitive advantage, their sustenance is limited by the high level of dynamism inherent in digital technologies. Newer innovations and the resulting disruption erode away these advantages quickly. Fig. 1 provides a schematic representation of the various components that play an important role in the digitalization of businesses.

2.2. Market pioneering in uncertain business environment

Market pioneering is an environment-specific phenomenon (Covin et al., 2000). "Common wisdom from the strategy literature suggests that ... pioneers have higher returns if they are successful...but [they] bear a higher risk of failure," (Shepherd, 1999, p. 623). However, with strategic foresight and agility, firms can attain sustainable competitive advantage from their first mover strategy (Vecchiato, 2015). It allows pioneers to develop sustained market leadership in the form of establishing industry standards and associated customer tastes, access to scale economies, preemption of scarce resources and development of substantial switching costs along with incumbent inertia (Kalyanaram et al., 1995). Thus, they command a higher market share and brand loyalty after entry of competitive businesses in the same market. These distinctions continue to exist for a long time after entry. The novelty of these distinctions due to the environment is especially profound for pioneering firms than for followers.

Past studies have examined the impact of stable versus dynamic environments on the firm's pioneering strategy (Ali, 1994). Mueller et al. (2012) have highlighted the importance of identifying when and to what degree does pioneering makes sense. The degree of dynamism in the operating environment is characterized by the rate of change of innovation (Miller and Friesen, 1983). Dynamism in the business environment results in uncertainty which mars effective decision making. This metric becomes especially crucial for digital technology-based

businesses where the rate of innovation is high. Firms in this domain have to continuously adapt to new technological innovations and explore new business opportunities. These opportunities often lead to new business ideas which may be introduced by market pioneers. In summary, operating environment, through cycles of technological change leading to new business opportunities, influences a digital firm's market pioneering strategy during its market entry and later on with the entry of competitors.

2.3. Strategic learning

Pioneering firms are exposed to novel business contexts beyond the scope of their experience (March, 1991). They need to process new information and learn from them to reduce the risk of uncertainty and unproductive experimentation. Although novel digital technologies like cloud computing have reduced the costs for such experimentation (Marston et al., 2011), firms need to embed their experience from such cost-effective experiments into their organizational fabric. Strategic learning helps transform information from such novel experiences to knowledge and allows firms to act upon them. It attempts to develop learning from current and past experiences to foster knowledge asymmetries that help improve the firm's competitive performance in the market. The process of strategic learning for firms involves *strategic knowledge acquisition, interpretation, and implementation* (Kuwada, 1998; Thomas et al., 2001).

Strategic knowledge acquisition is an exploratory process that enables individuals in an organization to gather strategic information from their environment to extend their current knowledge. It helps firms perceive and anticipate the dynamism in the operating environment and prepares the firm for modification of its core strategy. For digital businesses, such knowledge acquisition is accelerated by the experience of the firm's existing digital infrastructure and associated capabilities. *Interpretation* is the process by which new knowledge about the operating environment, especially the market, is synthesized to make sense of the interactions with various actors (Kuwada, 1998). This synthesis allows firms to filter and build an index of meaningful fragments of information which may be helpful in enhancing its knowledge base to allow strategic changes to be made (Tippins and Sohi, 2003). *Implementation* is the process of institutionalization of the strategic knowledge base developed through the earlier processes. The changes developed as a result of these processes are collectively termed as organizational memory (Walsh and Ungson, 1991). These adaptations and learnings culminate into improved provisioning of digital infrastructure existing within the firm. This knowledge also leads to expansion of the firm's digital capabilities.

Although digital capabilities form the cornerstone of our scholarship on dynamic capabilities for information systems, very little has been discussed about them. Digital capabilities have been described as the "collection of routines to leverage digital assets to create differential value" (Kahre et al., 2017, p. 4712). They allow firms to create competitive distinction in mature product-markets and marked competitive advantage for pioneers in new markets. They have the potential to transform the overall value system of a product or service by transforming the core business model. Many firms are beginning to see the power of digital resources to create new capabilities and craft novel strategies around new products and services (Rai et al., 2012; Sambamurthy et al., 2003).

2.4. Business model transformation and the role of digital technologies

Business model transformation allows firms to synchronize and update their existing business model to the new emerging value model and if needed, completely renew itself (Schneider and Spieth, 2013). It allows them to respond to changing sources of value creation in response to environmental volatility (Pohle and Chapman, 2006). This process is akin to the natural evolution of business logic (Demil and

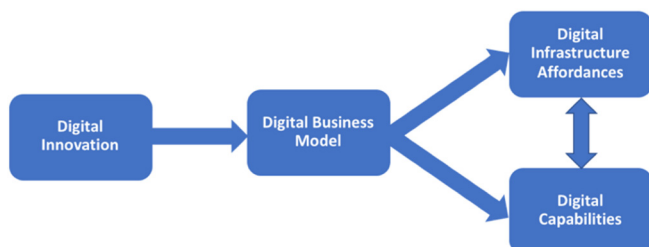


Fig. 1. Digitalization of business.

Lecocq, 2010; Zott et al., 2011) and the business model change is primarily developmental in nature. Such transformations allow businesses to adapt to discontinuities in their operating environments while sustaining their core business logic.

One such discontinuity is that the recent trend of digitalization of products and services has boosted large-scale migration of traditional business models. As these technologies in the form of digital services are integrated into the business products, they exceed the usual function of supportively complementing them (Pagani, 2013). These complementary digital products and services become valuable in themselves and gain the ability to charge rents (Ray et al., 2005). Other business models have integrated the digital products and services within the core business model and have derived value for the overall business. These supplementary digital products and services are often designed to improve or introduce new customer experiences or value pathways (Nambisan et al., 2017). Often these products and services free themselves from the initial value offering and mature into independent businesses with their segregated business processes delivering unique values. Such changes in the value system afforded by digital business models result in new uncertainties of entrepreneurial outcomes.

