



# Empowerment of Grassroots Consumers: A Revelatory Case of a Chinese Fintech Innovation

Tianhui Tan<sup>1</sup>, Ying Zhang<sup>2</sup>, Cheng Suang Heng<sup>3</sup>, Chunmian Ge<sup>4</sup>

<sup>1</sup>National University of Singapore, Singapore, [dcstant@nus.edu.sg](mailto:dcstant@nus.edu.sg)

<sup>2</sup>University of Auckland, New Zealand / National University of Singapore, Singapore, [zhangying@u.nus.edu](mailto:zhangying@u.nus.edu)

<sup>3</sup>National University of Singapore, Singapore, [hengcs@comp.nus.edu.sg](mailto:hengcs@comp.nus.edu.sg)

<sup>4</sup>Corresponding author, South China University of Technology, China, [bmgecm@scut.edu.cn](mailto:bmgecm@scut.edu.cn)

## Abstract

The recent emergence of financial technology (fintech) innovations offers a promising resolution to financial exclusion via mechanisms that *empower* financially underprivileged individuals to gain access rights in the traditional financial industry. However, academic research has provided little guidance on how to *strategize* the *IT-enabled empowerment mechanisms* for fintech innovations to realize both business success and financial inclusion. In this study, we conduct an in-depth revelatory case study on a novel Chinese fintech innovation, Yu'E Bao, a bellwether for the dramatic transformation of China's financial industry through the successful empowerment of a large population of financially underprivileged individuals (i.e., "grassroots consumers," translated from "cao gen" in Chinese). Through our systematic qualitative analysis of news articles collected since the product launch, we derive a two-stage theoretical model, examined through the lens of empowerment, and unravel the mechanisms underlying fintech innovation's empowerment process on grassroots investment consumers. Most importantly, we elucidate a duality of empowerment through which the catalyst for Yu'E Bao's success becomes an impediment to Yu'E Bao's further development. Our study contributes to the literature on information technology-enabled empowerment, empowerment, and fintech. We also elucidate critical implications for various stakeholders, such as governments, policy makers, fintech practitioners, and product designers.

**Keywords:** Qualitative Method, IT-Enabled Empowerment, Grassroots Consumers, Fintech, Emerging Market

Jens Dibbern was the accepting senior editor. This research article was submitted on April 1, 2017 and underwent five revisions.

## 1 Introduction

Financial inclusion is critical for attaining social inclusion and achieving sustainable development goals (UN, 2015). Yet, as of 2014, nearly half of all adults in emerging markets still remained unbanked and even those with bank accounts lacked access to a broad range of financial services such as investment products (Manyika et al., 2016; The Economist, 2015). Financial exclusion prevails because financial

services are either costly or difficult to use. Specifically, the financial industry often imposes high entry barriers, especially for people who are disadvantaged because of their net worth and domain knowledge (i.e., financially strained and/or illiterate individuals).

Financial exclusion is disconcerting, and coping with a financially strained and illiterate population remains a nontrivial challenge. However, such challenges may represent untapped opportunities for information

technology (IT) innovation in the area of financial technology (fintech) innovations, for example. From a business perspective, the large financially underserved population poses an alluring but overlooked market for fintech companies to exploit. From a prosocial perspective, fintech innovations have been recognized as a promising resolution to financial exclusion via mechanisms that overcome certain limitations (e.g., high entry barriers) to *empower* financially underprivileged individuals (Demirgüç-Kunt et al., 2015; TechUK, 2015). Thus, a thorough understanding of the specific context (e.g., barriers to “access” and “literacy” for financially underprivileged individuals in emerging markets) is key for fintech companies seeking to develop effective “win-win” strategies for pursuing both business and prosocial objectives (Lyons, Grable, & Zeng, 2019). Unfortunately, academic research has provided little guidance on how to *strategize IT-enabled empowerment mechanisms* so that fintech innovations can realize such “win-win” propositions enabling both business success and financial inclusion.

Two theoretical research gaps drive this research. First, the extant literature on technology adoption (Rogers, 2010; Venkatesh & Davis, 2000), pure economic benefits (Ba, Whinston, & Zhang, 2003), and the scaling of the consumer base (Foster & Heeks, 2013; Huang et al., 2017) is inadequate because financially underprivileged individuals not only need to overcome resistance to technology innovation itself, but must also overcome the context-specific physical and mental barriers of the financial industry, such as high investment thresholds and domain-specific knowledge (Lyons et al., 2019). Although emerging work on IT-enabled empowerment exists (Barak, Boniel-Nissim, & Suler, 2008; Doll & Deng, 2010; Ghose, 2001; Sia et al. 2002), it does not specifically target the fintech industry. For example, nascent work has examined community empowerment in crisis response (Leong et al., 2015) as well as employee empowerment in internal firm management (Doll & Deng, 2010). Denegri-Knott et al.’s (2006) study is noteworthy in that it cautions that power is not a universal concept but domain- and context specific. Hence, it is imperative to investigate *IT-enabled empowerment* in the context of fintech innovation in order to accurately account for the distinct characteristics of the fintech industry and its power relations. In this study, we thus examine a novel Chinese fintech innovation, Yu’E Bao, a bellwether for the dramatic transformation of China’s financial industry through the successful empowerment of a large population of financially underprivileged individuals (i.e., “grassroots consumers,” translated from the Chinese “cao gen”) (Barboza, 2014).

Second, our study is also theoretically pertinent in that it embraces an enriched *dynamic* view of IT-enabled

empowerment. Our review of extant works on IT-enabled empowerment reveals an assumption that power relations between an empowering agent (e.g., online social media) and empowered agents (e.g., victims of a natural disaster) are always unidirectional (Barak et al., 2008; Doll & Deng, 2010; Ghose, 2001; Leong et al., 2016; Leong et al., 2015; Sia et al., 2002), meaning that the impact of empowerment is typically assumed to involve no reversal of influence. However, in a context in which the empowering agent is an IT innovation (e.g., fintech innovation) and the empowered agents are consumers, we believe that this assumption should be challenged and reevaluated. As both empowering and empowered agents are subject to a highly competitive and evolving “external” industry landscape, overlooking the possibility of a reversal of influence may result in capricious predictions (i.e., the failure to realize the perils, if any, of IT-enabled empowerment). For example, AOL and Yahoo were pioneers that shaped the internet and email landscape, empowering early netizens to enjoy the benefits and convenience offered by the World Wide Web. However, with the rapid evolution of Web 2.0 and mobile industries, they failed to cope with the increasing needs of their empowered users and hence lost their users to other more appealing competitors. Evidently, strategizing IT-enabled empowerment without considering the possibility of the reversal of influence may be an inadequate strategy for achieving sustainable product success and governing effective social change. The failure to consider potential changes in power relations (i.e., dynamism) during the process of IT-enabled empowerment can be a grave theoretical omission. Hence, our study seeks to provide a more holistic and comprehensive understanding of the entire IT-enabled empowerment process by addressing the following research questions:

1. *How does a fintech innovation leverage the potential of grassroots investment consumers to succeed in a market with a high entry barrier (e.g., the financial industry)?*
2. *What are the mechanisms by which a fintech innovation empowers grassroots investment consumers?*

We provide a comprehensive theoretical background on “digitalization and fintech” and “empowerment and IT-enabled empowerment” in Section 2. We then detail our research method in Section 3. We introduce our case study in Section 4 and present our case analyses and findings in Section 5 and Section 6. We conclude by discussing theoretical and practical contributions, as well as the limitations of the paper and some potential future research directions in Section 7.

## 2 Theoretical Background

### 2.1 Digitalization and Fintech

Fintech is a portmanteau of financial technology that describes an emerging phenomenon in the 21st century, involving the design and delivery of financial products and services through technology (Leong et al. 2017). Broadly defined by Gomber et al. (2018), it refers to any technological innovation in the financial sector, including financial services operations such as digital banking (Campbell & Frei, 2010) and credit scoring (Tan & Phan, 2018), payment services such as mobile payment applications (Dahlberg et al., 2015) and digital currencies (Mai et al., 2018), deposit and lending services such as open banking (Zachariadis & Ozcan, 2017) and peer-to-peer lending (Burtch, Ghose, & Watal, 2014), and financial market and investment-related services such as high frequency trading (Brogaard, Hendershott, & Riordan, 2014) and social trading (Glaser & Risius, 2018). Today, technological forces have transformed almost all areas of financial services, mediating between markets, regulators, companies, and investors (Currie & Lagoarde-Segot, 2017). The wide range of fintech innovations present countless opportunities for exploration by practitioners and researchers alike.

Indeed, the multidisciplinary nature and multifaceted problematization of fintech have stimulated a surge of research on this topic in the field of information systems (IS) in recent years. Most existing studies predominantly focus on “crowdfunding,” i.e., the solicitation of funding (money) from the crowd (masses) (e.g., Burtch, Ghose, & Watal, 2016; Liu et al., 2015). There are also a few studies that examine other types of emerging fintech innovations such as digital currency (Mai et al., 2018) and social trading (Glaser & Risius, 2018). Notably, in adopting econometric and statistical methods, such research attempts to quantitatively investigate economic outcomes or behavioral incentives—e.g., the monetization of social media messages (Mai et al., 2018) or the provision of privacy and information controls (Burtch, Ghose, & Watal, 2015). Taken together, the extant work on this topic reveals several opportunities for complementary research. For example, fintech research largely tends to focus on quantitative research approaches and may hence miss potential insights or alternative perspectives offered by other methodological approaches. Despite the rapid development of diverse fintech innovations in emerging markets, their underlying mechanisms (e.g., overcoming traditional financial entry barriers) have been largely excluded from the academic spotlight.

A handful of nascent IS studies relevant to our research study have recently emerged to investigate the adoption and scaling mechanisms of fintech innovations (related to financial saving and borrowing, but not to financial

investments) to facilitate financial inclusion. For example, Foster and Heeks (2013) conducted a case study on a mobile monetary service innovation for money transfer and conversion and uncovered a four-stage process for scaling in emerging markets: namely, exploratory, incremental, aggressive growth, and standardization. Huang et al. (2017) investigated a microloan innovation and posited that data-driven operation, instant release, and swift transformation are the three mechanisms underpinning the rapid scaling process of a Chinese microlending company. Likewise, Leong et al. (2017) studied a different microloan innovation case and found that IT allowed for the generation of alternative credit scoring using nontraditional social network and location-based data, thereby enabling the focal company to occupy a market niche in the online lending industry.

Certainly, fintech innovations that focus on saving and borrowing are different from those designed for financial market and investment-related services in the financial services industry (Gomber et al., 2018). Unlike the simple notions of saving and borrowing, investment products are often perceived to be difficult to grasp, especially for financially unsophisticated investors (van Rooij, Lusardi, & Alessie, 2011). Often, individual investors face high barriers in order to effectively participate in financial activities. Since our study emphasizes overcoming barriers, our work is differentiated from prior research that focuses more on end goals such as the number of adoptions (Foster & Heeks, 2013) or the scaling of the consumer base (Huang et al., 2017). Moreover, our study investigates the salient dyadic interaction between fintech innovation and underprivileged consumers, accentuating the need to surmount difficulties to access complicated financial products. Hence, our study helps elucidate pertinent potential changes in power relations between fintech innovations and consumers over time.

### 2.2 Empowerment and IT-Enabled Empowerment

Based on the root word “power” (Pfeffer, 2013; Thomas and Velthouse 1990), the concept of “empowerment” has been most widely construed as the ability to enable, energize, or gain power over (someone or something) (Lincoln et al., 2002; Thomas & Velthouse, 1990). It moves the powerless or oppressed into more equitable positions through the use of various techniques (Lincoln et al., 2002).

Despite the various contexts in which empowerment occurs—e.g., social movements and politics (Hur, 2006; Lincoln et al., 2002) and management (Thomas & Velthouse, 1990)—there are three common conditions identifying people who are “empowered.” First, there must be individual, managerial, social, or political disturbances that create alienation, leading to triggers of empowerment (i.e., the premise of empowerment—Hur,

2006). Second, becoming empowered requires power changes in individuals' perceptions and behaviors (Breton, 1994; Conger & Kanungo, 1988; Swift & Levin, 1987). Third, some social, structural, or psychological catalyst must trigger change. In line with these three conditions, our investigation uses the lens of "empowerment" to explore how a fintech innovation (i.e., Condition 3: the trigger of empowerment) can influence power relations between the empowering fintech innovation and newly empowered consumers (i.e., Condition 2: power changes during empowerment) in a market with a high entry barrier (i.e., Condition 1: premise of empowerment).

The extant literature typically examines "empowerment" from either a social-structural perspective or a psychological perspective. The social-structural perspective is rooted in the belief in democratic politics. Because power resides at each level of a structure or system (Prasad & Eylon, 2001), the social-structural perspective focuses on sharing power and authority throughout a system (Conger & Kanungo, 1988) and making changes to policies, practices, and structures to facilitate a high-involvement structure (Bowen & Lawler, 1995). In contrast, the psychological perspective examines the use of techniques and a set of conditions that may motivate individuals in a stigmatized social category to perceive greater control over their own fates (Conger & Kanungo, 1988; Spreitzer & Doneson, 2005). Consequently, empowered individuals typically experience an increased level of self-efficacy (Lincoln et al., 2002). The psychological perspective builds on social learning, motivation theory, and other psychological concepts to focus on the individual empowerment experience. Our research question aligns more with the psychological perspective for two reasons. First, the main focus of our study is to reveal the enabling or facilitating mechanisms of fintech capable of changing individuals' perceptions and behaviors during empowerment. Second, our study takes a more granular perspective, focusing on the long-term dyadic interactions between fintech innovation and grassroots investment consumers (hereafter "grassroots consumers") rather than on the high-level power structure/system of the fintech industry.

