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Transforming from Traditional to E-intermediary: A Resource Orchestration Perspective

ABSTRACT

The development of digital technologies has forced an increasing number of traditional intermediaries to transform into e-intermediaries for survival. This study adopts the resource orchestration perspective to investigate the digital transformation process and mechanism by using a case study method. Our findings indicate that the digital transformation of intermediaries requires a fit among the strategic logic, resource orchestration and capability, and reveal the roles of information technology and strategic logics in the transformation process. This study contributes to theory-building in digital transformation by providing a comprehensive framework for reconfiguring organizational resources and capabilities to cope with the requirements of e-intermediaries. Our findings also provide useful managerial insights for intermediaries in terms of resource-focused actions and resource portfolios to bridge supply and demand.

Introduction

Intermediaries are commonly understood as organizations or bodies that function as brokers between products/service buyers and sellers [1, 58]. They do not actually design, manufacture or provide a product or service themselves [3]. Traditional intermediaries have been seriously impacted by digital technologies, which provides opportunities to achieve disintermediation [36] in recent years. For example, many manufacturing enterprises try to disintermediate by establishing their e-commerce platforms to connect directly with customers. These challenges have forced many traditional intermediaries either to go out of business altogether or to adopt digital technologies and transform into e-intermediaries [42]. However, 66% to 84% of digital transformation projects fail [47]. Therefore, it is important to explore how traditional intermediaries can transform into e-intermediaries.

Previous studies have paid attention to the digital transformation of various industries [19]. First and foremost, however, they ignore the digital transformation of traditional intermediaries, which differ from any type of industrial firms. Specifically, the existing research on the digital transformation of industrial firms focuses more on the firms' coordination with either demand side or supply side [6, 25, 40]. Nevertheless, traditional intermediaries' transformation must achieve coordination among the intermediaries, the suppliers, and the demand sides. Simultaneous and seamless coordination with multiple suppliers and customers brings novel challenges. How can intermediaries take the new online "middleman" [41] role? We have little knowledge about the approaches that the intermediaries adopt to coordinate the resources of suppliers and consumers online.

Furthermore, previous studies emphasize the roles of digital transformation strategy (DTS) in prompting digital transformation [11, 40, 62]. It is claimed that the strategy, not digital technologies, determines the success of digital transformation [11, 62]. However, the literature also acknowledges that it is very difficult to implement DTS because DTS does not take into account the particular conditions of enterprises, such as resources and capabilities [47]. To solve the problem, strategic logic has been utilized to replace the strategy in some studies [59, 66]. Strategic logic refers to an organization's operative rationale for achieving its goals through coordinated deployment of resources [16] on the basis of considering organizational resources, competencies, and environmental changes [35]. Therefore, it can reflect organizations' understanding of the particular conditions, articulate the key assumptions about cause-and-effect relationships and the internal consistency of strategic choices and actions [9, 35], and thus help clarify the operative rationale of DTS.

Finally, resource is recognized as another key factor supporting the transformation, and the resource-based view (RBV) is a widely accepted theoretical foundation in these studies [40, 65]. However, the RBV has been criticized for its statics and its applicability in a single firm but not between firms [31]. Therefore, this paper adopts the resource orchestration perspective as our theoretical lens. Resource orchestration, proposed by Sirmon et al., in 2011, is a dynamic view developed on the basis of the RBV. It describes how firms achieve competitive advantage through effective resource-focused actions [54]. Two rationales explain the suitability of the resource orchestration perspective. First, the transformation of traditional intermediaries involves coordinating the resources of multiple stakeholders, e.g. suppliers, customers, intermediaries, logistics, etc., to achieve digital transformation. The resource orchestration is suitable for examining how different organizations orchestrate their resources to achieve the strategic goal [4]. Second, strategic logic is "an organization's operative rationale for achieving its goals through coordinated deployment of resources" [16], which implies a sort of resource actions. Resource orchestration,

including resource portfolios and resource-focused action [15, 54] can be utilized to uncover the resource-focused actions in accordance with the strategic logic.

Thus, we ask *"How does a traditional intermediary transform into an e-intermediary by leveraging strategic logic and resource orchestration?"* This research question aims to reveal the digital transformation process. Given the exploratory nature of this study, we utilize a case study methodology and a traditional intermediary as our case sample.

Our data analysis reveals a three-phase process model that demonstrates the transformation process. The process model makes important theoretical contributions to the digital transformation literature by revealing the unique characteristics of intermediary transformation and advocating the use of strategic logic to replace DTS because the strategic logic takes into consideration the particular conditions of enterprises and bridges the DTS and resources. The model also has important practical implications for providing managers a step-by-step guide to realize a digital transformation. It enables managers to adopt different strategic logics in different transformation phases and suggests how to develop different capabilities through the formulation and implementation of resource-focused actions under the guidance of strategic logics.

Theoretical Foundations

Strategic Logic of Digital Transformation

The rapid development of digital technologies provides "both game-changing opportunities for and existential threats to companies" [21, 50, 56]. Therefore, an increasing number of organizations have launched their transformation initiatives [42]. This phenomenon has sparked studies on digital transformation, which is defined as "the use of digital technologies that enable organizations to achieve strategic changes in every aspect" [64].

In the existing studies of digital transformation, the concept of DTS occupies a central place [28]. Strategy is the determination of the basic long-term goals and objectives of an enterprise [10].

DTS is an organizational strategy that is formulated and executed by leveraging digital resources to create differential value [11]. Digital transformation requires close collaboration of different departments, making it effortless to fail without strategic guidance [53]. The DTS studies emphasize the strategy of cooperation [29], platform [50], ecosystem [52], and internalization of external resources of stakeholders [37]. These strategies are believed to help enterprises approach digital transformation and realize new value propositions and flawless operation [64].

However, DTS is criticized for the lack of feasibility and specific direction to execute digital transformation. Petruzzelli et al. (2020) note that most DTS do not fully articulate the specific conditions of enterprises and lack strong logical guidance [47]. Strategic logic has a critical role in directing enterprises to adapt to the environmental changes and search for opportunities [48].