Extant research on the key concepts and underlying topics considered in this research is shown in Table 1.

2.5. Analytical framework

The circumstances under which market pioneers operate are crucial to examining the pioneering behavior of entrepreneurs (Min et al., 2006). Of particular interest, for this study, are digital businesses developed from unique capabilities offered by digital infrastructures. Such business environments are characterized by high levels of dynamism due to rapid development of new and innovative technologies. Hence, there are continuous pressures on firms to conform to the changes in the business as they risk losing out on novel business opportunities that are potentially capable of developing market dominance. Digital infrastructure affordances like flexibility, modularity and generativity allow businesses to morph their existing digital infrastructure to novel outcomes through transformation of their business model. In response to the changes in the business environment, the changes in the various components of the business model are aimed at establishing the stability of the firm. Rindova and Kotha (2001) refer to this “continuous morphing” as a process of constant adaptation to environmental changes. These transformations are a result of carefully developed strategic learning processes which expose the unique business context to the firm. The linkage between strategic learning and pioneering behavior has been well established in literature (March, 1991). In this study, we consider the transformative pressures of changes in the operating environment on the business model of digital businesses as a result of adaptive strategic learning. Based on the review of the literature, our proposed analytical framework is shown in Fig. 2.

Digital ventures, pioneering in new product-market domains, extract market intelligence for initial survival and later growth. They gain this knowledge through repeated interactions with multiple

stakeholders in the market. The learnings from these interactions along with the experience of their own digital capabilities are captured through various organizational structures for strategic knowledge acquisition and interpretation. Although the primary focus of this study is on the digital strategy development process as a result of capability development, we also consider the continuous changes in the overall product-market domain. The proposed analytical framework examines the various learning processes involved in the business model transformation of pioneering digital ventures in such market contexts. In doing so, the role of the operating environment, along with technological innovations, through their various interactions with the business is examined in detail. An examination of these interactions helps in explaining the rationale for these interactions and the various constraints associated with them (Strauss and Corbin, 1990). The proposed framework illustrates the relationships between these different components and how their interactions lead to the development of a stable business model. We use this framework to guide the case examination of Wishberry for the stated research objectives.

3. Methodology

In accordance with the analytical framework presented in Fig. 2, this research inquiry followed an exploratory stance to examine the process of strategic learning for the digital business model transformation of entrepreneurial firms. Our exclusive focus was on the process of self-discovery for entrepreneurial firms that were pioneers in their market. Although an in-depth case study was considered as an appropriate method for addressing ‘how’ and ‘why’ questions in studies such as ours (Yin, 2014), our choice was further motivated by the potential of theory development from such a field case study (Eisenhardt, 1989). Exploratory cases, despite their limited breadth, provided numerous advantages such as: (a) depth of understanding in a rare and specialized scenario by collecting specialized data that very few methods allow, (b) access to crucial information leading to internal validity, and (c) creation of complex theories that can be tested and generalized later for large populations (Eisenhardt and Graebner, 2007). Previous studies have also established in-depth case study method as a powerful field validation method for proposed frameworks (Dubé and Paré, 2003). This research had the following objectives:

- Identify factors responsible for digital business model transformation for pioneering entrepreneurial firms
- Examine the process of strategic learning for this discovery-driven transformation
- Gather insights into the process of strategic learning of digital infrastructure capabilities and digital business model transformation

A purposive sampling technique was employed to identify the sample firm. The firm to be selected had to fulfill the following criteria: (a) successful implementation of a digital business platform in an undiscovered market, (b) evidence of stable transformation of the core business model, (c) extended access to core decision makers and other stakeholders relevant for strategy formulation of the firm, (d)

Table 1
Key concepts and underlying topics used in this research.

Concepts	Underlying topics	Sources
Digitalization of business	Digital innovation Digital business models Digital infrastructure affordances	(Autio et al., 2018; Yoo et al., 2010) (Bärenfänger and Otto, 2015) (Gaver, 1991; Nambisan, 2017; Yoo et al., 2010)
Market pioneering	Digital capabilities Environment scanning Strategy development	(Mata et al., 1995) (Covin et al., 2000) (Covin et al., 2000; Vecchiato, 2015)
Strategic reorientation	Strategic learning	(Kuwada, 1998; Thomas et al., 2001)
Business model transformation	Digital business model transformation	(Demil and Lecocq, 2010; Schneider and Spieth, 2013)

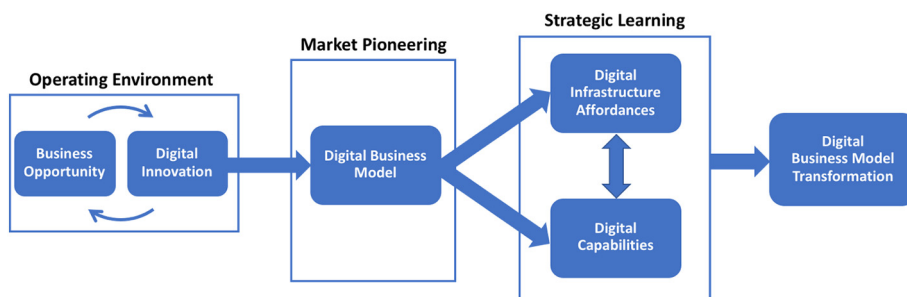


Fig. 2. Analytical framework for digital entrepreneurship.

availability of external documents to ensure external validity, reliability, and robustness of the observations. Our choice of sample was fulfilled by Wishberry, a digital crowdfunding platform for creative projects. It was the largest crowdfunding platform in India, and the success rate of projects in its platform was greater than that of global players like Indiegogo and Kickstarter. At the time of its launch in the Indian market in 2010, crowdfunding was an unheard phenomenon in the country. Wishberry's journey through the stages of digital capability and market discovery combined with strategic knowledge development leading to the transformation of the firm's core business model was an exemplar for other pioneering digital ventures in similar business contexts.