The advancement of IT has further enhanced the possibilities of empowerment, allowing even disadvantaged individuals to make personal decisions and access relevant resources (Barak et al., 2008; Doll & Deng, 2010; Ghose, 2001; Sia et al., 2002). For example, consumers can access greater levels of power through increased information availability, larger choice sets, and more personal autonomy (Fuchs, Prandelli, & Schreier, 2010; Rezabakhsh et al., 2006; Shankar et al., 2006). Consumers are now better able to proactively make choices rather than waiting to be contacted, as was the case in the past (Füller et al., 2009). In addition, consumers now have greater control over new product

design and development (Füller et al., 2009), allowing them, for example, to influence firm value (Boyd, Chandy, & Cunha, 2010) by contributing to the repositioning of brand imaging, which was previously dictated by companies alone (Cova & Pace, 2006). Consequently, companies are increasingly compelled to adapt their strategies to satisfy empowered consumers (Boyd et al., 2010).

Previous IS research has focused on leveraging empowerment to achieve IT-related outcomes such as technology use and support (Maruping & Magni, 2012; Shrednick et al., 1992; Wareham, Bjørn-Andersen, & Neergaard, 1998). Other nascent works on IT-enabled empowerment explore the role of IT in empowerment in various scenarios or contexts (Füller et al., 2009; Leong et al., 2016; Leong et al., 2015; Li, 2011; Li et al., 2017), such as community empowerment in crisis response (Leong et al., 2015) and employee empowerment in internal firm management (Doll & Deng, 2010). Leong et al. (2016), for example, examined how IT empowered marginalized communities in rural villages of China to achieve self-organizing e-commerce ecosystems. Adopting an experimental approach, Li et al. (2017) investigated the impact of a design artifact (i.e., virtual advisors' identity) on empowering emergency rescuers through a mobile psychological self-help service. Füller et al. (2009) uncovered the effects of IT (e.g., virtual interaction tool) on empowering consumers in product cocreation activities. Likewise, other studies have shown that IT may help employees who are deprived of resources achieve greater empowerment (Deng, Joshi, & Galliers, 2016; Duane & Finnegan, 2003).

Although these studies do provide some guidance on IT-enabled empowerment, they situate IT-enabled empowerment in contexts with power structures that are significantly different from the fintech industry. As mentioned above, power is not a universal concept but a domain- and context-specific concept (Denegri-Knott et al., 2006). Even though IT may seem to empower consumers through broadening available consumption choices (i.e., in marketing, more choices translate to more power) (Füller et al., 2009; Harrison, Waite, & Hunter, 2006), this may not necessarily be true for industries with high entry barriers that require domain-specific knowledge. Specifically, more choices of banks and financial products, facilitated by internet technology and fintech innovations, do not necessarily translate to more power for consumers, who nevertheless lack the power to participate in financial activities. In other words, the power of choice may not translate to other types of domain- and context-specific power (e.g., knowledge power), which are crucial in our context. In addition, as discussed in the Introduction, the extant literature has not yet unraveled the dynamics of the power relations between IT and individuals, and failing to recognize potential changes in power relations during the process of empowerment might incorrectly suggest

that power relations are always unidirectional and not subject to the reversal of influence. Thus, we situate our study of the fintech industry in a developing economy (China) and seek to enhance the understanding of the underexplored IT-enabled empowerment process with evidence from the rapidly developing fintech industry.

### 3 Method

To address our research questions, we conducted a qualitative study (Yin, 2013) on the revelatory case of Yu'E Bao, an online money market fund embedded within Alipay,<sup>1</sup> an affiliate technology of Alibaba (Tan et al., 2015). Revelatory cases provide unusual research access, exploiting opportunities to explore a significant phenomenon (Eisenhardt & Graebner, 2007). Yu'E Bao constitutes such a case, being a revolutionary fintech innovation that was an instant "hit" that created huge industrial and societal impacts. This unprecedented phenomenon, entailing massive grassroots consumers' empowerment and consumption, calls for an in-depth analysis. Hence, the qualitative approach is most appropriate because it provides deep insights on exemplary and novel cases to theorize new and interesting phenomena (Pan & Tan, 2011; Yin, 2013) with the goal of building an inductive model that is grounded in the relevant data.

#### 3.1 Data Collection

The Yu'E Bao case has the advantage of being well-documented by public media. Following approaches of evidence gathering and critique processing documented in historical research and archival analysis (Mason, McKenney, & Copeland, 1997; Porra et al., 2014), we focused on systematically collecting and analyzing our data<sup>2</sup> from online news media (e.g., news articles,

interview reports, consultant commentaries, etc.), which are similar to sources adopted by prior qualitative studies in top journals (e.g. Eaton et al., 2015; Fayard & Metiu, 2014; Nelson & Irwin, 2014; Ngosi & Braganza, 2009).

For data collection, we undertook extensive web searches using "Yu'E Bao" as our keyword in news portals. We arduously crawled and downloaded all data (in the form of online articles) related to Yu'E Bao and then laboriously checked and removed identical articles (mainly due to cross-platform reproduction). We eventually narrowed our sources down to 1,466 articles published from May 2013 to March 2015 from top Chinese<sup>3</sup> and English-language news portals,<sup>4</sup> as summarized in Table 1. The collected data were evaluated according to both external and internal criticism adopted by the authors (Golder, 2000; Porra et al., 2014). The external criticism appraises the "authenticity" of data. Based on Porra et al. (2014)'s criteria, articles were considered valid and authentic if they were written for the purpose of making a public record open to public scrutiny. Internal criticism considered the value of the data content, especially in terms of its "credibility" (Porra et al., 2014).

Online news media publish many articles written by multiple journalists and reporters across time and space. Although these sources include different viewpoints with a diversity of content and ideas (Carpenter, 2010; Voakes et al., 1996), such variety and diversity on a common topic help paint a more comprehensive picture and achieve better reliability because of data triangulation (Denzin, 1973). By seeking converging findings from different sources, we hope to improve the construct validity and reliability of our study (Yin, 2013).

**Table 1. Overview of Data Collection**

<b>Data sources (Language)</b>	<b>Number of articles</b>
Xinhuanet (Chinese)	586
Netease (Chinese)	422
Sohu (Chinese)	163
Sina (Chinese)	129
Tencent (Chinese)	77
Wall Street Journal (English)	36
Bloomberg (English)	34
Forbes (English)	12
Financial Times (English)	5
New York Times (English)	2

<sup>1</sup> Alibaba Group Holding Ltd. is the e-commerce giant in China. Alipay has become the world's largest mobile payment platform since 2013, by processing more than 2.78 billion transactions (worth US\$150 billion) in 2013.

<sup>2</sup> To evaluate the authenticity and credibility of our data, we adapted the "evidence critique techniques" typically used in IS historical method (e.g., Marwick, 2001; Porra et al., 2014)

because published and archival materials are considered typical sources of historical research.

<sup>3</sup> Note that Xinhuanet is operated by Xinhua News Agency, the official press agency of China. The other four Chinese websites are the top four web portals in China.

<sup>4</sup> Since most of the data was written in Chinese, we consulted an experienced translator to ensure high-quality translations.



In addition, online news media are known for capturing the latest events in a timely and opportune fashion. Since Yu'E Bao has been a major success and has undergone changes and development over time, we do not adopt direct interviews out of fear that respondents will fall prey to hindsight wisdom or overconfidence (e.g., “I knew it all along”) or be susceptible to post hoc construction of reasoning (Fischhoff, 1975; Koriat, Lichtenstein, & Fischhoff, 1980) or failure to recall. Thus, our use of data from online news media helps us mitigate hindsight bias (Fischhoff, 1975). In sum, we maintain that our collected data from online news media (including interviews) should be considered authentic and credible for helping to elucidate the case of Yu'E Bao.

### 3.2 Inductive Data Analysis

Recognizing the lack of well-developed theoretical models applicable for investigating the dynamic process of IT-enabled consumer empowerment, we adopt the qualitative approach to describe and explain the phenomenon of interest (Gioia & Pitre, 1990) and propose a grounded, substantive, midrange theory (Glaser & Strauss, 2017; Lincoln & Guba, 1985; Strauss & Corbin 1998). We refer to the systematic inductive approach devised by Gioia, Corley, and Hamilton (2013) to establish qualitative rigor. In particular, we closely follow Gioia et al.'s (2013) advice for demonstrating connections among data, emerging concepts, and resulting theory.

Our research method involved several steps. First, we reorganized and reformatted the data before coding. We pored over every article thoroughly to extract two types of information: official announcements versus opinions. As official announcements represent a more objective source, we used them to sketch the timeline and milestones of the Yu'E Bao development over time. Since opinions are more subjective, we used them to support the main findings and for purposes of induction and data triangulation. We collected all opinions from the articles in our sample, which were presented in the form of interviews, quotations, or comments. In total, we collected 269 company opinions and 264 consumer opinions, supplemented by 398 opinions from professionals (including scholars, analysts, consultants, etc.). Next, we started the data analysis by organizing these opinions into first-order categories and second-order themes by abstracting the original narratives, using a process similar to “open coding” and “axial coding” (Strauss & Corbin, 1998). As these “codes” capture the essence and essential elements of the research story, we clustered them based on a pattern of similarity and regularity through numerous iterations, which facilitated the development of “categories” and thus contributed to our analysis of the connections in a more structured form.

With our research questions in mind, we coded every piece of data as follows, exemplified by the *New York Times* news article presented in Figure 1. We pored over each original news article line by line. When we came across stakeholders (e.g., consumers, professionals, companies, etc.), we coded them accordingly. For example, “Gao Yue, a 25-year-old health care consultant in Beijing” was coded as a *consumer* whereas “Joe Zhang, a Hong Kong banker” was coded as a *professional*. We also coded the content of the interviews, opinions, and comments of these stakeholders. For example, when Gao Yue stated, “As long as I get a higher return than the regular bank deposit, I'm happy to put my money in there ... It's better than being beaten by inflation,” we coded this *consumer opinion* statement as *Yu'E Bao offers users economic benefits*. In another example, Joe Zhang stated, “What makes Yu'E Bao attractive is the small size. You don't need to invest much ... small is the killer app.” we coded this *professional opinion* as *Yu'E Bao requires small investment amount*.

We also coded the objective descriptions and narratives of key Yu'E Bao events and features (see Figure 1) to chart Yu'E Bao's timeline and milestones (Figure 4). For example, we coded “In 2013, the company's online payment service, Alipay (a kind of Chinese version of Paypal) moved into banking and finance” as the *Launch year of Yu'E Bao*. We coded “Alipay's 800 million registered users” as *Alipay's large user base*.

Next, we adopted *pattern coding* to group all the relevant quotes in the data that are conceptually similar to form tentative first-order categories (Saldaña, 2016) (see Figure 1 and Figure 2). For example, the coding of these two quotes: “Alipay account holders can transfer as little as one renminbi, or about 16 cents” and “What makes Yu'E Bao attractive is the small size. You don't need to invest much ... small is the killer app” were eventually grouped together in the first-order category: *Yu'E Bao lowers the investment threshold amount for consumers* because both quotes correspond to the similar notion of a low investment requirement. Likewise, we coded the following two quotes: “As long as I get a higher return than the regular bank deposit, I'm happy to put my money in there ... It's better than being beaten by inflation,” and “The rates promoted by Tianhong were higher than those offered by banks” in the first-order category *Yu'E Bao offers users economic benefits* because both quotes convey the notion of attractive economic returns. This entire process involved numerous iterations between the data, illustrative quotes, and first-order categories until no new concepts emerged. For the first-order analysis, we made little attempt to distill categories or relate the analysis to existing theory.

Next, in line with Gioia et al.'s (2013) approach, we sought to identify similarities and differences among the many first-order categories to arrive at our second-order

themes. For example, we juxtaposed our data and emerging codes (e.g., low investment requirement) with existing literature and theory (e.g., capability addressed in empowerment process) to develop our second-order themes (e.g., capacitation), which are theoretically distinctive, researcher-induced concepts. We also juxtaposed our data and emerging codes (e.g., attractive economic returns) with extant literature and theory (e.g., utility in economics), to arrive at second-order themes (e.g., incentivization), which are also theoretically distinctive, researcher-induced concepts. Again, this entire process involved numerous iterations. We continued coding in this manner until theoretical saturation was achieved with no more distinct shared patterns surfacing (Glaser & Strauss, 2017). Eventually, we identified a few aggregate second-order themes (i.e., mechanisms) to explain the IT-enabled empowerment process.