Strategic logic is "an organization's operative rationale for achieving its goals through coordinated deployment of resources" [16], which includes a set of assumptions and principles that specify strategic goals and expectations for success through consideration of organizational resources, competencies, and environmental changes [9, 35]. There are three distinct strategic logics - capability, guerrilla, and complexity logic, as summarized in Table 1. Specifically, capability logic contends that one firm will outperform another if it has a competitive ability, which is developed by leveraging a firm-specific strategic resource; guerrilla logic argues that one firm will outperform another if it disrupts the existing situation to form new value propositions and create a unique and unconventional basis for competing; and complexity logic argues that one firm will outperform another if it builds a business ecosystem that relies on network feedback and emergent relationships [35].

Table 1. Principles of the Three Strategic Logics

Capability logic	Guerrilla logic	Complexity logic

• Identify existing strategic resources that are valuable, rare, inimitable, and non-substitutable	• Disrupt existing business paradigms to create a series of temporary advantages	• A healthy ecosystem is a prerequisite for superior performance
• Identify existing strengths and new situations to initiate desirable future positions	• Recombine existing resources to form new value propositions	• Within the ecosystem, benefits derived from the efficient resource synergy
• Complement deficient resources	• Adopt actions to keep competitors off-balance and form new links among them	• Underlying forces and attractors, which organize the system, create order in the ecosystem
• Exploit complementary resources that enhance the value-creating potential of strategic resources		

Note: Derived from Lengnick-Hall &Wolff [35].

In fact, some studies have proposed to use strategic logic to replace strategy in transformation studies. For example, Aspara et al. highlight the role of logic in creating value during transformation [2]. Dovey and Fenech argue that many transformations fail because their leaders did not perform the transformation under the guidance of the core logic, which helped shape the firm's strategies and facilitate the transformation [15]. In line with these studies, we adopt the concept of strategic logic and investigate how it directs traditional intermediaries' transformation to e-intermediaries.

From Resources to Resource Orchestration

In addition to DTS, resources are the other factor that plays an important part in digital transformation [32]. Two significant resources support transformation: external and internal resources. External resources come from external stakeholders of an organization, including suppliers, distributors, customers, and cooperative third-party organizations, e.g., research institutes, universities, and consulting firms. Through providing necessary products, salesforce, market supply, demand information, and related consulting services, they help satisfy the requirements of a new market during the transformation [23]. Internal resources mainly include human resources, capital, and technologies. Human resources provide the basic intellectual support during the process of digital transformation [38]. Capital provides the economic security for digital transformation. Technology, including innovative and information technologies, helps produce higher value-added

products or new products to achieve digital transformation and to increase efficiency and gain core competencies during the transformation [30].

Due to the critical roles of resources in digital transformation, RBV is a widely accepted theoretical lens in the studies [40, 65], in spite of the criticism noted above [31]. Competitive advantages "derive from the better use of its resources, rather than better resources" [40]. Therefore, some literature highlights the need to pay attention to both resource and resource-focused actions. We opted for the resource orchestration perspective to respond to this call [54, 46]. This perspective describes how to achieve competitive advantage through effectively acting on resources [12, 54]. The resource orchestration incorporates three types of resource-focused actions, i.e., structuring, bundling and leveraging [54]. Structuring involves forming the firm's resource portfolio by acquiring, accumulating, and divesting resources. Bundling refers to integrating resources to develop capabilities, including stabilizing, enriching, and pioneering. Leveraging involves exploiting capabilities and taking advantage of specific market opportunities by mobilizing, coordinating, and deploying [54].

Actually, in some recent studies on transformation, resource-focused actions have attracted an increasing amount of attention. For example, Uhlenbruck et al. investigate various methods of resource acquisition to cover the shortage of necessary resources for transformation [61]. Rice et al. study the role of resource integration and resource configuration in developing capabilities during the process of transformation [49]. We take the resource orchestration as the theoretical lens to examine how strategic logic directs resource orchestration in the process of traditional intermediaries' transformation to e-intermediaries.

In addition to the role of resource-focused actions in transformation, the relationship between strategic logic and resource-focused actions has also attracted some attention. For example, Duhan notes that strategic logic is the operating principle for achieving organizational goals through coordinated deployment of resources [16]. Strategic logic has a significant impact on resource-

focused actions, and firms make decisions about resource-focused actions according to the strategic logic [16]. According to Lengnick-Hall and Wolff, capability logic can be fulfilled by selection, development, enhancement, and exploitation of fundamental resources; guerilla logic needs to repeatedly disintegrate and reintegrate activities; and complexity logic concentrates on designing and maintaining integration [35].

In summary, the previous studies have affirmed the important roles of DTS and resources in digital transformation. In our study, first, we use strategic logic to represent DTS due to its advantages of feasibility. Then, we introduce resource orchestration to both include resources and resource-focused actions and examine how the strategic logic guides resource orchestration in the transformation process.

Research Methodology

The case-based research methodology is particularly appropriate for this study for several reasons. First, this paper aims to answer the "how" question, i.e., "how does a traditional intermediary transform into an e-intermediary", which makes the case study method particularly pertinent [14, 17, 68]. Second, our research focuses on the process of intermediary transformation, and the case study method is suitable for a process-based analysis [30, 34]. Further, we employ a single case study to explore a path that traditional intermediaries can adopt to transform into e-intermediaries. The single case study method thus facilitates an in-depth analysis of rich data [69].

Given the research question, two conditions form the basis for case selection. First, the selected case organization must have completed the transformation from a traditional offline intermediary into an online one, with a growing number of users since the transformation. Second, the transformation process of the sample organization should experience three strategic logics to enable a comprehensive examination of the transformation process. Dalian Zhongding Information Co., Ltd. (DZI) was chosen as our case sample. DZI was a traditional intermediary, conducting offline payment intermediary business between merchants and their customers before the transformation,

then transformed into an e-intermediary – an e-commerce platform, Easy-Life, bridging various supermarkets and consumers in China.

Data Collection

We collected our data from both primary and secondary sources. Primary data was collected in three stages, and involved interviewing 53 informants in total (See Appendix A for a summary). The first stage was completed in late 2013, when the authors first got in touch with DZI and were invited to conduct a consultancy on the transformation. Interview records and minutes from the consultancy project were transcribed, enabling us to gain a comprehensive understanding of the case and the context. The second stage took place between April and June 2015, during which time we visited the headquarters of DZI in Dalian and conducted the 53 semi-structured interviews. Most of the interviews were conducted onsite and lasted from 1 to 1.5 hours. Some of the interviews (e.g., interviews with users) were conducted over the internet and lasted from 30-60 minutes. The interview questions sought to collect information on the transformation background and process (See Appendix B for sample questions). The third stage took place between May and June 2016, and sought to clarify aspects of the data as intriguing themes emerged in the data analysis process. We subsequently conducted follow-up telephone interviews in Aug 2020 for some final clarification. All the interviews were conducted in Chinese by the first two authors who also transcribed and translated the digitally recorded interviews.