The data collection process and analysis of the same adhered to the essential elements of case study methodology as outlined by Yin (2014). The overall research design followed the analytical framework as the guiding theory for data collection (Klein and Myers, 1999). We began by conducting interviews of the founders of Wishberry to have a preliminary understanding of the various phases in the evolution of the startup. These interviews were helpful in illuminating the socio-economic context in India at the time of launch of the startup. We gained some insights into the lack of resources for budding entrepreneurs and the risks associated with entrepreneurship. With some understanding of the business environment, we interviewed the mentors of the firm to gain insights into the evolution of strategic business objectives as a result of self-discovery of a firm's digital capabilities and the learning processes leading to digital business model transformation. Our observations were further enriched by insights from the interviews of external stakeholders of the startup. Interviews were conducted with various project owners and backers of the platform for multiple projects. Some details related the interviews are provided in Table 2 below. We went back to the founders for further interviews to help cross-examine the interview data collected from other interviewees. Although the interviews were semi-structured, some questions probing the key inflection points and their impacts were common across all respondents in order to increase the internal validity of the study (Gibbert et al., 2008; Yin, 2014) and minimize any retrospective bias of individual respondents (Huber and Power, 1985; Miller et al., 1997).

The interview data was cross-examined with archival data from internal documents like pitch deck, market research reports, various operational reports and marketing material. Further, public documents like press kit and newspaper reports helped triangulate the data from

Table 2
List of interviewees.

Role	Interviews conducted	Total duration (mins.)
Founder 1, Wishberry	4	460
Founder 2, Wishberry	3	230
Mentor 1, Wishberry	2	90
Project owner 1	2	65
Project owner 2	1	30
Backer 1	2	45
Backer 2	1	25

these various sources. It also helped enrich our understanding of the processes under study at Wishberry and the concurrent market conditions during its evolution (Yin, 2014). As mentioned earlier, the research design followed an inductive approach with constant iterations between data collection and analysis with a focus on theory development in line with suggestions provided by Eisenhardt (1989) and Patton (1990). The interviews along with the corresponding data allowed us to document the evolution of the crowdfunding ecosystem in India in general and the associated journey of Wishberry in particular. It highlighted the various inflection points, learning processes, and organizational arrangements, their impact on key constituents of the digital business model, and the emergent structural changes in the ecosystem following the entry of later entrants. The description of the case study, as presented in this paper, has been validated by the respondents.

The analysis of data collected from both the primary and secondary sources was informed by the tenets of qualitative data analysis for the development of grounded theory following the guidance provided by Strauss and Corbin (1990). The analytical framework, proposed earlier, guided the initial data collection. During data analysis, the role of the initial theory was of informing and validating the iterative theory development through categorization of observations. Data were categorized into various categories with a focus on theory development during the iterations of categorization and classification (Miles and Huberman, 1994). The process was continued until theoretical saturation was attained and the data was exhausted of any novel theoretical insights (Bowen, 2008).

4. Case study: Strategic learning for market pioneering by Wishberry

4.1. Early experimentation during market entry and discovery

Up until about 2010, only traditional channels of funding like lending existed in India to support investment in innovative projects. Crowdfunding as a means to fund innovative initiatives was non-existent in India. Not only was there a lack of any ecosystem for such digital aggregations, but the market also lacked understanding of the concept of crowdfunding. Although global platforms like Indiegogo or Kickstarter were accessible to both backers and project owners, it required payment using credit cards that were not widely used in India. Wishberry, a rewards-based crowdfunding platform was launched in 2010 under such market conditions. It started as a wedding gift registry service to help prospective brides and grooms share their wishlist of gifts that they needed, with their guests. This helped curtail wastage of gifts which were not useful to the recipients and helped guests by suggesting appropriate gifts. Its early pioneering strategy was to serve the marriage market through a crowdfunding model designed to improve the practice of giving gifts. For each successful project, it charged a single flat one-time commission at the time of launch of the project on its platform.

Wishberry's business model was designed as a barebones charity-based (gifting) crowdfunding service. Every new project required them

to develop a new catalog of gifts which the couple might find useful. Its online platform was primarily used for sharing the wishlist with all prospective guests online. This entrepreneurial business was barely digital as the online platform was not critical to the business. Most of the activities, i.e., customer onboarding, wishlist development, gift selection, etc. were conducted offline. The limited maturity of e-commerce in India at that time increased the complexity of many business processes, especially the process of wishlist creation. The team would have to access various offline retailers and stores to identify unique gifts for their customers. Then they would share it with all guests and also collate their choices to prevent overlaps between the choices made by them. Apart from that, the existing sociocultural context in India at that time hindered its target customer segment from realizing its potential. Wastage on gifts was recognized as a problem, but according to the Indian culture, it was considered inappropriate for brides and grooms to request gifts for themselves from guests formally. Also, the complexities involved in traditional marriages made this a very low priority activity and so there was a limited adoption of this service. One of the founders of the platform remarked:

“With everything going about for marriage preparations, deciding on gifts that would be useful later was of least priority in most households. Also, sharing a wishlist of gifts implied a conscious expectation of gifts from the guests which was considered inappropriate in the society. However, if these gifts were in the form of donations to charity, people were more welcome to adopt it.”