Progressing further in our method, we analyzed and deliberated on these inductively derived second-order themes (conscientization, capacitation, incentivization, enrichment, and cultivation). We eventually assembled these emergent second-order themes (i.e., mechanisms) into aggregate dimensions (i.e., stages) by discerning their linkages (Gioia et al., 2013). The two aggregate

dimensions—*incubation* and *coevolution*—occur in sequential stages of sorts. Figure 2 illustrates the data structure in terms of illustrative quotes, first-order categories, mechanisms, and stages.

By examining the relationship between grassroots consumers and Yu'E Bao across the two stages, we also identified a *transition* period in which the reversal of influence appears during the process of empowerment (i.e., grassroots consumers acquired enough power to change the dynamics to inversely affect the agent that initially gave them power, even though Yu'E Bao did not change its consumer empowering strategies—see Section 6.2). Finally, we were able to link the emergent concepts to develop a midrange theoretical model that explained the dynamism in IT-enabled empowerment (see Section 6). Throughout the inductive data analysis, to ensure sound interpretations, we triangulated data by cross-referencing different sources—namely, consumers' opinions, company opinions, and professionals' opinions—to ensure sound interpretations. Please note that in the following sections, we offer a number of quotes from the media sources we consulted but do not individually reference the specific sources. We are happy to provide interested readers with any or all quotation sources upon request.

Excerpt from “High-Interest Web Banks on the Rise in China”, *New York Times*, March 2, 2014

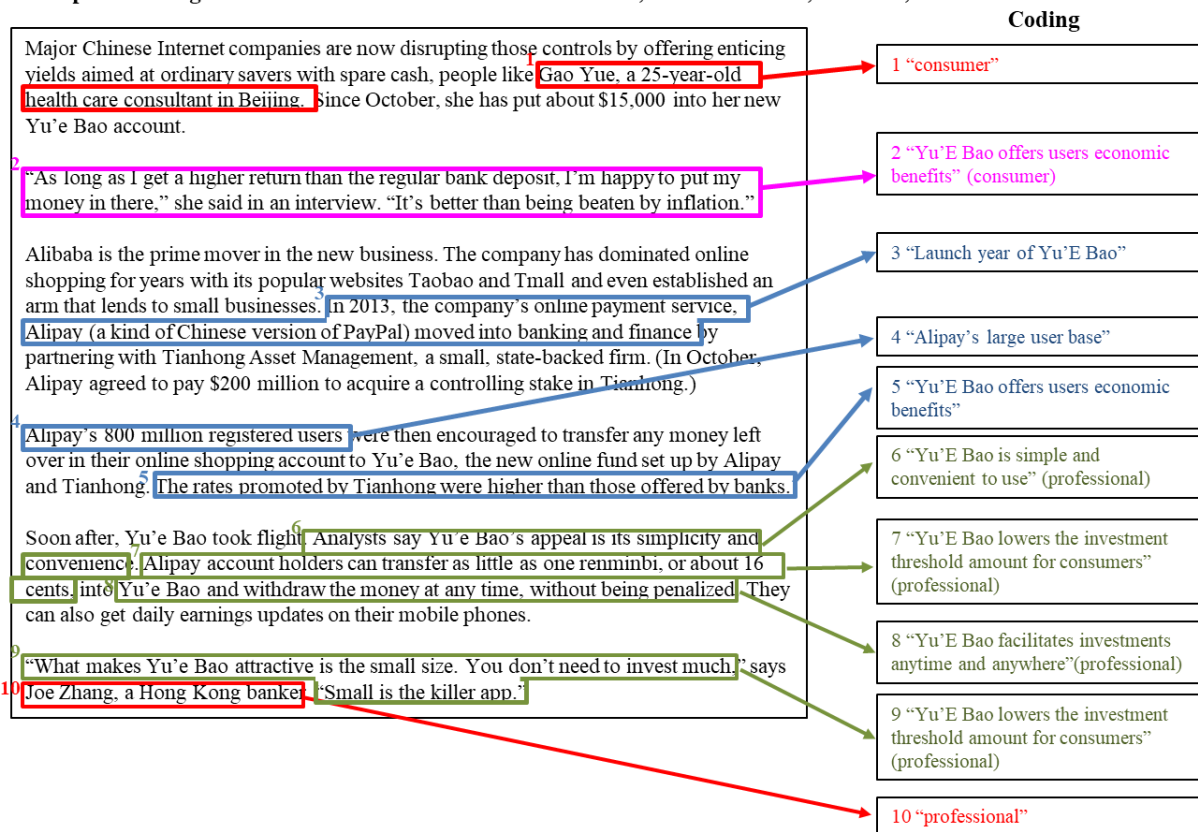


Figure 1. Coding of A Sample Excerpt

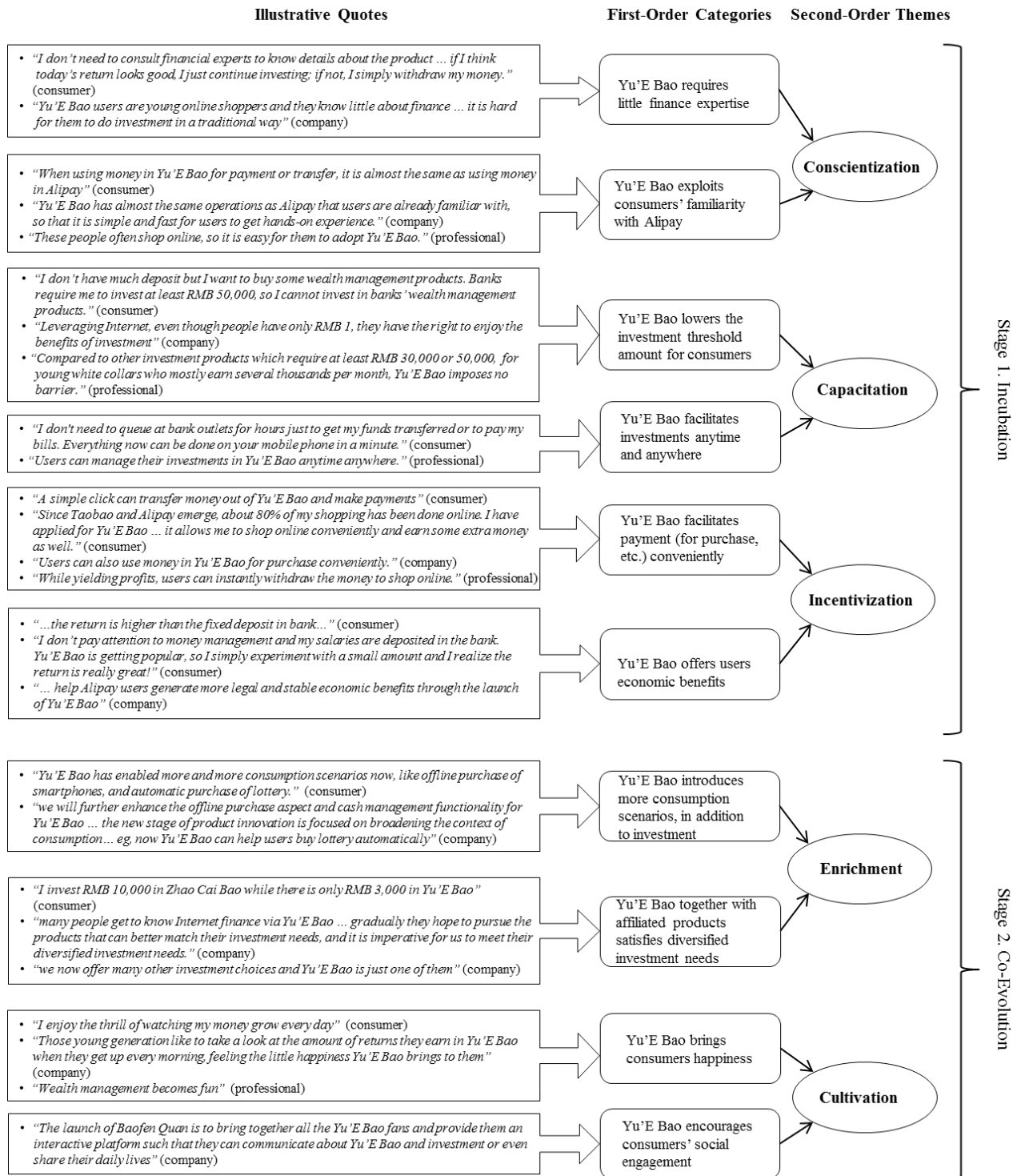


Figure 2. Data Structure



## 4 Case Background

In China, the deposit interest rate is significantly lower than the market interest rate,<sup>5</sup> although the savings rate is higher than any other major economy. While savings accounts at banks typically generate negligible amounts, especially for grassroots consumers with meager earnings, investment choices are limited or virtually nonexistent for grassroots consumers with small budgets. For example, the wealth management products at Chinese banks typically set an entry threshold of RMB 50,000.<sup>6</sup> Also, investors are required to authorize an annual comprehensive risk assessment report. Despite the ability to perform market monitoring and investment transactions online, barriers for grassroots consumers also remain high because financial expertise is still required. As one financial pundit<sup>7</sup> aptly pointed out in late 2012 “the Internet as a distribution channel, did not really help engage potential investors and enlarge the market share. Instead, it was like ‘chicken ribs’<sup>8</sup>: compared to banks, it did not significantly cut costs nor generate profits.”

Indeed, the need for expertise to invest means that the investment playing field is unfair and most grassroots consumers are excluded. As Jack Ma, founder and chairman of Alibaba explains:

*China’s financial industry, especially the banking industry, only serves 20% of potential clients, so there are 80% of potential clients underserved ... As a layman, I don’t know too much about finance ... but financial services should seek to serve the layman, rather than exclude them.*

In June 2013, a fintech revolution in China occurred when millions of grassroots consumers withdrew their hard-earned money from traditional banks, investing it instead in Yu’E Bao. In subsequent months, even more individuals invested in Yu’E Bao and other similar services that emerged.<sup>9</sup> Yu’E Bao, which literally means “leftover treasure” in Chinese, was the most critical player and prime mover of this revolution. The company grew and expanded exponentially, achieving its targets within a short period of time. Yu’E Bao is a deposit-like investment service that is embedded in Alipay and tailored to grassroots consumers who are accustomed to

leveraging Alipay for convenient financial transactions, especially for online shopping. Yu’E Bao gave grassroots consumers the ability to easily rechannel small amounts of “idle” money in real time by tapping the Yu’E Bao option built into Alipay. This option offers grassroots consumers the ability to transfer unused money (regardless of how little) into a customized money market fund that generates a relatively high return. It also promises “stability” (i.e., money market funds typically invest in a combination of various securities and is perceived as a safer financial instrument) and “liquidity” (i.e., consumers can withdraw funds at any time without penalty). At Yu’E Bao’s launch in June 2013, the average seven-day annualized return was approximately 6%.

As the fastest-growing Chinese money market fund ever, Yu’E Bao made an indelible mark in China’s financial history. It launched on June 13, 2013 and attracted one million consumers within five days. By November 14, it had reached RMB 100 billion in funds invested and boasted 30 million users. At that point, Yu’E Bao made up 20% of China’s money market funds in terms of assets. By the end of 2013, Yu’E Bao had attracted 43 million consumers with investments of approximately RMB 185 billion. On average, investment amounts were very small, about RMB 4,307 per consumer. Nevertheless, Yu’E Bao grew steadily and became the second-largest money market fund in the world in March 2015 (see Figure 3).

The launch of Yu’E Bao had huge impacts on the burgeoning fintech industry (Barboza, 2014) and contributed significantly to the acceleration of financial reform in China. Indeed, China’s other internet giants, such as Baidu Inc. and Tencent Holdings Ltd., have all ventured into fintech in the meantime, increasing the importance of this industry for China’s financial sector. Figure 4 presents the timeline of Yu’E Bao’s and similar companies’ market entry. By targeting traditionally underserved grassroots consumers, Yu’E Bao and similar services have gradually changed perceptions of wealth management among grassroots consumers’ investing small amounts of money. The Chinese government has also taken a stance on this issue. On March 5, 2014, Premier Li Keqiang pledged in the 12th National People’s Congress: “China will promote a healthy development of fintech.”<sup>10</sup>

<sup>5</sup> The market interest rate refers to Shanghai Interbank Offered Rate (SHIBOR). For example, in December 2013, one-week interest rate of SHIBOR hit 9% (annual) while the demand deposit interest rate remained at 0.35% and benchmark one-year deposit rate was 3%.

<sup>6</sup> According to wage information provided by the Beijing Municipal Bureau of Statistics, the average monthly wage in Beijing in 2013 was RMB 5793 (ca. US\$927) [http://www.gov.cn/xinwen/2014-06/07/content\\_2695972.htm](http://www.gov.cn/xinwen/2014-06/07/content_2695972.htm). On December 31, 2013, the currency exchange rate was RMB 1 = USD 0.16518.

<sup>7</sup> Mr. Tang, the former chairman of Lombarda China Fund Management Co. Ltd.

<sup>8</sup> “Chicken ribs” is a Chinese phrase that connotes something that is not good enough for consumption but too good to discard.

<sup>9</sup> To emulate the success of Yu’E Bao, other China large Internet companies also launched similar products, including Bai Zhuan (by Baidu Inc.), Li Cai Tong (by Tencent Holdings Ltd.), Xiao Jin Ku (by JD.com) etc.