Secondary data was collected from a variety of sources. First, we read a wide range of online articles in order to gain a comprehensive understanding of the background, development, and transformation of DZI. We noticed that some phrases, such as IT, technology, enriching resources, and exploiting resources were frequently used in the articles describing DZI's digital transformation. Based on this, after a thorough review of the literature, we opted for a resource orchestration perspective as the theoretical lens. This served as an initial guide in designing the interview

questions [45]. Second, some internal documents helped us better understand DZI's transformation process and implementation details. (See Appendix C for a summary of the secondary data).

Data Analysis

We adopted the temporal bracketing strategy to analyze the transformation process at DZI [44]. Accordingly, we divided the events, activities and decisions into three distinct phases, i.e., exploration, breakthrough and consolidation, by sorting all of the events in chronological order and exploring the transitional hallmarks, proposing the initial framing.

We adopted the Gioia coding method for data analysis [20]. First, we derived dozens of 1st order concepts from the raw data. Examples included "*identifying environmental changes*", "*planning to transform to cope with environmental changes*", "*complementing deficient resources and exploiting them to build online operational ability*". After several iterations, with constant corroboration against the recordings, the transcripts and supplementary notes, we generated four 2nd order themes from the 1st order concepts in each phase, e.g. *"capability logic", "identifying necessary resources", "exploiting complementary resources", and "capability for response to the market"*. The third step was to classify the themes into three aggregate dimensions [7]. For example, the "*capability logic*" was classified into a dimension of "*strategic logic*". The *"identifying necessary resources" and "exploiting complementary resources"* were grouped into the dimension of *"resource orchestration"*. The data structures presented in Appendices D-F summarize the quotations, 1st order terms, 2nd order themes, and aggregate dimensions. Throughout the process of data analysis, we worked independently and met frequently to compare notes, discuss contradictory interpretations and seek consensus as appropriate [38].

We also took advantage of the flexibility that the case study method offered: as new data became available, we progressed iteratively, resolving contradictions, taking account of new interpretations, and thus sought to ensure the integrity of the analytical process and coherence of the findings.

Case Description

Organizational Background

DZI, headquartered in Dalian, Liaoning Province, was established in 2006. Before the transformation, the firm mainly engaged in prepaid card (OnlyCard) sales business. By the end of 2012, the OnlyCard had accumulated more than a million customers and nearly a thousand cooperating merchants, and annual sales of 550 million RMB (US$86 million).

In 2013, however, the OnlyCard business began to encounter difficulties because of changes in national regulation. The central government issued the *Eight Rules,* which severely limited public expenditure, an important source of OnlyCard payment, and the development of online payment systems, such as Alipay, a leading independent third-party payment platform launched by Alibaba. As a result, OnlyCard circulation decreased sharply. Annual sales declined to 220 million RMB (US$34 million) in 2014, a 60% drop in just two years. To survive, DZI was forced to transform in 2014 by establishing a subsidiary – Dalian Zhongding Electronic Commerce Co., Ltd. (DZEC).

There are three milestones in DZI's transformation, i.e., launching the online platform, realizing one-hour delivery, and building an ecosystem, hence the transformation process is divided into three phases. The exploration phase began in December 2013, when the circulation of OnlyCard dropped significantly. In September 2014, the Easy-Life app was launched, marking the end of the exploration phase and the beginning of breakthrough phase. The breakthrough phase ended in March 2015. At that time, one-hour delivery was realized and the consolidation phase began, as shown in Figure 1.
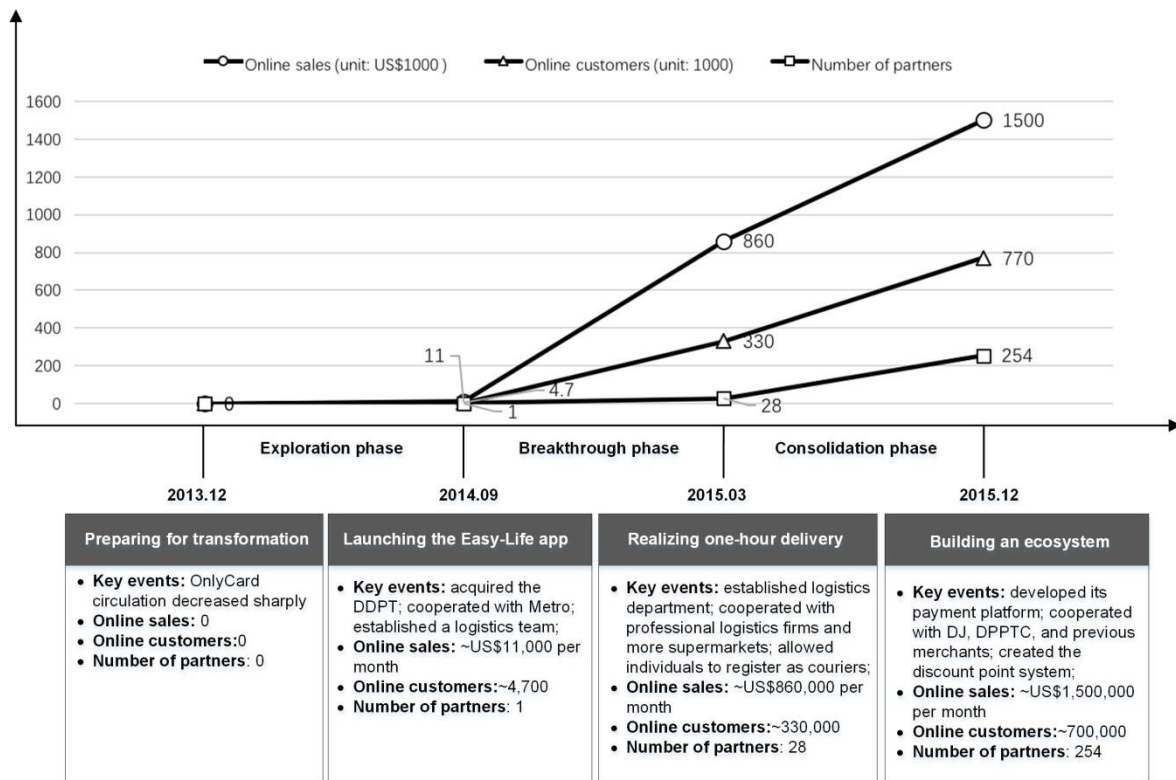
Figure 1. The key events of the DZI transformation process