These learnings from the market impacted Wishberry's pioneering strategy based on the realization that charity-based crowdfunding aligned better with the existing social system in India. Its first project that focused specifically on charity-based crowdfunding was for a marathon event in which various charities were supported. These charities wanted to expand their outreach to more donors. The new model in Wishberry offered an online platform for collecting donations on behalf of various charities associated with the event. It adopted a flexible funding model which allowed projects to be funded even if they did not attain their target amount from backers. This model proved exceptionally successful for charitable projects which often did not attain their projected goal. The online medium provided greater reach for the charities and consequently improved the potential to collect more donations. This campaign with the newer business model proved to be very successful for the participating charities involved and consequently for the firm. These developments in the business model marked the early signs of evolution of digital entrepreneurship.

4.2. Environment sensing and interpretation

Due to the success of charitable fundraising, the online platform started becoming pivotal to Wishberry's overall business strategy. It became a critical component for the success of the business. Some activities like the survey of offline stores stopped being the key activities for the business and the business functions were aligned to serve a broader market for charities. After gathering strategic knowledge of the operating environment, Wishberry developed its business model as a mature charity-based crowdfunding platform. Its entry into the market affected the overall ecosystem too. The market also became aware of the crowdfunding funding model and started developing preferences for such services. The founders reflected:

“People who had backed them on some occasion could back other crowdfunding projects. So, it became a bit easy for new entrepreneurs to enter the market. Also, payment gateways too started to support crowdfunding platforms which made entering the market a bit easier.”

“Once you are online, you are no longer restricted to people within the country. People from outside also wanted to back some of our projects. However, the existing laws were not very clear about such transactions. Hence, we pushed for some regulations in this domain.”

Competitors like Ketto entered the market to capitalize on these developing market conditions. Their entry was relatively easy due to

the digital nature of the business structure and low barriers to entry. Also, scalability of the business was not dependent on the acquisition of physical resources. However, strategic knowledge of the operating environment gained through sustained market presence and early entry helped Wishberry develop various sources of significant competitive advantage. Although, easy replicability of the digital platform hindered the development of high barriers to entry such roadblocks were developed through the knowledge base that Wishberry developed over time. Factors like brand loyalty and high brand recall became sources of competitive advantage and required continuous learning for retention of these advantages. Project owners of past projects expressed their preference for the platform:

“The Wishberry team was very supportive of our project. Although they had little experience of the domain of my project, they knew the crowdfunding process very well. I will return to this platform if I launch any other project in the future.”

“They were very professional, and I don't know of any other firm where I would like to go for future projects.”

“They helped us at all stages of the project starting with helping us identify an appropriate project goal to helping us advertise our project on online platforms. We enjoyed working with them.”

At the same time, Wishberry started to learn that their core competition was not from other competitors in the same domain but was mostly from the conventional funding channels like offline donations. Very few charitable projects on its platform were able to attain their crowdfunding goal. The online platform started to become a supplementary source of income for charitable activities and hindered the development of any form of exclusivity in its product-market domain. Assimilation of this knowledge led to a renewed search for transformation of the business model. One of the founders remarked:

“We could not continue with the same business model. We questioned ourselves on our current business model and tried to identify issues with the current business processes.”

While there were multiple sources of funding for charitable projects, there existed no channels to support innovative projects in the domain of technology, arts, music, films and other such categories. This was an unfulfilled market need and a potential source for sustainable competitive distinction. The online nature of the platform expanded the potential for funding of such projects beyond the geographical vicinity of the project owner. Digital started becoming a critical success factor for this business, unlike the earlier charity-based model which was limited by geographical proximities. The startup expanded its business model to support such crowdfunding projects. During that time, it also received its first external funding in the form of angel investment from one of its mentors. It helped in improving the digital platform in alignment with the evolving business model. The organizational structure and roles were designed to support both forms of crowdfunding simultaneously (i.e., charitable funding and donations for creative projects). This was a significant expansion of its business model. Creative projects were based on rewards-based crowdfunding as against charity-based model in the earlier scheme. In rewards-based crowdfunding individuals or groups raised funds for various projects, and in return for these donations, appropriate rewards were offered to the backers after the successful launch of the project. The new model extended Wishberry's responsibility to the delivery of rewards after the project got funded and extended its key activities and involvement. The strategic knowledge gained from market experience helped Wishberry develop an inimitable knowledge base that had the potential to generate sustainable competitive advantage.

4.3. Business model transformation through knowledge assimilation

However, Wishberry realized that such a broad focus was proving detrimental to its growth. Most charitable projects did not realize their initial goal, and the rewards-based projects were also failing to attain their project goals. This was an appropriate phase for intra-

organizational consolidation of activities and services. Such reorganization involved significant communication and coordination. The team depended on organization-wide mailing lists to share both routine and unique market intelligence. The knowledge gained from these structures encouraged others to share their knowledge too, which sometimes led to interesting insights. One of the founders discussed one such insight:

“Charitable projects could still continue without reaching the project funding goal completely. For example, if it was for feeding some poor people, lesser people could be fed, but it can continue. But in case of a creative project, the quality of the project and its associated rewards would dwindle if it failed to collect the projected funds required for the project initially. This was not acceptable to both of our customers, i.e., the project owners and the backers.”

Therefore, in early 2013, charity-based crowdfunding was annulled from Wishberry's platform since it was not as successful as conventional channels of funding but rather competed with them. Further, it allowed funding of projects which were successful in attaining its initial funding target entirely only. The founders also learned that certain sectors were more amenable to rewards-based crowdfunding, as projects like films and music could not turn to conventional modes of funding like a venture capital. Rewards-based crowdfunding was the best option for these kinds of projects. A timeline of key events in the history of Wishberry is shown in Fig. 3.