<sup>10</sup> [http://www.gov.cn/guowuyuan/2014-03/14/content\\_2638989.htm](http://www.gov.cn/guowuyuan/2014-03/14/content_2638989.htm)

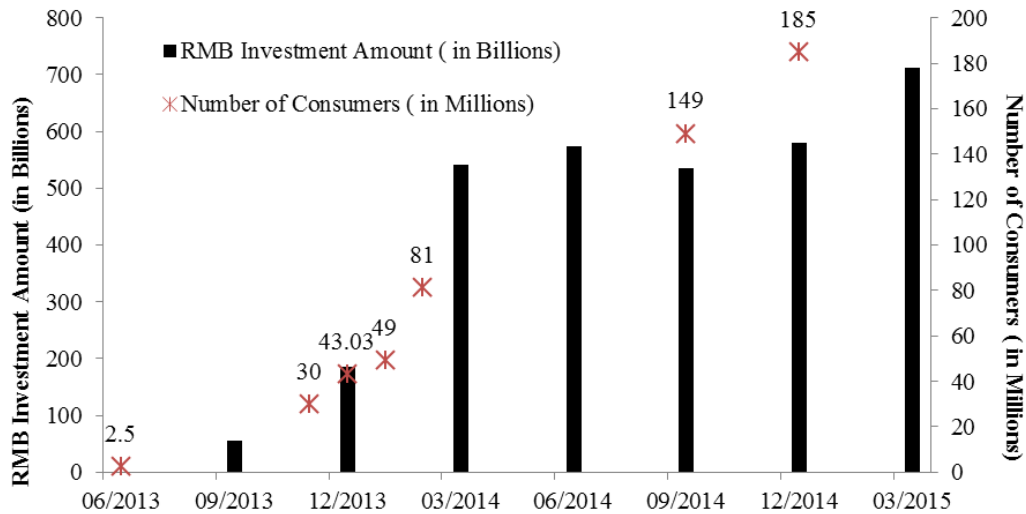


Figure 3. The Growing Consumer Base of Yu'E Bao

**Yu'E Bao**

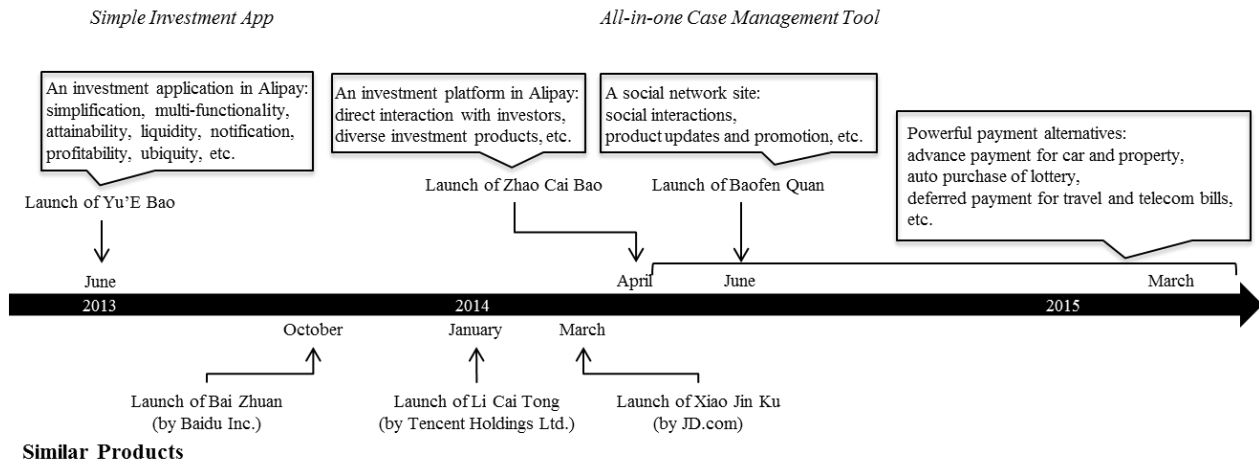


Figure 4. Key Events of Yu'E Bao and Similar Products

## 5 Case Analysis

Our data analysis demonstrates Yu'E Bao's strategized empowerment process, leading to their dominance in the Chinese fintech industry, which had previously excluded many potential consumers based on demands for knowledge and capital.

### 5.1 Stage 1: Incubation

Prior to Yu'E Bao's launch, the Chinese investment market imposed high barriers for grassroots consumers who lacked specialized knowledge and financial assets, often rendering them powerless and alienated. These potential investors were often plagued by both

psychological and physical barriers to investing. Psychologically, grassroots consumers often had the false perception that investments were exclusively intended for experts and/or the wealthy few, and therefore alienated themselves from investment markets. However, even if grassroots consumers had been tempted and willing to give investing a try, the financial industry explicitly excluded them by setting high investment thresholds. These consumers hence remained powerless as banks and other traditional money market fund companies were reluctant to ease investment conditions. In essence, both psychological and physical barriers exacerbated the alienation of potential grassroots consumers, signaling the need for empowerment to occur (Craig, 2007). Specifically,

Yu'E Bao exploited the three mechanisms of *conscientization*, *capacitation*, and *incentivization* to enable novice grassroots consumers to enter the investment market, as discussed below.

### 5.1.1 Conscientization

First, conscientization is defined as a process of educating people about their social or political rights (Hur, 2006). Through conscientization, disempowered individuals can change the perception of their own ability to make a difference, which is often reflected in higher levels of confidence (Breton, 1994). Researchers have identified control and trust as two parallel sources that complement each other to boost confidence (Das & Teng, 1998). Control refers to the ability to impose restraints on one's own or others' conduct (Parker & Price, 1994) and can spawn higher levels of confidence because it makes the attainment of desirable goals more predictable and ensures more certain outcomes (Das & Teng, 1998). Trust is defined as the degree of positivity that one perceives toward the goodwill and reliability of others in risky situations (Gambetta, 1988; Nooteboom, Berger, & Noorderhaven, 1997). It refers to the confidence that a trustor has in a trustee's behavior in uncertain circumstances (Das & Teng, 1998; Gefen, 2000). By definition, higher levels of confidence are generated when trustors believe in a trustee's goodwill and reliability (Das & Teng, 1998). Hence, the coupling of control and trust is crucial for consumers to develop a sense of personal mastery (i.e., a "can do" attitude). Yu'E Bao strategically increased consumers' perceived control and trust through *low financial-knowledge requirements* and high levels of perceived *familiarity*.

First, Yu'E Bao implemented a simplicity-centered design principle by offering novice grassroots investors a sense of control (of their money), claiming that investing is "so easy that even the elderly [who are old and less educated] could do it." In this way, Yu'E Bao helped grassroots consumers believe they had the knowledge requirements necessary for financial investment. Compared to expert investors, grassroots consumers typically lack the experience and expertise needed to make informed investment decisions and perform related investment activities. The embedded option to transfer money from Alipay to a Yu'E Bao account is very straightforward, and grassroots consumers are given the seven-day annualized interest rate and the expected amount of return. This stands in stark contrast to most financial products that "mystify financial investment" with highly professional and legal financial underwriting (usually incomprehensible to most laymen). As pointed out by Mr. Li, one of Yu'E Bao's development team members, Yu'E Bao is designed to "leave the financial logics to the system and present the easiest observable operations to consumers." With simplicity and clarity, Yu'E Bao created a different investment environment for grassroots consumers—that is, one absent financial jargon and the

need for professional advice. For example, a grassroots consumer who invested in Yu'E Bao remarked, "I've never known that investment could be so simple and easy!" Another grassroots consumer concurred, "I never imagined that even I could conduct investment activities all by myself!" Another Yu'E Bao user exclaimed: "I don't need to consult financial experts to know details about the product ... if I think today's return looks good, I just continue investing; if not, I simply withdraw my money."

Second, Yu'E Bao elicits high levels of trust from grassroots consumers because it is embedded in Alipay which "has spent ten years building its credibility." Familiarity, which refers to an understanding of the actions of other people built upon previous interactions, experiences, and learning (Gefen, 2000; Luhmann 2000), helps reduce uncertainty and foster trust, thus increasing confidence (Das & Teng, 1998). Familiarity not only provides the context to formulate trust (Gefen, 2000), but also it creates concrete expectations to breed trust (Gulati, 1995). As grassroots consumers are highly familiar with Alipay, they easily become accustomed to Yu'E Bao. More importantly, Yu'E Bao enabled the psychological transformation of a seemingly complex money market fund into a simple deposit/withdrawal account that easily gained traction and acceptance among grassroots consumers. According to Mr. Li from Yu'E Bao's development team, "Yu'E Bao has almost the same operations as Alipay that users are already familiar with, so that it is simple and fast for users to get hands-on experience." An external consultant also agreed that "users who already have a habit of using Alipay will be less hesitant to use it due to its convenience, and the established brand trust." As a grassroots consumer shared, "when using money in Yu'E Bao for payment or transfer, it is almost the same as using money in Alipay." In sum, through *conscientization*, Yu'E Bao managed to change the perceptions of grassroots consumers regarding their ability to participate in financial activities and boost their confidence through control and trust.

### 5.1.2 Capacitation

Capacitation refers to the way that Yu'E Bao broke the physical barriers precluding participation in Chinese money market funds to trigger participation among grassroots consumers, which is imperative to the empowerment process (Narayan-Parker, 2002). Capacitation involves individuals' applying their competence and skills to increase their assets. (Narayan-Parker, 2002). As discussed above, through the conscientization mechanism, Yu'E Bao endows grassroots consumers with a "can do" attitude, making them aware of their right to access existing resources. Nevertheless, if the conditions for performing the necessary actions remain too stringent, potential grassroots investors will still be rendered powerless. Yu'E Bao thus successfully removed the physical

barriers that prevented potential grassroots investors from participating through offering *low investment requirements* and requiring *minimal effort to invest*.

First, Yu'E Bao decided to target and "tailor to all Chinese grassroots netizens" by setting a negligible investment threshold of only RMB 1, in contrast to the typical demand of RMB 5,000 or more. Beyond this, Yu'E Bao also required no minimum fixed maturity date, allowing investors to withdraw their money at any time. Thus, the low investment threshold and high liquidity effectively overcame investment impediments, providing grassroots investors the opportunity to participate. As shared by Mr. Fan, a manager of Yu'E Bao, "even though people have only RMB 1, they have the right to enjoy the benefits of investment." A consumer was also pleased, explaining that "I don't have much [money to] deposit but I want to buy some wealth management products. Banks require me to invest at least RMB 50,000, so I cannot invest in banks' wealth management products." Another grassroots consumer praised Yu'E Bao's "flexibility in money investment and withdrawal," stating, "I spend a lot of money at times ... Yu'E Bao is like a flexible current account for me. Sometimes I deposit quite a lot of money (up to RMB 20,000) into Yu'E Bao, but sometimes I only deposit a few RMBs."

Second, Yu'E Bao also dispensed with the usual formalities (e.g., application forms, credit assessments, etc.) that may discourage potential grassroots consumers from participating. Yu'E Bao demonstrated how fintech innovations "can break through the limitations of time and space." Given ubiquitous IT (e.g., internet and mobile technology), Yu'E Bao enabled grassroots consumers to make investments anywhere and anytime. This convenience further removed the physical barriers to investing in an efficient manner. As reported in one commentary news article, tedious formalities, low levels of efficiency, and bad customer service associated with traditional investment products are some reasons why grassroots consumers readily adopted Yu'E Bao. A grassroots consumer highlighted, "I don't need to queue at a bank branch for hours just to get my funds transferred or pay my bills. Everything now can be done on your mobile phone in a minute." Another grassroots consumer concurred: "With Yu'E Bao, I do not need to specifically go to the bank on a weekday just to deal with investment issues." By removing physical barriers, grassroots consumers can access resources that were unavailable to them in the past. Through *capacitation*, grassroots consumers have the capability to actually use Yu'E Bao for investment purposes.

### **5.1.3 Incentivization**

Incentivization describes how Yu'E Bao provides potential grassroots consumers with the incentive, in terms of high utility, to proactively participate in money

market funds. In economics, utility refers to the ability to fulfill needs and represents the level of satisfaction experienced by a consumer for a product. The concept of utility is used to abstract people's preferences for some set of products or services (Marshall, 2004). Based on economic rationality, consumers are expected to choose the product that maximizes their utility. In other words, consumers have more incentives to adopt a product that can offer greater satisfaction and benefits. Yu'E Bao's high level of utility is reflected in its promised benefits, including *seamless shopping integration* and *attractive economic returns*.

First, Yu'E Bao is more than an investment tool, it is a "money-making Alipay." Embedded in Alipay, Yu'E Bao manages to seamlessly unite investment with the online shopping experience. When grassroots consumers are shopping online, the one-click purchase design of Yu'E Bao allows them to instantly make payments using money in Yu'E Bao. For example, one grassroots consumer who bought a pair of shoes online using money in Yu'E Bao described his experience as "instant payment after clicking 'transfer out.'" More importantly, without compromising the convenience of online shopping, Yu'E Bao also allows any remaining amount in the Yu'E Bao to generate interest rather than sitting idle in an account. One online shopper extolled Yu'E Bao's convenience, stating: "since Taobao and Alipay emerged, about 80% of my shopping has been done online. I have applied for Yu'E Bao ... it allows me to shop online conveniently and earn some extra money as well." The importance of Yu'E Bao for online shopping is also supported by firm statistics: "as of November 11, 2013, 15.4 million online shopping transactions have been completed via Yu'E Bao," reaffirming the value of seamless shopping integration to consumers.