The Exploration Phase

At the end of 2013, to reverse the dramatic decline in the OnlyCard business, DZI was forced to undertake a digital transformation, but lacked the necessary resources to operate online. Therefore, the CEO proposed to first acquire the corresponding resources. As he recalled:

> *"We had accumulated plenty of customers. They are no doubt tremendous and a unique treasure to us and laid the foundation for our transformation… However, as a traditional firm, we lacked IT-related resources, including both information technology and staff, as well as logistics and suppliers. This was our first challenge for conducting the transformation."*

A customer service manager expressed a similar concern:

> *"The primary responsibility of the service department was bridging customers and the merchants. For example, when consumers pay by the OnlyCard and request a*

return, we have to be involved in the transaction (merchants pay a certain amount

of commission to DZI) ... To conduct e-business, the service department had to take

more responsibility, such as delivery, returns and exchanges."

Therefore, DZI first identified the resources it lacked and focused on seeking IT resources and the other necessary resources to be "a carrier of the supermarket".

After a series of detailed inspections, DZI decided to acquire Dalian Diandian Power Technology Co., Ltd. (DDPT), a small software development firm founded in 2011, to access IT resources. The senior vice president commented on the acquisition:

"Although DDPT was a small firm, the staff and consultants were experienced, dedicated,

and were well aware of cooperation, and the firm was highly professional in developing

online platforms. DDPT can well satisfy our requirements. Acquiring it made us gain

both IT personnel and capability within a short period."

After acquiring DDPT, DZI established DZEC to start the transformation in June 2014. DZEC's first move was to develop its own mobile application (app) to lay the foundation to conduct online transactions. As opposed to the prepaid OnlyCard designed for offline stores, through the app, customers could browse products, place orders and conduct payment anywhere and at any time. When recalling the development of the app, the product manager said:

"Before developing the app, we had reached a cooperative agreement with a large-scale

foreign supermarket, which laid the foundation for us to transform into a deliveryman for

supermarkets. Thus, the products exhibited on the app are those sold in supermarkets…

In addition to the exhibit function, our app also embedded a transaction function so that

customers could conduct payment online."

Metro became DZEC's first cooperating supermarket. A senior manager explained the reasons for choosing Metro:

> *"There are two main reasons why we chose Metro. First, Metro's customers are firms, and individual consumers could not shop at Metro before. Actually, Metro is favored by individual consumers because a large number of products sold in Metro are imported goods, and Chinese consumers, especially our targeted consumers, white-collar workers, prefer imported products. Therefore, we can bridge Metro and individual consumers. This is also the most important reason why Metro was willing to cooperate with us. And second, Metro had been engaged in B2B business and could provide order-picking and distribution services, bringing us great convenience."*

Meanwhile, DZEC established a small logistics team consisting of approximately twenty people. The coverage was limited to a handful of office buildings in the downtown area. After developing the app, building the logistics team and reaching the cooperation agreement with Metro, the Easy-Life app was launched in September 2014. It began to deliver Metro's goods to office buildings in Dalian City. As one consumer recalled:

> *"Easy-Life is convenient, especially for us busy white-collar workers. After working all day, I am already too tired to spend half an hour or more in supermarkets. With Easy-Life, I just need to click my mobile phone and wait at home. That's great."*

The Breakthrough Phase

After operating for a while, the firm began to receive customer complaints.

> *"I placed my order in the morning; however, when I got off work, the delivery man had not come. I had to wait and could do nothing."*

> *"I ordered yogurt and milk. They came six hours after I ordered…I doubted whether they were drinkable as they were not stored in a refrigerator during transportation and were not fresh anymore."*

An employee of the call center also recalled:

"I answered 60 calls a day. Most of them complained about the delivery. I remember a consumer ordered frozen dumplings at 2 pm. He called to complain about the delivery at 8 pm. The late delivery delayed his dinner."

Poor time delivery led DZEC to lose a large number of customers who returned back to the e-commerce platforms they used before, such as Taobao, the largest e-commerce platform in China, and JD, another leading e-commerce platform. To reverse the situation and gain an advantage over the national e-commerce platforms which supply a wider range of products and at a cheaper price but require several days to deliver, DZEC determined that products would be delivered to consumers within one hour of placing the order. As the CEO explained:

"In China, the existing e-commerce platforms have covered the entire category and primarily rely on price to beat the competition. It's impossible to beat them by engaging in price wars. However, we noticed that many consumers are time-sensitive and hope to receive goods immediately after placing their order. Therefore, we proposed the one-hour delivery. This disrupts the routine of the e-commerce business, and thus, DZEC could win an outstanding competitive advantage."

To achieve the goal of delivery within one hour, DZEC focused on enriching short-board resources by cooperating with more suppliers and logistics organizations. The VP of marketing explained:

"At that time, we aimed to make up for our shortcomings to conquer the market. Logistics is the main point. However, only improving the logistics team was not enough. Therefore, we also cooperated with other suppliers. This could ease our logistics pressure."

DZEC expanded the logistics team by employing part-time delivery couriers. Meanwhile, with the rapid development of the Chinese logistics industry, a number of logistics firms emerged, such as Baidu Take-Away, a professional delivery service platform built by Baidu (the biggest Chinese

search engine), and China Post, which cooperated with DZEC. A marketing manager recalled the cooperation:

> *"Baidu Take-Away has a distinguished delivery capability and is able to completely satisfy our delivery requirements. What's more, it costs less because of the scale effect. Compared with Baidu Take-Away, the delivery of China Post is somewhat slower. However, it has coverage all over China and can serve remote areas."*

Meanwhile, DZEC proposed the idea of "sharing logistics", i.e., anybody could register to undertake deliveries. Thereafter, DZEC developed an order progress system through which the registered individual could receive messages on the location of products and their destination and compete for orders. The sharing of logistics greatly reduced the logistics time and made one-hour delivery possible.