In 2014, Wishberry launched the new platform with even more focus on the new business model. By the end of 2014, it raised US\$ 650 k from 44 investors. Moreover, the range of categories for which rewards-based crowdfunding was offered by the platform, were curtailed too. With this change in the business model, the crowdfunding startup became a completely digital entity. The ease of doing business on the digital platform became a critical success factor for it. All of its major activities including advertisement, customer onboarding (both project owners and backers), project development, project advertisement, etc. were performed on the online medium only. So, the reach of the platform increased for project owners as well. Although backers from diverse geographies could already fund projects on the platform, project owners were required to visit the startup physically before launching a project. Projects were curated, and only projects with huge potential of success or having novelty were allowed to launch on the platform. A new source of revenue was also developed in the form of consultancy fees for projects which needed some handholding to succeed on the crowdfunding platform. One of the founders remarked:

“Earlier our revenue was intrinsically tied to the success of the projects. Many times the project owners did not put in too much effort to make it successful as they were shy to request funds or due to other reasons. But then we also lost time and revenue because of it. So, we started curating and then launching projects on the platform.”

But with its move to an entirely digital form, Wishberry gained immense success and the percentage of projects successfully funded became more than that of global players like Kickstarter and Indiegogo. Wishberry's focused business model curtailed most other competitors that competed with a broader focus in the same product-market domain. The transformation of Wishberry's business model is shown in Fig. 4.

5. Discussion

The case study of Wishberry has valuable lessons for managing pioneering and learning processes for digital entrepreneurship. We tend to use the term digital entrepreneurship with caution primarily due to the possibility of it being misused with closely related terms like ‘technology entrepreneurship’ or ‘digital technology entrepreneurship’. This term is related to concepts like digital artefacts, infrastructure, and platforms unlike the other terms (Nambisan, 2017). Digital entrepreneurship is situated at the crossroad of entrepreneurship and the above concepts in information systems. Technology takes a backseat in such discussions. Technology remains an input to the overall business logic and helps the firm develop a scalable and sustainable business model that is capable of commanding sustained market power. In this case study, an overview of the description suggests that the pioneering process of the firm could be examined similar to lifecycle stages, i.e., market entry, growth and finally maturation, but it does not allow rich analysis of the intricacies involved in the development of such strategic maneuvers. The evolutionary analysis does not sufficiently expose the uniqueness of the pioneering context, specifically for digital entrepreneurship. Any rich inquiry of the pioneering strategy of such firms cannot be limited to an examination of market entry strategy only as the differences between first movers, and late entrants continue to exist over several cycles of market development. Pioneering is marred primarily by various uncertainties related to market and related risks. Digital infrastructures curtail the initial cost of setting up the venture due to affordability and easy availability of technologies like cloud-based services; it converts the cost of setting up infrastructure from a capital expense to operational expense (Marston et al., 2011). Digital platforms also allow easy access to expertise and skills required at different stages of the firm's growth and development. Firms continue to learn and develop based on their interactions with the operating environment. Moreover, these learning processes, especially in case of market pioneers, lead to unique and continuous changes in the firm's business model. We examine these interactions in detail below.

5.1. Digital market pioneering

Since launch, Wishberry was sure on utilizing an online platform to create business value. Digital entrepreneurship was at the core of their business logic. When it was preparing to launch in the Indian market, it faced some challenges which were very similar to those of other ventures in undiscovered markets. This included, among others, lack of awareness leading to lack of supporting regulations, the absence of relevant skills and unavailability of input resources like a segmented market base, funds, etc. Without these resources, the firm could not design an effective rollout strategy. Hence, it needed to start with developing an understanding of the suitability of the crowdfunding model for funding various projects. Although there had been some crowdfunding initiatives in India before (e.g., a movie named Manthan was crowdfunded by dairy farmers in 1960s), a formal platform for such projects did not exist. Hence, there were no formal financial, regulatory or market frameworks to support such businesses. Wishberry's first

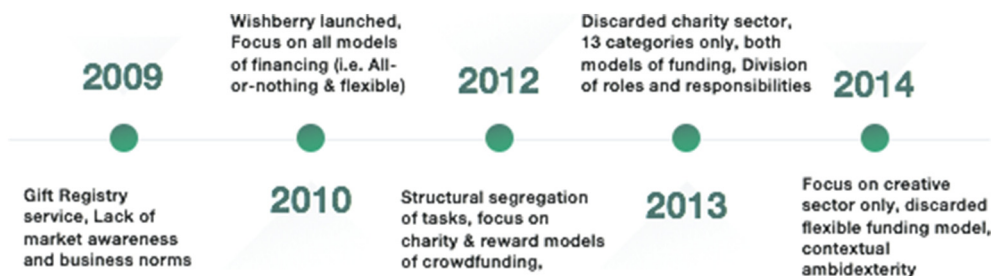


Fig. 3. Timeline of key events.