Second, Yu'E Bao confers grassroots consumers with relatively high economic returns when investing in Yu'E Bao. Indeed, Yu'E Bao offers an annualized interest rate of up to 6% with a guarantee on the principal. In contrast, as of 2013, other banks typically offered an interest rate of 0.35% per year for an ordinary account and 2% per year for one-year deposits. Thus, grassroots consumers are enticed by the financial benefits offered by Yu'E. One consumer explained that she put her money in Yu'E Bao because "it's much better than just letting the money lie idle in the bank." Similarly, another grassroots consumer stated: "the returns are much higher than bank's deposit ... Its interest rate is even higher than that of a five-year fixed deposit." In essence, Yu'E Bao incentivized potential grassroots consumers by using additional utility benefits and financial benefits. Through *incentivization*, grassroots consumers were motivated to start proactively investing in Yu'E Bao.

## **5.2 Stage 2: Coevolution**

In the second stage of Yu'E Bao's development, the firm responded to consumers by offering increased



power. In particular, Yu'E Bao exploited the mechanisms of *enrichment* and *cultivation* to sustain the interest of grassroots consumers.

### 5.2.1 Enrichment

Enrichment refers to the way in which Yu'E Bao maintained its primacy as a competitive choice for grassroots consumers by offering more competitive features or affiliated products in response to the increasing power of grassroots consumers. In response to the increasing financial management needs of grassroots consumers, Yu'E Bao enriched its usage scenarios through offering *all-inclusive consumption management* and an *enlarged investment ecosystem*.

First, Yu'E Bao's positioning has gradually migrated from being a "magical investment tool" to becoming an "all-in-one cash management tool." To satisfy grassroots consumers' increased consumption requirements, Yu'E Bao made a conscientious effort to introduce new features to facilitate more effective and all-inclusive consumption management. In addition to online payments in the Alibaba ecosystem, Yu'E Bao made it possible for grassroots consumers to also use Yu'E Bao money for offline payments, such as utility bills, restaurant meals, taxi rides, etc. A fund manager from Yu'E Bao highlighted that "we will further enhance the offline purchase aspect and cash management functionality for Yu'E Bao ... the new stage of product innovation is focused on broadening the context of consumption." Furthermore, there are other more complicated consumption scenarios enabled by Yu'E Bao. For instance, property buyers can put an advance payment in Yu'E Bao and receive normal investment returns. Car purchasers can choose to "freeze" payment to car dealers in Yu'E Bao for three months, during which time they simultaneously own a new car and enjoy interest earnings. As one grassroots consumer exclaimed: "Yu'E Bao has enabled more and more consumption scenarios now, like offline purchases of smartphones, and automatic purchase of lottery tickets." Yu'E Bao also reported that "more consumers are using Yu'E Bao for cash management and payment ... and many of the existing consumers have developed a consumption habit of relying on Yu'E Bao for all salary and consumption needs."

Second, Yu'E Bao also decided to embrace an enlarged investment ecosystem, offering many affiliated products that satisfy differentiated and advanced investment needs. A vice president from Alibaba reported that the company "now offers many other investment choices and Yu'E Bao is just one of them." For example, Zhao Cai Bao, also embedded in Alipay, is a platform that lets small businesses and individuals borrow from investors directly. It offers a variety of investment products other than money market funds alternatives. As Mr. Guo, a manager of

Yu'E Bao, commented: "in the long term, Yu'E Bao and the financial products on Zhao Cai Bao can complement each other nicely to serve different investment purposes."

In sum, Yu'E Bao continued to enrich its usage scenarios for grassroots consumers through enhanced features and affiliated products that directly meet their growing consumption and investment needs. Through *enrichment*, Yu'E Bao responded to the increased power of grassroots consumers, making sure that the company stood out among the increasing variety of fintech products, not just in terms of financial incentives.

### 5.2.2 Cultivation

As the empowerment of grassroots consumers increased, the concept of cultivation describes how Yu'E Bao responded by promoting its brand and building consumer loyalty. While enrichment functions as a mechanism to create the "best choice" by directly satisfying the needs of demanding consumers, cultivation seeks to retain grassroots consumers by grooming consumer loyalty. Marketing literature has shown that consumer loyalty is an important and strong predictor of consumer choice (Guadagni & Little, 1983). Consumer loyalty has two components—an attitudinal component (i.e., attitudinal loyalty), which emphasizes consumers' emotional attachment to products, and a behavioral component (i.e., purchase loyalty), which highlights actual purchase behaviors (Chaudhuri & Holbrook, 2001). Consumers with strong and favorable brand attitudes are more willing to sacrifice their interests and pay higher prices for the valued brand (Chaudhuri & Holbrook, 2001). In addition, prior literature has also discussed the role of social bonding in the formation of consumer loyalty (Oliver, 1999). Social features can enhance consumer loyalty by promoting interactions among consumers and stimulating trust between consumers and the product (Laroche, Habibi, & Richard, 2013). Unlike other traditional loyalty-building tactics (e.g., giving out free vouchers, launching loyalty reward programs, etc.), Yu'E Bao attempted to cultivate consumer loyalty through *accumulated happiness* and *social engagement*.

First, Yu'E Bao sought to supply grassroots consumers with "a little happiness every day." Unlike traditional investment products, Yu'E Bao shares individual return amounts on a daily basis (as opposed to on the maturity date only). This visible and progressive signal of wealth accumulation helps grassroots consumers attain a positive sense of achievement on a daily basis. Brands that make consumers feel happy often lead to higher attitudinal loyalty (Chaudhuri & Holbrook, 2001). As highlighted by one consumer: "I enjoy the thrill of watching my money grow every day." This trend has also been noticed by the company itself:



“those in the younger generation like to take a look at the amount of the returns they are earning in Yu’E Bao when they get up every morning, feeling the little bit of happiness that Yu’E Bao brings to them.”

Second, Yu’E Bao “embrace[d] opportunities for consumers to communicate and interact,” to encourage grassroots consumers’ social engagement within Yu’E Bao and hence cultivate consumer loyalty. To bind the community together, Yu’E Bao introduced a new online social community site, called Baofen Quan (meaning “the circle of Yu’E Bao fans”), so that its grassroots consumers could interact and communicate with one another, which would hopefully build social ties and makes them continue with Yu’E Bao. The company announced that three months after its launch, more than one million Yu’E Bao consumers had registered for Baofen Quan and there were around 300,000 daily page views. Ms. Cai, a manager from Yu’E Bao, also commented on the objective of such a platform, “The launch of Baofen Quan is to bring together all the Yu’E Bao fans and provide them with an interactive platform so that they can communicate about Yu’E Bao and investment or even share their daily lives.” In essence, Yu’E Bao cultivated deep consumer loyalty through innovative loyalty-building strategies, underscoring new approaches to encourage consumer affect and social involvement. Through *cultivation*, Yu’E Bao was able to retain its grassroots consumers.

## 6 A Grounded Model of IT-Enabled Empowerment in Fintech

In Section 5, we elucidated the different mechanisms used at different stages to explain how Yu’E Bao empowers grassroots consumers. Our findings suggest that empowerment is a complex process that unfolds in

two stages and across five mechanisms (as summarized in Table 2). To develop a midrange theory, the dynamic interrelationships among the emergent concepts need to be explicated further (Gioia et al., 2013). In this section, we present a theoretical model of IT-enabled empowerment, grounded in our data.

### 6.1 A Two-Stage IT-Enabled Empowerment Model

Yu’E Bao fundamentally catapulted disempowered grassroots consumers into a position of power by removing psychological and physical entry barriers. Through process theorizing (Langley, 1999; Langley et al., 2013), we found that the rise and development of Yu’E Bao involved two stages: *incubation* and *coevolution*. To review, in the first stage (i.e., the “incubation” stage), Yu’E Bao focused on empowering and leveraging a large base of potential grassroots consumers through the enactment of three mechanisms (conscientization, capacitation, and incentivization), leading to consumers’ perceived ability, equipped capability, and actual action.

Although one observable outcome of the incubation stage was the adoption and use of Yu’E Bao, it is noteworthy that the mechanisms of our derived empowerment model are distinguishable from those of technology adoption (Rogers, 2010; Venkatesh & Davis, 2000) or financial incentive (Ba et al., 2003) models. Specifically, unlike those models, we explicitly emphasize the empowerment of an underprivileged population, i.e., novice and disempowered grassroots investment consumers. Before the launch of Yu’E Bao, banks and fund management companies had already begun to offer diverse types of investment products via the internet and/or mobile applications.

**Table 2. Theoretical Mechanisms**

Mechanism	Explanation	Description
<b>Stage 1: Incubation</b>		
<i>Conscientization</i>	Gaining a “can do” attitude	<ul style="list-style-type: none"> <li>• Reducing financial knowledge requirement</li> <li>• Increasing perceived familiarity</li> </ul>
<i>Capacitation</i>	Breaking physical barriers	<ul style="list-style-type: none"> <li>• Reducing investment requirement</li> <li>• Minimizing investment hassles</li> </ul>
<i>Incentivization</i>	Inducing actual behaviors	<ul style="list-style-type: none"> <li>• Integrating seamless shopping functions</li> <li>• Offering attractive economic returns</li> </ul>
<b>Stage 2: Coevolution</b>		
<i>Enrichment</i>	Satisfying diverse needs	<ul style="list-style-type: none"> <li>• Providing all-inclusive consumption management</li> <li>• Building an enlarged investment ecosystem</li> </ul>
<i>Cultivation</i>	Building consumer loyalty	<ul style="list-style-type: none"> <li>• Creating accumulated happiness</li> <li>• Encouraging social engagement</li> </ul>

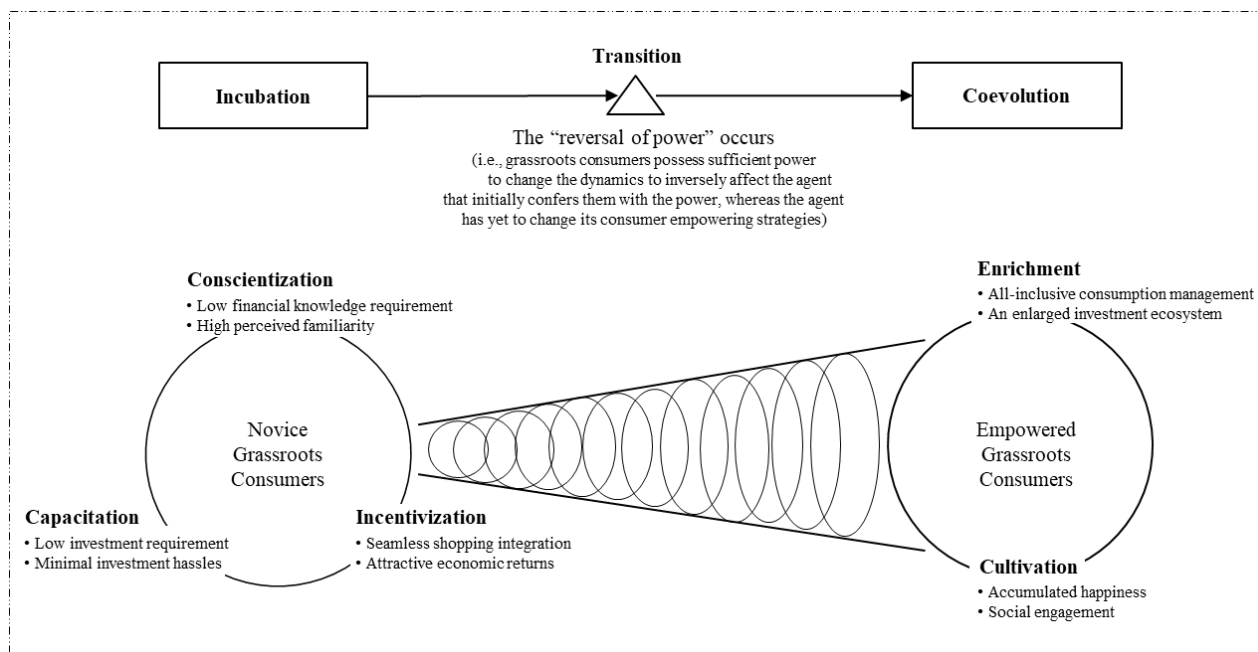


Figure 5. A Two-Stage IT-Enabled Empowerment Model

Although many of these investment products generated higher returns than Yu'E Bao, none of them succeeded in leveraging the large grassroots consumer base. Thus, general perspectives on technology adoption and/or financial incentive models cannot fully explain Yu'E Bao's success (especially in terms of grassroots consumers). Indeed, our analysis reveals that monetary incentives are only related to the third empowerment mechanism (i.e., incentivization). Emphatically, as shown in our analysis, without first removing both psychological and physical barriers (i.e., conscientization and capacitation), financial incentives alone are insufficient to empower the grassroots consumer base.