However, because there was only one Metro in Dalian City, which is located in the northern suburbs, delivery could take more than one hour. Therefore, expecting to develop its logistics team, DZEC sought to cooperate with other supermarkets to speed up delivery. Finally, DZEC reached cooperation agreements with Tesco, Jinma, a local chain supermarket in Dalian, Jiazhou, a Korean supermarket, and other imported goods and community stores. The cooperation with multiple logistics firms and individuals as well as supermarkets enabled DZEC to provide richer product choices to customers and improve delivery speed. In terms of cooperation, the marketing VP reported:

> *"Cooperation with different supermarkets offers diversified options for customers, and we also can renew the cargo list at intervals according to the feedback from customers. Cooperation with professional logistics firms and individuals strongly supports one-hour delivery. This enabled us to better satisfy our customers. All of this brought us competitiveness in the e-commerce market and thus allowed us to win many customers from our competitors."*

The Consolidation Phase

After a series of changes, the firm successfully overcame the challenges and got on the right track. However, the CEO was not satisfied with the situation and sought further remedies:

> *"Although, at that time, we survived the market, some similar regional e-commerce platforms emerged. Therefore, we had to try harder…We acknowledge that, as an internet firm, the ecosystem is very important. As you know, Alibaba, Baidu, Tencent and other internet firms are all committed to building their ecosystems. To survive the future competition, we have to build our own ecosystem."*

To build an ecosystem, first, DZEC's parent firm, DZI, began to develop its own payment platform, One Payment, to avoid relying on other online payment platforms and obstacles to occupy the central position of the business ecosystem. One Payment, supporting OnlyCard payment attracted a large proportion of OnlyCard users to install the online payment app. Second, DZEC began to cooperate with JD, the largest self-operated e-commerce platform in China, allowing customers to purchase JD's products through Easy-Life with One Payment. Third, it cooperated with other organizations that held a large number of users, such as Dalian Pearl Public Transportation Card Co. Ltd. (DPPTC), the issuer of the bus pass for Dalian City. By December 31, 2019, the circulation of the bus pass had passed 5 million. Cooperation meant gaining access to these users. Additionally, to attract DPPTC users to shop on Easy-Life, DZEC facilitated payment through the bus pass. Finally, DZEC intensified cooperation with existing cooperating merchants such that Easy-Life and these merchants could share users' information with each other, and these merchants could also access Easy-Life's users. To strengthen the interaction among these merchants, consumers won discount points when consuming through One Payment, the OnlyCard and the bus pass. Therefore, centered on the app, customers, merchants and logistics were linked together, as a senior manager explained:

"We have built our ecosystem, which consists of various merchants, logistics and customers. The ecosystem enables merchants to share customers. And the discount point system further improves customer stickiness… Stickiness is one of the most important tools to resist external competition. And the diversity of internal organizations ensures the stability of the ecosystem. Thus, we are not afraid of losing any partners."

Case Analysis

This study aims to generate insights that advance both research and practice in the field of transformation from a traditional intermediary to an e-intermediary. The resource orchestration perspective was applied as a theoretical lens through which to analyze the case of DZI's transformation. The case evidence was analyzed across three phases: the exploration phase, the breakthrough phase and the consolidation phase. As shown in Figures 2, the analysis revealed that each phase was marked by the presence of a strategic logic, resource-focused actions, a resource portfolio and capability.
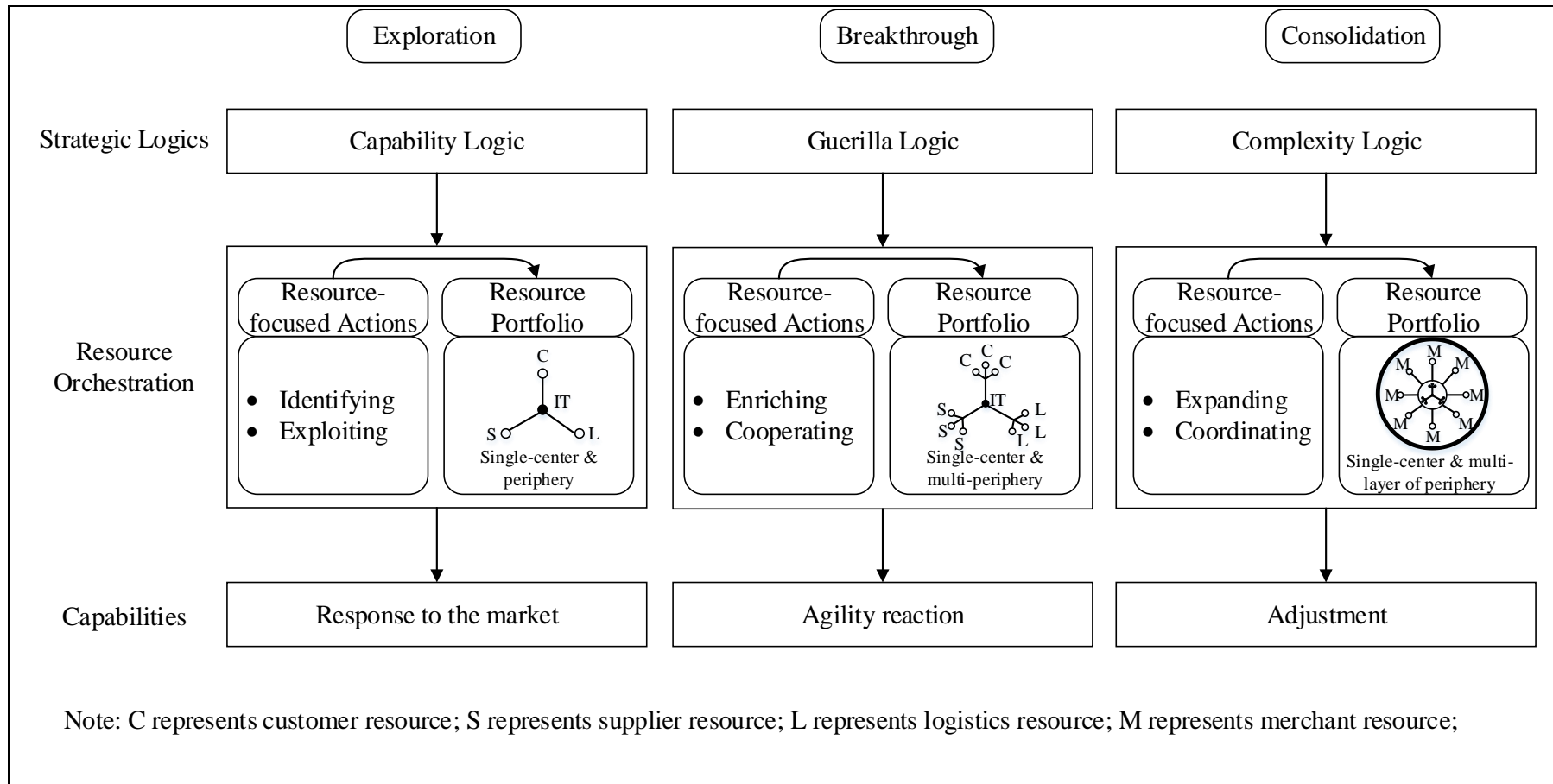
Figure 2. The Relationship of the Strategic Logic, Resource Orchestration and Capability.