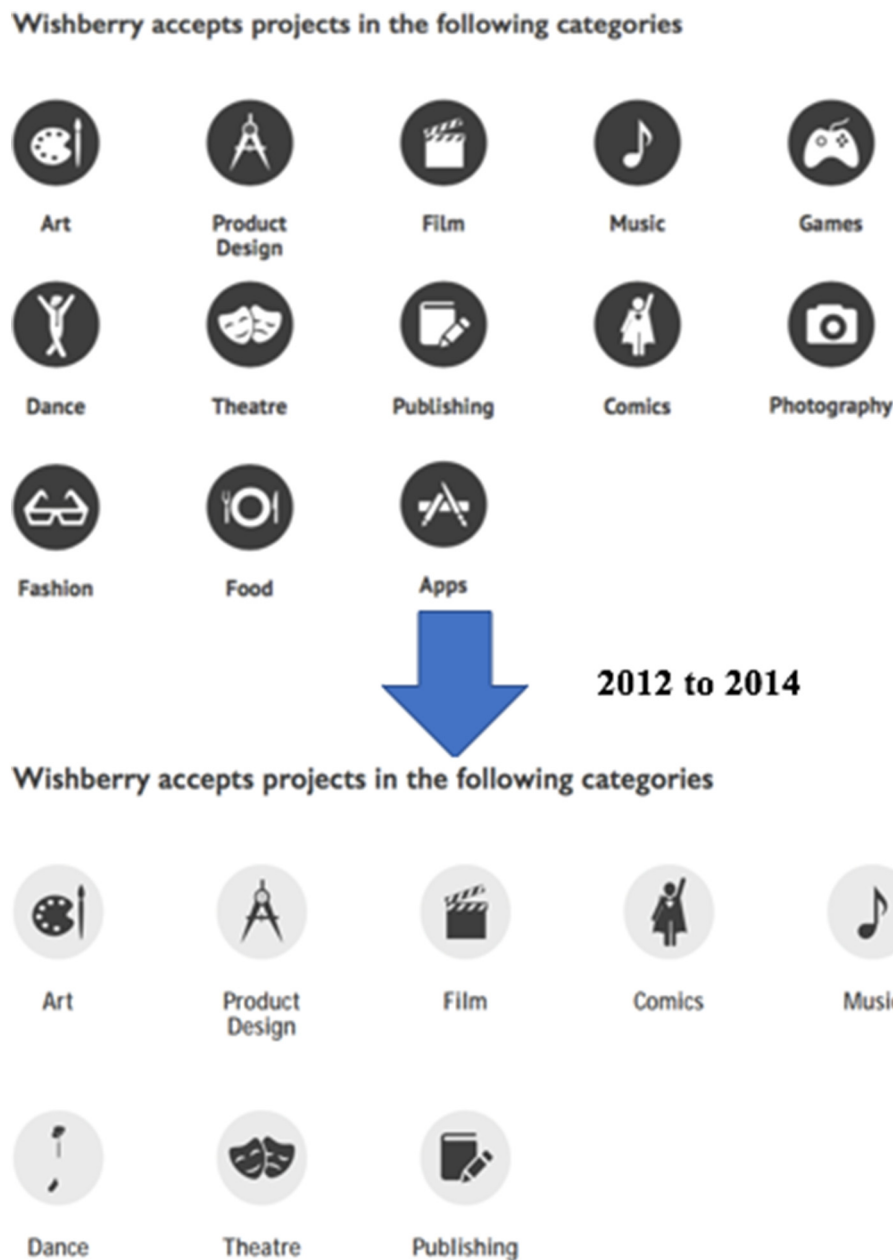


Fig. 4. Business model refinement of Wishberry.
(Source: Presskit in 2012 v/s 2014).

foray into the crowdfunding domain was akin to experimentation by the firm which led to some awareness about this business model. Its reliance on technology helped ease some initial issues relating to access to market and related resources. It allowed them to build a lean startup with its inherent advantages from the start. Also, it allowed them to explore the affordances of the digital platform through these experiments. Such entrepreneurial behavior had market-driving capabilities which later helped develop their pioneering strategies (Mueller et al., 2012). Extended experimentation continued to help develop its capabilities to develop strategic knowledge about the market and its own digital capabilities. Moreover, this cycle of systematic expansion of the firm's knowledge base became a core capability which later developed as a source of sustainable competitive advantage.

But there were some challenges which were quite unique to this product-market domain. For example, the social system existing in India at the time of Wishberry's market entry hindered the success of their gift registry service model due to the inappropriateness associated

with sending active signals for receiving gifts during a marriage. Similarly, the existing socioeconomic environment did not allow the venture to adopt a completely digital business model with online payments and social media led project promotions. These challenges and the firm's unique responses to them helped in the development of an unstructured knowledge base for the business which was useful to respond to sudden environmental disruptions in the future. Later models of crowdfunding adopted by Wishberry were designed using these learnings and helped them overcome such socioeconomic and socio-cultural challenges.

The case study provides rich insights into the interactions of digitalization and strategic learning with the market pioneering strategy of digital ventures. While extant literature has discussed the impact of the operating environment on the entrepreneurial learning processes (Kenworthy and McMullan, 2013; Politis, 2005; Rae, 2006), our study focuses on the strategic learning aspect of it. Strategic learning helps in the development of positive knowledge bases which can be tapped by

later entrants too. The culmination of such knowledge leads to standardization within the industry. Our study supports established theories of entrepreneurial learning through experience and immersion in industry contexts (Deakins and Freel, 1998) and extends this discourse to the context of digital ventures and their pioneering strategies. The results of this study suggest that such ventures should be actively seeking novel opportunities from their operating environment while continuously auditing its intrinsic digital capabilities from its digital infrastructures. As a result of the actions of these market pioneering entrepreneurs the market absorbs these innovations, becomes more mature, and generates new opportunities for other aspiring incumbents.

5.2. Development of strategic knowledge base for digital entrepreneurship

During the launch phase of market pioneers, the firm's knowledge base is primarily based on the founder's knowledge and experience. The informal nature of such knowledge centralizes its accessibility and therefore usefulness. For Wishberry too, early strategy development was based primarily on the founder's knowledge and experience of the market and resulted in the marriage gift registry business model. While this and later business model experimentation strategies were expensive, it developed strategic learning of market intelligence like target segment characteristics, product expectations, and market needs.

Before market entry, Wishberry had limited knowledge of the market or even its own capabilities. Its early experimentation was aimed at the development of probes to collect strategic market information. Likewise, the market entry phase consisted of activities aimed at collecting customer feedback. Simultaneously, it aimed at extending its digital capabilities by focusing on lean development. Since the early business model was mostly unstructured, the strategic information collection processes were informal. Wishberry focused on building relationships with mentors having significant experience in the market. About its mentors, the founders remarked:

"They helped us understand market needs better and allowed us to identify potential sources of disruption for the future."