With more grassroots consumers being empowered and entering the market, as well as the emergence of many other competing fintech innovations modeled after the Yu'E Bao innovation, Yu'E Bao was soon challenged by the increased power of consumer power that it had originally bestowed. At this point, Yu'E Bao entered a *transition* period during which the power relations between Yu'E Bao and its grassroots consumers began to change. During this *transition* period, Yu'E Bao had not yet changed its consumer empowering strategies but had already seen the need to coevolve in tandem with the increasing financial needs of its consumers in order to ensure its continued empowerment. A second stage (i.e., the "coevolution" stage) hence emerged. Specifically, our analysis reveals that Yu'E Bao managed to thrive during this stage through two mechanisms (enrichment and cultivation).

The IT-enabled empowerment process depicted in the theoretical model (see Figure 5) can be generalized to other similar contexts (such as microfinance), as well as other commercial contexts (such as the sharing economy). We now elaborate on the dynamic relationships among the abovementioned concepts.

## 6.2 Linkage Between Incubation and Coevolution: The Transition

In the incubation stage, grassroots consumers were empowered to participate in China's fintech industry through the three mechanisms of conscientization, capacitation, and incentivization. Indeed, many grassroots consumers reported that Yu'E Bao empowered them to start investing.

Apart from direct empowerment through Yu'E Bao, China's growing fintech industry also empowered potential grassroots consumers in another way. The rise of Yu'E Bao attracted the attention of other internet giants and traditional financial incumbents. Propelled by the "catfish effect" (i.e., the effect that a strong competitor causes weak players to improve themselves) (Yue & Yu, 2006), these entities tried to emulate the success of the first mover, Yu'E Bao. They quickly launched similar money market funds with low investment thresholds and knowledge requirements (see Figure 3). Consequently, the proliferation of China's fintech industry further empowered grassroots consumers by equipping them with more financial product information and a larger choice set. Rapid industry growth along with the launch of various competitive innovations accelerated the pace of financial inclusion in China.

As the power of grassroots consumers further increased, the power relations between Yu'E Bao and grassroots consumers also inevitably evolved and soon entered a *transition* period of empowerment. We define this as a period during which grassroots consumers possessed enough power to change the dynamics in a way that inversely affected Yu'E Bao (i.e., the agent that initially granted them power), even though Yu'E Bao had not yet changed its consumer empowering strategies. This was acknowledged by several professionals. In the words of one of them, transition would occur “when Yu'E Bao's returns can [no longer keep pace] with its users' increasing awareness on financial management.” Notably, ignorance of such changes in power relations may result in fintech innovators suffering from perils stemming from consumer empowerment. In other words, the power gained by grassroots consumers during empowerment, reflected through their demand for financial services, soon challenged Yu'E Bao's dominant role in the power relations that thrived during the incubation stage. At this point, stakes for Yu'E Bao were high: if they failed to cope with the increasing demands of grassroots consumers, “[Yu'E Bao's] users will have a high tendency to switch to other more profitable investment options.”

Indeed, our data triangulation using consumers' opinions establishes the existence of a transition period, replete with challenges confronting Yu'E Bao's continued empowerment. Specifically, the increased empowerment of grassroots consumers is reflected in two aspects of financial needs: consumption and investment. First, grassroots consumers became dissatisfied with merely investing using Yu'E Bao, now expecting other financial management services as well, especially in terms of consumption. For example, one grassroots consumer complained, “Yu'E Bao cannot generate [a] monthly transaction statement, which is really a problem for me when I apply for visas and need bank statements as financial proof.” Second, grassroots consumers, having gained some experience and financial knowledge through using Yu'E Bao, were no longer satisfied with the status quo and became eager to venture into the exciting world of investment.

The initial exposure to investment triggered by Yu'E Bao gave them the confidence to explore more sophisticated investment possibilities. As a vice manager from Yu'E Bao noted, “many people get to know fintech via Yu'E Bao ... gradually they hope to pursue the products that can better match their investment needs, and it is imperative for us to meet their diversified investment needs.” A grassroots consumer who did not know much about investment before the trial of Yu'E Bao stated: “I simply move the money to other investment products when Yu'E Bao's returns decline.” Another Yu'E Bao user also said: “I

started to use another fintech innovation recently because its return mechanism is more interesting and attractive [than Yu'E Bao].” Similar sentiments were echoed by another Yu'E Bao supporter, who reduced her amount invested to a mere 5% of the original investment amount: “I now have other better choices,” she explained.

To continue engaging the now-empowered grassroots consumers, it became imperative for Yu'E Bao to remain the most attractive choice (not just in terms of financial incentives) among the pool of fintech innovations. Specifically, Yu'E Bao was compelled to make adjustments in response to the power shift in its relationship with grassroots consumers, in order to coevolve with grassroots consumers' increasing needs beyond financial incentives. A second stage, the coevolution stage, hence emerged. Our data analysis reveals that Yu'E Bao continued to outperform other alternatives through the two mechanisms of enrichment and cultivation during the second stage. Specifically, Yu'E Bao either directly addressed consumers' additional financial management needs through enrichment mechanisms or built strong consumer loyalty through the cultivation mechanism.

### 6.3 The “Duality of Empowerment”

Our two-stage theoretical model depicts a two-stage process in which the incubation stage moves into the coevolution stage. Most importantly, our scrutiny of the transition between the two stages reveals an interesting phenomenon that we call the “duality of empowerment.” In essence, the necessary condition (empowerment) of Yu'E Bao's success soon became an impediment to Yu'E Bao's further development.

In a knowledge-intensive industry with high entry barriers—finance, in our context—a product targeting novice grassroots investment consumers must first empower them to overcome both psychological and physical barriers (i.e., the incubation stage). In the case of Yu'E Bao, the grassroots consumers were empowered through conscientization, capacitation, and incentivization mechanisms to progressively engender perception, capability, and behavior changes. However, this necessary empowerment soon challenged Yu'E Bao's continued empowerment. Acknowledging the duality of empowerment, Yu'E Bao was compelled to make changes to manage the increased power of its grassroots consumers that it originally bestowed. In other words, the critical and necessary process (i.e., empowering potential grassroots consumers) that led to the rise of Yu'E Bao, created the obstacles (i.e., more demanding grassroots consumers) that Yu'E Bao had to overcome to ensure its continued empowerment.

Despite the existence of this duality, our analysis suggests that the impediments were overcome by Yu'E

Bao careful strategizing (in the coevolution stage). To do this, Yu'E Bao enacted enrichment and cultivation mechanisms that transformed the potentially problematic empowerment (of its grassroots consumers) and propelled Yu'E Bao forward. Specifically, Yu'E Bao actively evolved with its grassroots consumers through satisfying their increased financial management and other consumption-related needs and entrenching consumer loyalty. Based on our case analysis, Yu'E Bao took the right steps to resolve the duality. First, Yu'E Bao was quick to acknowledge the perils that potentially accompany the empowerment of grassroots consumers. As acknowledged by a company representative, "Yu'E Bao is just one choice. Consumers have more choices for investment now." Second, Yu'E Bao was wise to craft appropriate strategies to respond to the empowerment of grassroots consumers. Yu'E Bao admitted that grassroots consumers have the ability to choose and different fintech innovations that meet their diversified consumption and investment needs and reacted quickly and decisively to convince grassroots consumers of the "power" of Yu'E Bao.

In other words, empowerment is not a one-off action and/or an immediate strategy. In our case, the initial empowering agent focused on overcoming entry barriers by empowering consumers. However, this process did not happen in a vacuum, and follow-up reactions at the industry level ironically led to the erection of new barriers that ironically threatened to disempower the initial empowering agent. These new barriers were amplified because the now-empowered consumers became more capable to choosing and switching among service providers. In sum, the rise and development of Yu'E Bao shed light on how to leverage and maintain a large pool of potential grassroots consumers in an emerging market and show that dynamics of empowerment requires empowering agent's recursive and lasting attention on the part of the empowering agent.

## **7 Contributions and Conclusion**

### **7.1 Theoretical Contributions**

#### **7.1.1 Dynamic View of IT-Enabled Empowerment**

In contrast to prior literature, this paper embraces a much richer dynamic view of IT-enabled empowerment and reveals the connections and intricacies of empowerment mechanisms across two stages (i.e., incubation and coevolution). Prior literature has primarily embraced a static and single-phase view of IT-enabled empowerment, assuming that empowerment is unidirectional and unchanging in its effects (Füller et al., 2009; Leong et al. 2016; Leong

et al. 2015; Li 2011; Li et al. 2017; see Section 2.2). We add to the cumulative tradition of prior work on IT-enabled empowerment in IS research by first highlighting the criticality of examining the dynamics in power relations (especially regarding power shifts) between the empowering IT (i.e., Yu'E Bao in our case) and empowered agents (i.e., grassroots consumers in our case). Specifically, our study reveals a possible reversal in the effect of empowerment when both the empowering and empowered agents are subject to a highly competitive and evolving "external" industry landscape (i.e., fintech industry in our case).

In this paper, we tease apart two distinctive stages (the incubation stage and the coevolution stage) that demonstrate how changes in power relations between Yu'E Bao and grassroots consumers resulted in critical differences across the two stages in terms of business objectives and mechanisms. While the business objective of the incubation stage was to empower as many novice grassroots consumers as possible, the aim of the coevolution stage focused on coping with the perils stemming from empowerment of grassroots consumers. Consequently, the empowerment of grassroots consumers in the incubation stage exploited the mechanisms of conscientization, capacitation, and incentivization whereas in the coevolution stage, the mechanisms of enrichment and cultivation were exploited. In essence, our findings on the different but intertwined two stages offer new insights that complement and enrich extant IT-enabled empowerment literature (Füller et al., 2009; Harrison, et al. 2006) in strategy making.

#### **7.1.2 Psychological- and Process View of Fintech Innovation**

Our study also advances the nascent literature on fintech in the following two ways: one radically changes the economic/fiscal perspective to incorporate the psychological perspective and the other radically focuses on process as opposed to outcome. We underscore the importance of infusing a psychological perspective into the dominant economic/fiscal perspective of empowering consumers, using a qualitative approach to complement the prevalent quantitative investigative approach. Given the nature of fintech, prior research has revolved primarily around quantitative approaches that examine economic outcomes, behavioral incentives, and so forth (e.g., Burtch, Hong, & Liu, 2018; Hildebrand, Puri & Rocholl, 2016; Mai et al., 2018). While these prior studies are insightful, we believe that much more could be elucidated by complementing prior studies that overly emphasize economic/fiscal considerations without suggesting the need for alternative perspectives (e.g. Burtch et al., 2015; Burtch et al., 2016; Burtch et al., 2018; Hu, Li, & Shi, 2015). In doing this, we identify obstacles as well as latent and



convoluted mechanisms that are difficult to discover through quantitative methods. In essence, our approach reiterates the need for and power of complementary methodologies and approaches for fintech research.

We also further enrich prior research (Huang et al. 2017; Leong et al., 2017) by underscoring the importance of reflecting a more complex and evolving relationship among different stakeholders in the fintech landscape. Due to the rapid proliferation of fintech innovations, some innovations are widely adopted while others fade into oblivion. Previous studies (e.g., Foster & Heeks, 2013; Huang et al., 2017) have developed grounded models to understand such phenomena. However, the midrange process models in extant research tend to emphasize barriers less and be more preoccupied with the ultimate “outcomes” (i.e., number of adoption of the fintech innovation (e.g., Foster & Heeks, 2013) and/or the scaling of the consumer base (e.g., Huang et al., 2017)). Hence, it is critical that we contribute theoretically to these extant studies by providing insights into the understanding of “process” (as opposed to simply “outcomes”). Leveraging an investment-oriented fintech innovation, we closely examine the mechanisms, changing relationships (focusing on long-term dyadic interactions between the fintech innovation and grassroots consumers), as well as the transition period between stages to arrive at a more comprehensive proposed model that encapsulates dynamism and explanatory mechanisms. By elucidating barriers and mechanisms in our two-stage process model, our study hints at the possibility of integrating both the outcome-view and process-view to uncover the “black box” of the underlying trajectories of fintech innovation (e.g., Yu’E Bao’s empowering process in our case) to influence consumer decisions and company strategies. In sum, our model contributes by exposing the difficulties and challenges in grasping complex financial products, complementing prior midrange process models on business growth as an outcome (Foster & Heeks, 2013; Huang et al. 2017).

### **7.1.3 Duality-View of Empowerment**

Finally, our revelation of the “duality of empowerment”—i.e., how the necessary condition of Yu’E Bao’s success soon became an impediment for Yu’E Bao’s further development—is theoretically profound and important. The identification of the duality underscores the downside of empowering novice grassroots consumers, a dilemma that a company might face in the process of leveraging a large consumer base through empowerment. By expounding on how Yu’E Bao resolved the initial empowerment that backfired during the coevolution stage, our study provides theoretical guidance on the sustainability of IT-enabled empowerment to grassroots consumers. We have elucidated a much more complex relationship of empowerment than was

previously assumed (Barak et al., 2008; Doll & Deng, 2010; Ghose, 2001; Sia et al., 2002), thereby enriching and contributing to the academic discourse on empowerment.