Strategic Logic and Resource Orchestration

The case analysis reveals that the resource orchestration is determined by strategic logic in each phase, as shown in Figure 2.

During the exploration phase, a capability logic is adopted and directs the resource-focused actions of identifying and exploiting. The capability logic emphasizes building abilities depending on strategic resources [35]. Traditional intermediaries that commit to transform into e-intermediaries need to leverage additional strategic resources to outperform competitors and respond to environmental change [60]. Therefore, the capability logic is indispensable. Under the guidance of the capability logic, the intermediaries must know what resources are essential to build abilities. Therefore, they need to identify the strategic resources they have and exploit existing resources and complementary resources.

In 2013, the number of online consumers in China exceeded 300 million, with a growth rate of more than 20%. People are more willing to shop online due to the convenience and low price [24]. Thus, DZEC was forced to transform into an e-intermediary. To achieve the transformation, it first adopted the capability logic, and by so doing was able to evaluate its probability of transformation into an e-intermediary by identifying its strategic resources and deficient resources. As a senior manager recalled:

> *"In response to changes in the market, we decided to transform into an e-intermediary. At that time, we were only concerned about how to achieve online operation. Therefore, we needed to know what we have and what we need and supplement the resources we need."*

In reality, it owned rich customer resources but lacked IT, suppliers and logistics resources. Therefore, to leverage the customer resources, DZEC further exploited the three deficient resources. First, it selected Metro as its cooperator. Second, given that an online app is essential for operating an online e-commerce platform, DZEC needed an app for consumers to select and purchase its

products. It acquired a software developer DDPT. Finally, to deliver the products sold online, it further established a small scale logistic team. A senior manager reported:

"At that time, we knew what we had and what we lacked. To transform into an e-intermediary, we must supplement the resources. An e-intermediary needed an app, a supplier, and a logistics team. Then we committed to do that."

During the breakthrough phase, a guerilla logic is adopted and directs the resource-focused actions of enriching and cooperating. The guerilla logic emphasizes breaking through the existing proposition and recombining existing resources to form a new competitive advantage [35]. When an intermediary has the ability to basically respond to the demands of online consumers, it tends to seek competitive advantages that other e-intermediaries do not have to block out competitors and win a place in the market [57]. Thus, the guerilla logic is needed. Under the guidance of guerilla logic, the intermediary has to further enrich its resources to compete with rivals and obtain a competitive advantage [18]. However, a new e-intermediary, compared with other established e-intermediaries, lacks advantageous resources. The new e-intermediary needs to enrich its resources to build the resource reservoir. By integrating these resources, it can pursue the business in an innovative way, which creates a competitive advantage.

Although it could basically respond to the online market, DZEC had to build its competitive advantage to survive in the fierce competition. Therefore, DZEC switched to a guerrilla logic. A middle manager recalled:

"At that time, we did not have any competitive advantage. We had to do something different to survive the fierce competition. We recognized that consumers were time-sensitive. Thus, we proposed one-hour delivery."

At that time, the main competitors included Taobao and JD, which sold products online but could not meet the tight delivery customers demanded. Therefore, the ability to deliver within one hour became a source of competitive advantage, which required cooperation with supermarkets to

broaden the product range, and with third-party logistics firms to speed up delivery. China had mature third-party logistics providers, consisted of trunk line logistics, branch logistics, and last-mile logistics. It was quick, convenient, and cost-effective for DZEC to cooperate with them and deliver products to the door in a timely manner. As a department manager said,

> *"To differ from the existing e-intermediaries, such as JD and Taobao, what we could do was to achieve a timely delivery. The timely delivery required us to have more cooperators, so that we tried to cooperate with more supermarkets, such as Tesco and Jinma, and professional logistics organizations, Baidu Take-Away and China Post. "*

A user also recalled,

> *"Previously, I used JD. Then I was attracted and stuck by the Easy-Life because of its timely delivery. I just ordered on the app, and then the products would come to my door within an hour. "*

During the consolidation phase, a complexity logic is adopted and directs the resource-focused actions of expanding and coordinating. The complexity logic emphasizes building an ecosystem and manipulating the underlying forces and attractors that create order in the ecosystem [35]. However, the competitive advantage is transitory because others can easily imitate what the e-intermediary did. To maintain and gain a sustainable competitive advantage, the e-intermediary must set up a competitive threshold. Building a business ecosystem is an option [39]. Therefore, they will switch to a complexity logic. To build an ecosystem, the robustness of an ecosystem relies on ecological diversity. Then, the intermediary will try to cooperate with more organizations in a variety of sectors. To maintain the health and evolution of the business ecosystem [55], the e-intermediary needs to share its resources with other organizations and coordinate the resources within the ecosystem.

Executing the one-hour delivery led to concerns that rivals would imitate the business model. Therefore the DZEC top management team decided to leverage the complexity logic to build an ecosystem. According to a senior manager:

"It is impossible to maintain lasting competitive advantages depending on one-hour delivery. We decided to build our business ecosystem. The ecosystem is easier to retain customers than a single enterprise. I think this is the sustainable competitiveness."