"More than funds, our initial investors helped us to develop and refine the initial business model. Their knowledge was invaluable for our growth."

Like most digital ventures, Wishberry had a flat organizational architecture in the early phase. But the lack of formal structures for knowledge dissemination hindered uniformity of information access throughout the firm. Organizational communication artefacts (digital) like mailing lists helped formalize knowledge dissemination structures within the firm. Strategic information like implicit customer needs, structured market reports, and other sources of market information became accessible to everyone through these mailing lists. This knowledge was crucial for the startup's routine operations as well as for the development of a long-term business strategy. Further, it helped expand the network resources available to Wishberry.

The firm's response to various business disruptions also reinforced its knowledge base through the strategic knowledge acquisition structures. This knowledge base was served by extrinsic probes along with internal knowledge implementation structures. The knowledge base developed by the digital venture was a rich source of strategic knowledge of the product-market domain. Implementation of the strategic knowledge gained henceforth led to improvement of process efficiency for the firm and also helped develop critical business insights.

5.3. Business model transformation for digital entrepreneurship

Business model transformation for pioneering firms includes the design of a novel business model for a specific business objective and then its gradual or disruptive evolution. Initial business model design for undiscovered markets is derived primarily from the implicit knowledge of the entrepreneurs. Wishberry's early rollout strategy was of experimentation and refinement over it. The digital nature of the business allowed for low cost and swift experimentation. While it could

access some explicit sources of strategic market intelligence through reports of related industries (primarily related to the financial market), implicit knowledge of the business was gained through the founder's knowledge and experience. Together they helped in the design of a prototype business model. This prototype was tested on early customers and refined gradually. This model when supplied with specific strategic market intelligence, helped identify the actual market needs and existing market conditions. It helped in later business model development and adaptation.

Business model transformation is a risky exercise. While transformation may become a necessity under market expectations and specific pressures to perform, it also carries a considerable risk of wastage and failure. With digital enterprises, the cost of transformation and the risks associated with it are lower, but the risk of a competitor imitating the transformed model is high. The business model design may not remain proprietary to the firm, and hence the specific competitive distinction may be easily lost in the digital business domain. However, specific strategic knowledge of the product-market domain together with business transformation can help develop sustainable competitive advantage for the firm. This combination has very low replicability as the sources of competitive advantage are not apparent. In case of a market pioneer like Wishberry, its early entry into the crowdfunding market allowed it to gain rich insights of the market especially of the social, cultural and economic conditions that could be used to develop strategic market advantages (Kerin et al., 1992). Hence, it developed and redesigned its business model with these insights to conform to the specific market needs. Later entrants could not immediately access this strategic knowledge and hence couldn't compete fiercely. Although some of them did try to replicate the digital platform services, the distinctions remained. Specifically, Wishberry's choice of a focused business model for a limited set of sectors was based on its market insights and strategic learning developed from experience. In contrast, all of its competitors went for a broad-based strategy and positioned themselves to cater to all sectors which might gain from crowdfunding. The competition from traditional sources of funding was largely ignored by them. Hence, Wishberry continued to maintain market supremacy even with competing digital business platforms. A summary of the lessons learned from the case study are presented in Table 3 below:

While the learnings from this study provide rich insights into the phenomenon of business model transformation of pioneering digital entrepreneurial ventures as a result of strategic learning, the authors are cautious about generalizing the results to all digital enterprises. Instead our focus is on ensuring analytical generalizability which is defined as "a process separate from statistical generalization in that it refers to the generalization from empirical observations to theory, rather than a population" (Gibbert et al., 2008, p. 1468). We provide analytic generalizability to this study through the rich details provided for the case study of Wishberry. Our study identifies the factors impacting the business model transformation for digital ventures and attempts to examine their interactions under a market pioneering context. This paves the path for developing a theory of strategic learning for digital ventures. Apart from the insistence on analytical generalizability, our focus in this research has been on ensuring high internal validity and reliability of the results to ensure rigor (Gibbert et al., 2008). We ensure high internal validity by basing our research design on strong theoretical foundation (Yin, 2011). The proposed framework is based on extant scholarship supported by irrefutable logic. Further, the reliability of the results is ascertained by means of triangulation of data through multiple interviewees and collection of data from multiple sources. Together they ensure the credibility of the results from the study, hence paving the path for theoretical validity (Eisenhardt, 1989; Gibbert et al., 2008).

6. Implications of the study

Entrepreneurs and managers of entrepreneurial ventures can use the

Table 3
Lessons learned from the case study.

Concepts	Observations from case	Learnings
Digital market pioneering	<p>Launched as a marriage gift registry service which didn't align with the existing market conditions.</p> <p>Flexible business model to implement multiple forms of crowdfunding both simultaneously and sequentially.</p> <p>Lack of market structures to support the digital business.</p>	<p>Initial experimentation helped gain market knowledge. Early entry gave pioneers an opportunity to experiment and learn without the pressure of competition.</p> <p>Strategic agility was desirable for pioneers. It helped them utilize the knowledge acquired from the market efficiently and swiftly.</p> <p>Undiscovered markets provided an opportunity for digital ventures to affect market standards and expectations.</p>
Development of strategic knowledge	<p>Dependency on the founder's knowledge and experience at launch.</p> <p>Knowledge development through customer feedback.</p> <p>Knowledge dissemination within the organization through mailing lists etc.</p>	<p>Unstructured knowledge acquisition structures were useful in early stages.</p> <p>Pioneers focused on extrinsic sources of knowledge to gain market intelligence.</p> <p>Formal knowledge assimilation structures needed to be developed for organization-wide access to the knowledge base.</p>
Business model transformation	<p>Flexibility in digital infrastructure enabled learning of market conditions and led to business model transformation.</p> <p>Segregation of organization structures for simultaneous experimentation with multiple business models.</p> <p>Mix of incremental and substantial changes led to market dominance.</p>	<p>Digital ventures were able to transform their business model swiftly as a result of strategic learning of the market characteristics. The success of the transformation depended on the accuracy and extent of strategic learning.</p> <p>Formal organization structures for different business models allowed pioneers to experiment quickly with limited resources.</p> <p>Learnings developed from experimentation needed to be assimilated and refined for exploitation and eventual growth. Successful transformation led to market dominance.</p>