## **7.2 Practical Contributions**

Our study offers interesting societal and practical implications to different stakeholders. First, we provide practical guidance to governments and policy makers as well as prosocial financial institutions by illustrating how IT and fintech innovations can be used to overcome both physical and mental barriers that have impeded grassroots consumers from participating in financial activities. Governments and policy makers aiming to alleviate financial exclusion should encourage, promote, and support prosocial financial institutions that bestow financially underprivileged individuals with monetary and knowledge power, embracing and cultivating the healthy growth of the fintech environment for prosocial purposes. For example, in order to remove the barriers to “access” of financial services, governments and policy makers should consider offering financial support to prosocial financial start-ups (e.g., attractive grants and funding schemes) so that these financial start-ups can obtain sufficient capital to implement features that lower the investment threshold for financially underprivileged individuals. Similarly, in order to remove the barriers to “use” of financial services, policy makers and governments could take a proactive and responsible role in providing mechanisms that enable prosocial financial institutions and their fintech innovations to implement other trust-building features (e.g., government certification and authorization) to compensate grassroots consumers’ lack of trust based on unfamiliarity with financial services. In sum, governments, policy makers, and prosocial financial institutions can learn much from Yu’E Bao’s approach to circumvent the barriers to access and use of financial services, thereby ameliorating the financial exclusion problem which is a key obstacle in reducing poverty and accelerating economic growth (Demirgüç-Kunt et al., 2015; TechUK, 2015).

Second, our study also provides some practical guidance to fintech practitioners and product designers. Our study underscores the economic potential of grassroots consumers and provides a foray into untapped opportunities of grassroots consumers in product marketing. Our findings apply to every fintech company that aims to leverage the potential of grassroots consumers but are more specific to fintech innovations on internet investment-related services (e.g., money market fund investment). For innovations to engage financially underprivileged populations, surmounting domain-specific obstacles and reducing context-oriented barriers would be the key to rapid growth and product success. For example, fintech



practitioners and product designers should make a conscientious effort to incorporate unique and well-conceived features in the design of financial products that minimize the requirement of financial knowledge so that novice grassroots consumers are better equipped to participate in money market funds investment. In addition, fintech practitioners who have already attracted a large pool of underserved grassroots consumers may need to quickly and decisively formulate appropriate strategies to enhance and enrich their features (e.g., Yu'E Bao's enlarged investment ecosystem and social engagement features) to respond to grassroots consumers' increasing power and diversified needs regarding consumption and investment.

### **7.3 Limitations and Future Research**

Although we collected an extensive set of online data, we limited our analysis to quotations, interviews, opinions, and comments from online news media. In line with the research steps outlined in Mason et al. (1997) and Porra et al. (2014), we systematically gathered evidence and ensured its credibility in terms of competence, expertness, objectivity, reliability, and corroboration (Gottschalk, 1969). Based on prior work (e.g. Fayard & Metiu, 2014; Nelson & Irwin, 2014; Ngosi & Braganza, 2009), we believe that our data meet the requirements for authenticity and credibility under external and internal criticism (Porra et al., 2014). Moving forward, we would encourage future researchers to consider other sources, such as immersion and observation in fintech companies and direct interviews with different stakeholders (e.g., customers, company managers, and industry professionals), because ethnographic data and self-conducted interview data could provide "rich descriptions" (Geertz 1973) that could yield further insights into company and customer thoughts and behaviors in the context of the fintech industry.

In our quest for an in-depth analysis, we opted for a single revelatory case study on a fintech innovation empowering the underserved population in a developing economy. Although our study is rooted in a specific context, our work could nevertheless be generalized to some extent. As described in Section 3.2, we followed established methodological approaches to carefully generalize and derive the theoretical abstractions (i.e., the two-stage IT-enabled empowerment model) from qualitative statements (i.e., the rich description of our case) (Lee & Baskerville, 2003). Thus, our model could be further extended to other similar contexts, such as fintech in other developing countries where potential grassroots consumers are financially underprivileged. Even in developed countries, financial institutions or entrepreneurs could also benefit from our presented model, depicted in Figure 5, to help empower underserved consumers. For researchers interested in

multiple case studies (Eisenhardt, 1991; Eisenhardt & Graebner, 2007), there are several opportunities for future research. For example, it could be informative to investigate the entire ecosystem of the emerging fintech industry in China. Specifically, future research could consider exploring the interaction (be it collaborative or competitive) between Yu'E Bao and similar fintech innovations provided by other internet incumbents in China. We briefly described the emulation of Yu'E Bao by internet giants and banks entering China's fintech industry, but a full exploration of all the relationships and interactions in a more comprehensive manner was beyond the scope of our study. Thus, future researchers could investigate concurrent cooperative and/or competition strategies among different fintech companies.

### **7.4 Concluding Remarks**

Yu'E Bao has undoubtedly revolutionized the fintech industry and has been emulated by many other internet giants (e.g., Baidu Inc., Tencent Holdings Ltd., and JD.com Inc.) that have subsequently ventured into fintech by launching competitive products. Its massive societal and industrial impacts, especially on accelerating financial reform in China, have been widely acknowledged. Through an in-depth revelatory case study on Yu'E Bao, we derived a two-stage theoretical model on the IT-enabled empowerment process and unravel the mechanisms underlying the way in which fintech innovations empower grassroots consumers, thereby shedding light on IT-enabled empowerment strategies for achieving product success and promoting financial inclusion. Most importantly, we elucidate a "duality of empowerment" that demonstrates how the catalyst for Yu'E Bao's success actually becomes an impediment to Yu'E Bao's further development. Theoretically, our study contributes to the literature on fintech and IT-enabled empowerment. Practically, our elucidation of the IT-enabled empowerment mechanisms offers crucial guidance for various stakeholders (e.g., governments, policy makers, fintech companies and product designers) seeking to tap into the financial industry, which has traditionally been characterized by high entry barriers.

### **Acknowledgments**

The authors thank the senior editor and the anonymous reviewers for their valuable comments and suggestions. The first two authors contributed equally to this research. We gratefully acknowledge the funding support from the Singapore Ministry of Education (Grant R-252-000-A08-112), the National Natural Science Foundation of China (Grant 71872065), and the Natural Science Foundation of Guangdong Province for Distinguished Young Scholar (Grant 2019B151502027). Chunmian Ge is the corresponding author.

## References

- Ba, S., Whinston, A. B., & Zhang, H. (2003). building trust in online auction markets through an economic incentive mechanism. *Decision Support Systems*, 35(3), 273-286.
- Barak, A., Boniel-Nissim, M., & Suler, J. (2008). Fostering empowerment in online support groups. *Computers in Human Behavior*, 24(5), 1867-1883.
- Barboza, D. (2014). High-interest web banks on the rise in china. *New York Times*, March 3, 2014. [http://www.nytimes.com/2014/03/03/business/international/web-banks-offering-high-interest-rates-rise-in-china.html?\\_r=0](http://www.nytimes.com/2014/03/03/business/international/web-banks-offering-high-interest-rates-rise-in-china.html?_r=0)
- Bowen, D. E., & Lawler, E. E. (1995). Empowering service employees. *Sloan Management Review*, 36(4), 73-73.
- Boyd, D. E., Chandy, R. K., & Cunha Jr., M. (2010). When do chief marketing officers affect firm value? A customer power explanation. *Journal of Marketing Research*, 47(6), 1162-1176.
- Breton, M. (1994). Relating competence, promotion and empowerment. *Journal of Progressive Human Services*, 5(1), 27-44.
- Brogaard, J., Hendershott, T., & Riordan, R. (2014). High-frequency trading and price discovery. *The Review of Financial Studies*, 27(8), 2267-2306.
- Burtch, G., Ghose, A., & Wattal, S. (2014). Cultural differences and geography as determinants of online pro-social lending. *MIS Quarterly*, 38(3), 773-794.
- Burtch, G., Ghose, A., & Wattal, S. (2015). The hidden cost of accommodating crowdfunder privacy preferences: A randomized field experiment. *Management Science*, 61(5), 949-962.
- Burtch, G., Ghose, A., & Wattal, S. (2016). Secret admirers: An empirical examination of information hiding and contribution dynamics in online crowdfunding. *Information Systems Research*, 27(3), 478-496.
- Burtch, G., Hong, Y., & Liu, D. (2018). The role of provision points in online crowdfunding. *Journal of Management Information Systems*, 35(1), 117-144.
- Campbell, D., & Frei, F. (2010). Cost structure, customer profitability, and retention implications of self-service distribution channels: Evidence from customer behavior in an online banking channel. *Management Science*, 56(1), 4-24.
- Carpenter, S. (2010). A study of content diversity in online citizen journalism and online newspaper articles. *New Media & Society*, 12(7), 1064-1084.
- Chaudhuri, A., & Holbrook, M. B. (2001). The chain of effects from brand trust and brand affect to brand performance: The role of brand loyalty. *Journal of Marketing*, 65(2), 81-93.
- Conger, J. A., & Kanungo, R. N. (1988). The empowerment process: Integrating theory and practice. *Academy of Management Review*, 13(3), 471-482.
- Cova, B., & Pace, S. (2006). Brand community of convenience products: New forms of customer empowerment: The case "My Nutella the Community". *European Journal of Marketing*, 40(9/10), 1087-1105.
- Craig, G. (2007). Community capacity-building: Something old, something new. *Critical Social Policy*, 27(3), 335-359.
- Currie, W. L., & Lagoarde-Segot, T. (2017). Financialization and information technology: Themes, issues and critical debates—Part I. *Journal of Information Technology*, 32(3), 211-217.
- Dahlberg, T., Guo, J., & Ondrus, J. (2015). A critical review of mobile payment research. *Electronic Commerce Research and Applications*, 14(5), 265-284.
- Das, T. K., & Teng, B.-S. (1998). Between trust and control: developing confidence in partner cooperation in alliances. *Academy of Management Review*, 23(3), pp. 491-512.
- Demirgüç-Kunt, A., Klapper, L. F., Singer, D., & van Oudheusden, P. (2015). *The global fintech database 2014: Measuring financial inclusion around the world* (Working paper 7255). World Bank Policy Research
- Deng, X., Joshi, K., & Galliers, R. D. (2016). The Duality of empowerment and marginalization in microtask crowdsourcing: Giving voice to the less powerful through value sensitive design. *MIS Quarterly*, 40(2), 279-302.
- Denzin, N. K. (1973). *The research act: A theoretical introduction to sociological methods*. Transaction.
- Doll, W., & Deng, X. (2010). A technology empowerment model for engineering work. *ACM SIGMIS Database*, 41(4), 52-74.

- Duane, A., & Finnegan, P. (2003). Managing empowerment and control in an intranet environment. *Information Systems Journal*, 13(2), 133-158.
- Eaton, B., Elaluf-Calderwood, S., Sorensen, C., & Yoo, Y. (2015). Distributed tuning of boundary resources: The case of Apple's Ios service system. *MIS Quarterly*, 39(1), 217-243.
- The Economist. (2015). Financial exclusion. *The Economist*, April 18, 2015. <http://www.economist.com/news/economic-and-financial-indicators/21648642-financial-exclusion>
- Eisenhardt, K. M. (1991). Better stories and better constructs: The case for rigor and comparative logic. *Academy of Management review*, 16(3), 620-627.
- Eisenhardt, K. M., & Graebner, M. E. (2007). Theory building from cases: Opportunities and challenges. *Academy of Management Journal*, 50(1), p. 25.
- Fayard, A.-L., & Metiu, A. (2014). The role of writing in distributed collaboration. *Organization Science*, 25(5), 1391-1413.
- Fischhoff, B. (1975). Hindsight is not equal to foresight: The effect of outcome knowledge on judgment under uncertainty. *Journal of Experimental Psychology: Human Perception and Performance*, 1(3), 288-299.
- Foster, C., & Heeks, R. (2013). Innovation and scaling of ICT for the bottom-of-the-pyramid. *Journal of Information Technology*, 28(4), 296-315.
- Fuchs, C., Prandelli, E., & Schreier, M. (2010). The psychological effects of empowerment strategies on consumers' product demand. *Journal of Marketing*, 74(1), 65-79.
- Füller, J., Mühlbacher, H., Matzler, K., & Jawecki, G. (2009). Consumer empowerment through internet-based co-creation. *Journal of Management Information Systems*, 26(3), 71-102.
- Gambetta, D. (1988). *Trust: Making and breaking cooperative relations*. Blackwell.
- Geertz, C. (1973). Thick description: Toward an interpretive theory of culture. In *The Interpretation of Cultures: Selected Essays* (pp. 3-30). Basic Books
- Gefen, D. (2000). E-commerce: The role of familiarity and trust. *Omega*, 28(6), 725-737.
- Ghose, R. (2001). Use of information technology for community empowerment: Transforming geographic information systems into community information systems. *Transactions in GIS*, 5(2), 141-163.
- Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2013). Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. *Organizational Research Methods*, 16(1), 15-31.
- Gioia, D. A., & Pitre, E. (1990). Multiparadigm perspectives on theory building. *Academy of Management Review*, 15(4), 584-602.
- Glaser, B. G., & Strauss, A. L. (2017). *Discovery of grounded theory: Strategies for qualitative research*. Routledge.
- Glaser, F., & Risius, M. (2018). Effects of transparency: Analyzing social biases on trader performance in social trading. *Journal of Information Technology*, 33(1), 19-30.
- Golder, P. N. (2000). Historical method in marketing research with new evidence on long-term market share stability. *Journal of Marketing Research*, 37(2), 156-172.
- Gomber, P., Kauffman, R. J., Parker, C., & Weber, B. W. (2018). On the fintech revolution: Interpreting the forces of innovation, disruption, and transformation in financial services. *Journal of Management Information Systems*, 35(1), 220-265.
- Gottschalk, L. R. (1969). *Understanding history: A primer of historical method*. Knopf.
- Guadagni, P. M., & Little, J. D. (1983). A logit model of brand choice calibrated on scanner data. *Marketing Science*, 2(3), 203-238.
- Gulati, R. (1995). Does familiarity breed trust? The implications of repeated ties for contractual choice in alliances. *Academy of Management Journal*, 38(1), 85-112.
- Harrison, T., Waite, K., & Hunter, G. L. (2006). The internet, information and empowerment. *European Journal of Marketing*, 40(9/10), 972-993.
- Hildebrand, T., Puri, M., & Rocholl, J. (2016). Adverse incentives in crowdfunding. *Management Science*, 63(3), 587-608.
- Hu, M., Li, X., & Shi, M. (2015). Product and pricing decisions in crowdfunding. *Marketing Science*, 34(3), 331-345.
- Huang, J., Henfridsson, O., Liu, M. J., & Newell, S. (2017). Growing on steroids: Rapidly scaling