At that time, DZEC only cooperated with the supermarkets and the logistics teams. To build an ecosystem, DZEC decided to attract partners from other sectors into the ecosystem, such as restaurants and shopping malls. To occupy the central position of ecosystem, it began to develop its own online payment platform instead of relying on payment platforms of others, such as Alipay and Wechat Pay, which account for 91.1% of the mobile transaction value share in China [22]. To enhance the competitive advantages of the business ecosystem, DZEC further tried to coordinate the resources of the organizations within the ecosystem by sharing customers and developing a discount point system. As a manager reported:

"We knew that one-hour delivery could be easily copied, so we tried to upgrade our competitive advantages into the business ecosystem. Consequently, we tried to cooperate with other organizations, such as JD and DPPTC. And to make them stick within the ecosystem, we tried to co-create value, such as sharing users with each other."

Resource Orchestration and Capability

The case analysis reveals that the capabilities in each phase are developed through resource orchestration, as shown in Figure 2.

The capability for response to the market is developed in the exploration phase. By exploiting the resources of IT, suppliers, and logistics, and combining with existing resources of customers, the e-intermediary forms a resource portfolio such that IT occupies the central position, and

suppliers, logistics, and customers are linked through IT. The information system of suppliers is connected with the IT system of the e-intermediary so that customers could browse and purchase the products online. Then the logistics delivers the products to customers. As a result, the capability for response to the market is generated.

After identifying the customer resources and exploiting the three deficient resources, the intermediary owned the basic functions to operate as an e-commerce-based platform. DZEC used IT resources to develop an app, Easy-Life, and connected the app with Metro. When a customer placed an order through the app, DZEC would immediately send the order information to Metro and its logistic team. Then, couriers picked up products from Metro and delivered them to customers (See Appendix G). Consequently, DZEC was able to respond to the market. As a user recalled:

> *"When I shopped with the OnlyCard, I must drive to the supermarkets, and sometimes I had to wait in line. However, when I was very tired after work and didn't want to go to the supermarket, I could place an order on Easy-Life. I did not need to go out and the goods will arrive later.*

The capability for agile reaction is developed in the breakthrough phase. By cooperating with more suppliers, the products available on the e-intermediary are enriched. By cooperating with more logistics providers, the e-intermediary could speed up delivery and attract more customers. Meanwhile, it must enrich the IT system functions to integrate all of these cooperating partners. The e-intermediary forms a resource portfolio in which IT occupies the central position, and multiple suppliers, logistics, and customers are linked with IT. The IT system enables the e-intermediary to quickly select the most suitable supplier and logistics to meet the requirements of customers, i.e., agilely react to the customers.

By cooperating with more supermarkets, DZEC could provide more products for online customers. By cooperating with more logistics teams, it could speed up delivery. Then, DZEC enriched IT system functions and linked all the cooperative partners through the IT system. When

a customer placed an order, it would process the order immediately, and match it with the most suitable supplier and courier (See Appendix G). Thus, DZEC could flexibly choose logistics to send products to consumers according to the locations of products and consumers. Consequently, DZEC gained the capability for agile reaction. As a department manager reported:

> *"After cooperating with more supermarkets and logistics, we were no longer worried about the situation that products were out of stock or that there were not enough couriers. However, the most important thing to realize one-hour delivery was to add a 'match' function on our app. It would automatically match customers with nearby supermarkets and couriers to speed up delivery."*

A user also recalled:

> *"Easy-Life is amazing! It's much faster than other e-commerce platforms. I bought some fruits before eating and the fruits were delivered as soon as I finished eating."*

The capability for adjustment is developed in the consolidation phase. Expanding different types of cooperators could increase diversity and ensure various functioning of the ecosystem [26]. At this time, the e-intermediary forms a resource portfolio in which IT occupies the central position and multiple layers of different types of cooperators are linked with IT. The IT system enables the e-intermediary to coordinate the resources of all the stakeholders. All the organizations within the ecosystem share a large-scale customer portal through the IT system. The health of the ecosystem was guaranteed by sharing users among the organizations and designing and leveraging a discount point system within the ecosystem [33]. The stickiness makes the ecosystem, as an organic whole, adjust its internal relationships and external competition maintains stability.

Thus, DZEC built an ecosystem through expanding and coordinating resources. In this process, the IT system connected multiple types of cooperators, such as restaurants, JD, and shopping malls, and became the traffic hub for all stakeholders. Consumers could choose DZEC's payment platform to pay orders instead of relying on third-party online payment platforms, and all

entities were connected with the discount point system to form stickiness (See Appendix G). Thus, the e-intermediary formed an ecosystem which coordinated a vast number of cooperators. The ecosystem rendered the capability for adjustment because, on the one hand, with the stickiness, DZEC could resist external challenges, such as competition from other e-commerce platforms, and, on the other hand, with the diversified merchants, DZEC could counter the bargaining power of a giant supermarket. As a senior manager recalled:

> *"Due to the diversity of our ecosystem, we were not afraid of losing any partners. Meanwhile, the ecosystem as a whole could better satisfy customers and defeat our competitors."*

Evolution of the Relationship between the Strategic Logics, Resource Orchestration and Capabilities

Given a panoramic view of the entire process, when a traditional intermediary initiates transformation into an e-intermediary, it inevitably lacks the resources necessary in the new field [63]. Therefore, to achieve the transformation, the traditional intermediary must comply with a capability logic, which aims to exploit complementary resources after identifying the strategic resources owned [35]. After collecting the necessary resources, which primarily include customers, suppliers, and logistics, and connecting them through the IT resource, a simple linkage will be formed to enable the intermediary to operate in the new field and gain the capability of responding to the market. In this phase, the intermediary contributes to link the demand side and the supply side that otherwise would not have been connected [3].