insights from this study to design and develop reactive business models. Strategic agility is crucial for market pioneers as it allows them to implement the strategic knowledge assimilated from their repeated market interactions. Digital ventures have an opportunity to implement agile structures and processes easily owing to the affordances provided by technologies that offer both platforms and infrastructures as services. Startups in the digital domain can easily modify their products and services to align them with market needs. The results of this study will help market pioneers identify potential strategies for developing competitive distinctions, which if developed carefully, can allow them to create a portfolio of inimitable competencies. Although the replicability of explicit business models is high in digital businesses, the portfolio of advantages developed by pioneers can help them enjoy extensive market dominance.

The outcomes from this study have important implications for customers (i.e., both project owners and backers) of crowdfunding platforms too. For example, project owners can evaluate the implications of launching their projects in pioneering platforms. Insights from the process of strategic learning for such ventures will help customers contribute to shaping this specific product-market domain. Industry standards and market expectations are primarily shaped by the repeated interactions of market pioneers with early customers. Adoption and growth of such business domains are primarily the results of such interactions. Mentors to such businesses gain insights into their specific role in the overall business ecosystem and how their roles evolve over time.

Researchers in the domain of change management and strategic learning will benefit from the integration of strategic learning and business model transformations in the context of market pioneers. Further, the intricate interaction of strategic learning with operating environment leads to rich insights into the process of evolution of new industries. Although scholars like [Covin et al. \(2000\)](#) have examined the various characteristics of competition between pioneers and followers, its impact on the firm's structure and product characteristics have garnered little attention. This study extends the extant scholarship in the domain of digital entrepreneurial ventures by developing a vocabulary for examining such business scenarios and their impact on a firm's business model. Future researchers can examine the various market stimuli which necessitate changes in the business model. Further, when and how should new ventures respond to them? Questions like under what conditions should business models be transformed and to what extent, to develop sources of sustainable competitive advantage and even how such sources can be identified, shall lead to new theoretical developments. Also, what is the relationship between the order of market entry and the associated business model development? How does strategic learning impact the overall operating environment? These questions and the related lines of inquiry will illuminate and further strengthen our understanding of strategic learning processes of digital ventures.

7. Conclusion

Digital infrastructures allow the re-appropriation of the capabilities offered by them. This fluidity of function as a result of segregation of form from function allows entrepreneurs in this domain to develop novel business models and transform existing ones. This research examined the process by which pioneering digital firms can transform their business model as a result of strategic learning. The case study of Wishberry suggests that digital ventures in pioneering conditions implement strategic learning processes and structures to develop sources of sustained competitive advantage over late entrants. Wishberry transformed its business model multiple times from its learnings of the operating environment until it achieved stability and dominance in the market. It was observed that strategic learning from interactions with the operating environment reciprocally impacted the operating environment for all firms in that specific product-market domain as well.

In this case, it established standards for all other incumbents. Further, we realized that successful transformation of the pioneer's business model could lead to sustained market dominance. Therefore, digital entrepreneurs that have an opportunity to mitigate early uncertainties should consider developing structures for strategic learning that have the potential to ensure market dominance for the venture. This study illuminates the significance of business model transformation for market pioneers in developing sources of sustainable competitive advantage. Future researchers can examine the specific impact of strategic learning on the business environment, thereby affecting the transformation of the business model for the success of the digital entrepreneurship.

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Gaurav Gupta is a doctoral candidate of Management Information Systems Group at the Indian Institute of Management Calcutta. He completed his B. Tech (IT) from Orissa Engineering College and then went on to work at Tata Consultancy Services for around 3 years. His research interests are in digital entrepreneurship, strategic information systems, IoT and information privacy. He is an EFMD and CEEMAN teaching case writing award winner. He has presented his research in various prestigious conferences and his work has been featured in the proceedings of conferences like ECIS, HICSS etc. He has also published a book chapter titled “Privacy and consumer IoT: a sensemaking perspective” in *Engineering Secure Internet of Things, IET*. He is currently working on his PhD dissertation which explores the role of operating environment on the business model of technology ventures using a multi-country sample of case studies. He has served as an expert reviewer for

various high impact journals like *Information & Management* and *Communications of AIS*.



Indranil Bose is Professor of Management Information Systems at the Indian Institute of Management, Calcutta. He acts as Coordinator of IIMC Case Research Center. He holds a B. Tech. from the Indian Institute of Technology, MS from the University of Iowa, MS and Ph.D. from Purdue University. His research interests are in business analytics, telecommunications, information security, and supply chain management. His publications have appeared in *Communications of the ACM*, *Communications of AIS*, *Computers and Operations Research*, *Decision Support Systems*, *Ergonomics*, *European Journal of Operational Research*, *Information & Management*, *International Journal of Production Economics*, *Journal of Organizational Computing and Electronic Commerce*,

Journal of the American Society for Information Science and Technology, *Operations Research Letters* etc. He is listed in the *International Who's Who of Professionals*, *Operations Who's Who in the World*, *Marquis Who's Who in Asia*, *Marquis Who's Who in Science and Engineering*, and *Marquis Who's Who of Emerging Leaders 2007*. He serves as Senior Editor of *Decision Support Systems* and as Associate Editor of *Communications of AIS*, *Information & Management*, *Information Technology & Management* and several other IS journals.