- the user base of digital ventures through digital innovation. *MIS Quarterly*, 41(1).
- Hur, M. H. (2006). Empowerment in terms of theoretical perspectives: Exploring a typology of the process and components across disciplines. *Journal of Community Psychology*, 34(5), 523-540.
- Koriat, A., Lichtenstein, S., & Fischhoff, B. (1980). Reasons for confidence. *Journal of Experimental Psychology: Human Learning and Memory*, 6(2), 107-118.
- Langley, A. (1999). Strategies for theorizing from process data. *Academy of Management Review*, 24(4), 691-710.
- Langley, A., Smallman, C., Tsoukas, H., & Van de Ven, A. H. (2013). Process studies of change in organization and management: Unveiling temporality, activity, and flow. *Academy of Management Journal*, 56(1), 1-13.
- Laroche, M., Habibi, M. R., & Richard, M.-O. (2013). To be or not to be in social media: how brand loyalty is affected by social media? *International Journal of Information Management*, 33(1), 76-82.
- Lee, A. S., & Baskerville, R. L. (2003). Generalizing generalizability in information systems research. *Information Systems Research*, 14(3), 221-243.
- Leong, C., Tan, B., Xiao, X., Tan, F. T. C., & Sun, Y. (2017). Nurturing a fintech ecosystem: The case of a youth microloan startup in China. *International Journal of Information Management*, 37(2), 92-97.
- Leong, C. M. L., Pan, S. L., Newell, S., & Cui, L. (2016). The emergence of self-organizing e-commerce ecosystems in remote villages of China: A tale of digital empowerment for rural development. *MIS Quarterly*, 40(2), 475-484.
- Leong, C. M. L., Pan, S. L., Ractham, P., & Kaewkitipong, L. (2015). ICT-enabled community empowerment in crisis response: Social media in Thailand flooding 2011. *Journal of the Association for Information Systems*, 16(3), 174-212.
- Li, M. (2011). Online government advisory service innovation through intelligent support systems. *Information & Management*, 48(1), 27-36.
- Li, M., Jiang, Z. J., Fan, Z., & Hou, J. (2017). Expert or peer? Understanding the implications of virtual advisor identity on emergency rescuer empowerment in mobile psychological self-help services. *Information & Management*, 54(7), 866-886.
- Lincoln, N. D., Travers, C., Ackers, P., & Wilkinson, A. (2002). The meaning of empowerment: The interdisciplinary etymology of a new management concept. *International Journal of Management Reviews*, 4(3), 271-290.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. SAGE.
- Liu, D., Brass, D., Lu, Y., & Chen, D. (2015). Friendships in online peer-to-peer lending: Pipes, prisms, and relational herding. *MIS Quarterly*, 39(3), 729-742.
- Luhmann, N. (2000). Familiarity, confidence, trust: Problems and alternatives. *Trust: Making and Breaking Cooperative Relations*, 6, 94-107.
- Lyons, A. C., Grable, J., & Zeng, T. (2019). *Impacts of financial literacy on the loan decisions of financially excluded households in the People's Republic of China* (ADB working paper 923). Asian Development Bank.
- Mai, F., Shan, Z., Bai, Q., Wang, X., & Chiang, R. H. (2018). How does social media impact bitcoin value? A test of the silent majority hypothesis. *Journal of Management Information Systems*, 35(1), 19-52.
- Manyika, J., Lund, S., Singer, M., White, O., and Berry, C. (2016). *Digital finance for all: Powering inclusive growth in emerging economies*. <https://www.betterthancash.org/tools-research/resources/digital-finance-for-all-powering-inclusive-growth-in-emerging-economies-mckinsey#>
- Marshall, A. (2004). *Principles of economics*. Macmillan.
- Maruping, L. M., & Magni, M. (2012). What's the weather like? The effect of team learning climate, empowerment climate, and gender on individuals' technology exploration and use. *Journal of Management Information Systems*, 29(1), 79-114.
- Marwick, A. (2001). *The new nature of history: Knowledge, evidence, language*. Palgrave.
- Mason, R. O., McKenney, J. L., & Copeland, D. G. (1997). An historical method for MIS research: Steps and assumptions. *MIS Quarterly*, 21(3), 307-320.
- Narayan-Parker, D. (2002). *Empowerment and poverty reduction: A sourcebook*. World Bank Publications.
- Nelson, A., & Irwin, J. (2014). Defining what we do—all over again: Occupational identity, technological

- change, and the librarian/internet-search relationship. *Academy of Management Journal*, 57(3), 892-928.
- Ngosi, T., & Braganza, A. (2009). Toward a component-based design framework of the international information technology standardization process. *Journal of Information Technology*, 24(1), 103-125.
- Nooteboom, B., Berger, H., & Noorderhaven, N. G. (1997). Effects of trust and governance on relational risk. *Academy of Management Journal*, 40(2), 308-338.
- Oliver, R. L. (1999). Whence consumer loyalty? *Journal of Marketing*, 63(SI), 33-44.
- Pan, S. L., & Tan, B. (2011). Demystifying case research: A structured-pragmatic-situational (SPS) approach to conducting case studies. *Information and Organization*, 21(3), 161-176.
- Parker, L. E., & Price, R. H. (1994). Empowered managers and empowered workers: The effects of managerial support and managerial perceived control on workers' sense of control over decision making. *Human Relations*, 47(8), 911-928.
- Pfeffer, J. (2013). You're still the same: Why theories of power hold over time and across contexts. *The Academy of Management Perspectives*, 27(4), 269-280.
- Porra, J., Hirschheim, R., & Parks, M. S. (2014). The historical research method and information systems research. *Journal of the Association for Information Systems*, 15(9), 536-576.
- Prasad, P., & Eylon, D. (2001). Narrating past traditions of participation and inclusion: Historical perspectives on workplace empowerment. *The Journal of Applied Behavioral Science*, 37(1), 5-14.
- Rezabakhsh, B., Bornemann, D., Hansen, U., & Schrader, U. (2006). Consumer power: A comparison of the old economy and the internet economy. *Journal of Consumer Policy*, 29(1), 3-36.
- Rogers, E. M. (2010). *Diffusion of innovations*. Simon & Schuster.
- Saldaña, J. (2016). *The coding manual for qualitative researchers*. SAGE.
- Shrednick, H. R., Shutt, R. J., & Weiss, M. (1992). Empowerment: Key to is world-class quality. *MIS Quarterly*, 16(4), 491-505.
- Sia, S. K., Tang, M., Soh, C., & Boh, W. F. (2002). Enterprise resource planning (ERP) systems as a technology of power: Empowerment or panoptic control? *ACM Sigmis Database*, 33(1), 23-37.
- Spreitzer, G. M. (1996). Social structural characteristics of psychological empowerment. *Academy of Management Journal*, 39(2), 483-504.
- Spreitzer, G. M., & Doneson, D. (2005). Musings on the past and future of employee empowerment. In T. G. Cummings (Ed.), *Handbook of organizational development* (pp. 311-324). SAGE.
- Spreitzer, G. M., Kizilos, M. A., & Nason, S. W. (1997). A dimensional analysis of the relationship between psychological empowerment and effectiveness satisfaction, and strain. *Journal of Management*, 23(5), 679-704.
- Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Procedures and techniques for developing grounded theory*. SAGE.
- Swift, C., & Levin, G. (1987). Empowerment: An emerging mental health technology. *Journal of Primary Prevention*, 8(1-2), 71-94.
- Tan, B., Pan, S. L., Lu, X., & Huang, L. (2015). The role of IS capabilities in the development of multi-sided platforms: The digital ecosystem strategy of Alibaba.com. *Journal of the Association for Information Systems*, 16(4), 248-280.
- Tan, T., & Phan, T. Q. (2018). Social media-driven credit scoring: The predictive value of social structures. Available at <https://ssrn.com/abstract=3217885>.
- TechUK. (2015). Technology has a central role to play in supporting financial inclusion. <https://www.techuk.org/insights/opinions/item/3184-technology-has-a-central-role-to-play-in-supporting-financial-inclusion>
- Thomas, K. W., & Velthouse, B. A. (1990). Cognitive elements of empowerment: An "interpretive" model of intrinsic task motivation. *Academy of Management Review*, 15(4), 666-681.
- UN. (2015). Transforming our world: The 2030 agenda for sustainable development. *United Nations Sustainable Development Summit*. <https://sustainabledevelopment.un.org/post2015/transformingourworld/>
- van Rooij, M., Lusardi, A., & Alessie, R. (2011). Financial literacy and stock market participation. *Journal of Financial Economics*, 101(2), 449-472.



- Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, 46(2), 186-204.
- Voakes, P. S., Kapfer, J., Kurpius, D., & Chern, D. S.-Y. (1996). Diversity in the news: A conceptual and methodological framework. *Journalism & Mass Communication Quarterly*, 73(3), 582-593.
- Wareham, J., Bjørn-Andersen, N., & Neergaard, P. (1998). Reinterpreting the demise of hierarchy: A case study in information technology, empowerment and incomplete contracts. *Information Systems Journal*, 8(4), 257-272.
- Denegri-Knott, J., Zwick, D., & Schroeder, J. E. (2006). Mapping consumer power: An integrative framework for marketing and consumer research. *European Journal of Marketing*, 40(9/10), 950-971.
- Shankar, A., Cherrier, H., & Canniford, R. (2006). Consumer empowerment: A Foucauldian interpretation. *European Journal of Marketing*, 40(9/10), 1013-1030.
- Yin, R. K. (2013). *Case study research: Design and methods*. SAGE.
- Yue, G., & Yu, J. (2006). Role of catfish effect in inspiring nurse's potential. *Journal of Nursing Science*, 21(1), 63-64.
- Zachariadis, M., & Ozcan, P. (2017). *The API economy and digital transformation in financial services: The case of open banking* (SWIFT Institute Working Paper No. 2016-001). Available at <https://ssrn.com/abstract=2975199>.

## About the Authors

**Tianhui Tan** is a research fellow in the School of Computing at the National University of Singapore. She received her PhD degree in information systems from the National University of Singapore. Her research interests focus on fintech, social networks, and electronic commerce.

**Ying Zhang** is a lecturer in the Faculty of Business and Economics at the University of Auckland and was a research assistant in the department of information systems and analytics in the School of Computing at the National University of Singapore. She received her PhD degree in information systems from the National University of Singapore. Her research interests focus on economics of information systems, digital marketing, electronic commerce, and online word-of-mouth. Her work has been published in journals such as *Information Systems Research*, *Information & Management* and *Electronic Commerce Research and Applications* and presented at conferences such as the International Conference on Information Systems.

**Cheng Suang Heng** is an associate professor in the Department of Information Systems and Analytics in the School of Computing at the National University of Singapore. He received his PhD degree in organization, technology and entrepreneurship from the Stanford University. His research interests focus on organization strategies, with an emphasis on social media, sharing economy and financial technologies. He has published papers in journals such as *MIS Quarterly*, *Information Systems Research*, *Journal of Management Information Systems*, *Journal of the Association for Information Systems*, *Research Policy*, *Information & Management* and presented at conferences such as the International Conference on Information Systems.

**Chunmian Ge** is a professor in the School of Business Administration at the South China University of Technology. He received his PhD degree in information systems from the National University of Singapore. His research interests focus on economics of information systems and strategic management. His work has been published in journals such as *Strategic Management Journal*, *Research Policy*, *Information & Management* and presented at conferences such as the International Conference on Information Systems.

Copyright © 2021 by the Association for Information Systems. Permission to make digital or hard copies of all or part of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and full citation on the first page. Copyright for components of this work owned by others than the Association for Information Systems must be honored. Abstracting with credit is permitted. To copy otherwise, to republish, to post on servers, or to redistribute to lists requires prior specific permission and/or fee. Request permission to publish from: AIS Administrative Office, P.O. Box 2712 Atlanta, GA, 30301-2712 Attn: Reprints, or via email from [publications@aisnet.org](mailto:publications@aisnet.org).