Although the transformed intermediary possesses the basic functions and capabilities to respond to the market, it may discover that it is difficult to gain a competitive advantage compared with other e-commerce platforms that are operating in proximity. Therefore, to gain a foothold in the market, an intermediary just entering the new market has to disrupt the existing business

paradigms to create temporary advantages and keep competitors off-balance. In this context, a guerrilla logic will substitute for a capability logic [35]. Under the direction of a guerilla logic, the intermediary will try to do something extraordinary. Therefore, it must cooperate with other organizations to gain temporary advantages because, on the one hand, as a newcomer, it lacks resources and, on the other hand, cooperation has become the most important method for organizations to win competitive advantage [27]. Thus, the intermediary should enrich its cooperating partners and integrate them through the information system. Thus, a linkage of a single central node and multiple peripheral nodes will be developed to avoid product and delivery route conflicts and form valuable, rare, inimitable and non-substitutable resources to beat the competition. Eventually, cooperation will enable the intermediary to achieve responsiveness, competency, flexibility and speed, i.e., the capability of agile reaction [70]. In this phase, the intermediary is committed to connect multiple organizations [58] to provide better products/services and boost transactions.

With the rapid development of the intermediary, it may seek further development and superior performance. As an e-intermediary, it must build its own ecosystem [8]. Therefore, a complexity logic will substitute for a guerrilla logic. To construct an ecosystem, the intermediary should first expand the types of organizations within the system to achieve diversification. Then, the intermediary should coordinate these organizations to form the ecosystem through a certain mechanism, such as discount points to form stickiness. Finally, with the information system acting as the center to coordinate the diversified members, the ecosystem will form a linkage of a single central node and multiple layers of peripheral nodes that enable the intermediary to react to both internal and external challenges, such as bargaining power and price wars, by adjusting the internal structure and mechanism. Therefore, the capability of adjustment is formed in this phase. In this phase, the intermediary aims to establish networks [13] to facilitate connections among partners and

stick with users. In contrast to direct transactions, intermediaries help suppliers reach a wider base of online customers [1].

Conclusions and Implications

Taking the resource orchestration perspective as a theoretical lens, this paper investigates the relationship among strategic logic, resource orchestration and capability. It provides a digital transformation process model to help explain how traditional intermediaries transform into e-intermediaries. The process model demonstrates that the capabilities are developed through the formulation and implementation of resource-focused actions under the guidance of strategic logics. Specifically, the capability for response to the market is developed through identifying and exploiting resources under the guidance of capability logic; the capability for agility reaction is developed through enriching and cooperating resources under the guidance of guerilla logic; the capability for adjustment is developed through expanding and coordinating resources under the guidance of complexity logic.

By adopting a longitudinal in-depth case study and taking a dynamic resource orchestration perspective instead of a static RBV, this study helps shed light on the process of transforming from a traditional intermediary into an e-intermediary and contributes to the digital transformation literature. The findings also have practical implications for traditional intermediaries aiming to transform into e-intermediaries. Below we elaborate these insights by setting out the theoretical and practical implications.

Theoretical Implications

First, our longitudinal study, which examines an intermediary's transformation process, clearly reveals a digital transformation pathway by identifying a three-phase process model. Specifically, we observed how a traditional intermediary achieved a transformation through three phases and

accordingly develops a capability in each phase. The development of the capabilities required a fit across the strategic logic, resource orchestration and capability. A strategic logic, a set of principles that specify strategic goals for success [16] perceived by an intermediary after assessing the environment, can provide a sense of direction for resource actions and allow flexibility and opportunism along the way [48]. The result of resource-focused actions manifests as the changes in the resource portfolios [54], which in turn will lead to the formation of the corresponding capabilities [14]. Resource portfolios indicate the accumulation of resources and the structure of resource elements. Different structures may lead to different capabilities [54]. Identifying the relationship among a strategic logic, resource orchestration and capability responds to the call to investigate how the strategizing process takes place in the digital transformation [59, 67].

Our model (Figure 2) reveals the difference between the intermediary transformation and transformations of industrial firms. Industrial firms respond to the needs of the demand/supply side or vice versa [6, 25, 40] by largely depending on their own resources to develop IT systems to connect with either suppliers or customers. For instance, Chanias et al., (2019) investigated how a service company established its digital sales system to respond to customers' demand for online purchases of real estate fund stocks [11]. Behnke and Janssen (2020) focused on building digital supply chain systems to satisfy suppliers' demand for traceability of ingredients in food supply chains [6]. In contrast, transformation of intermediaries emphasizes cooperation between the supply and demand sides. This requires intermediaries to develop IT systems to connect themselves with both suppliers and consumers. In the first phase, the most important function of IT system is to connect consumers with a few suppliers and logistics. In the second phase, as the number of consumers, suppliers, and logistics organizations increases, the IT system needs to match different suppliers and logistics for consumers and avoid product and delivery route conflicts [5]. For example, it could send the product information to the nearest courier to realize rapid delivery. In the third phase, different types of stakeholders join, and the e-intermediaries should meet the

requirements of all stakeholders [41]. Thus, the IT system must be further improved and accurately connect different stakeholders. At this time, the IT system becomes a traffic hub so that the different stakeholders can share users and achieve value co-creation.

In addition, e-intermediaries need to obtain complementary resources e.g. products and logistics, from the cooperators. As a new e-intermediary, it is important but challenging to establish relationships with suppliers, logistic companies and consumers. It requires the intermediaries to attract enough online consumers by superior products and agile logistic services. Then they can attract more suppliers and further optimize services to consumers by providing more products and more agile services. Therefore, it becomes crucial for e-intermediaries to establish business ecosystems, which allow them to attract and retain consumers and suppliers at a lower cost, as shown in the consolidation phase.

Second, our research advocates to use the strategic logic to replace DTS in future research. Although the basic role of DTS has received substantial attention, the DTS still meets challenges because of its uncertainty, complexity, and disconnection with particular conditions of enterprises [47]. Thus, we introduced the concept of strategic logic to clarify the operational rationale of DTS [16]. Specifically, previous DTS studies have focused on its dependence on resources [62], but lacked an appropriate bridge between them. The strategic logic plays the role of a bridge because it illustrates the operative rationale of coordinating resources to achieve the goals of a particular strategy - DTS [16].

For example, this paper highlights the critical role of strategic logics in directing resource-focused actions. First, a capability logic aims to identify existing strategic resources and exploit complementary resources to develop the capability [59], enabling the intermediary to operate in the digital market. Second, a guerrilla logic concentrates on "destabilizing the current reality so that a series of temporary, and often incompatible, advantages lead to high performance" [35]. Thus, a guerilla logic guides the intermediary to disrupt the existing business paradigms through extensive

cooperation and enrichment of resources. Third, a complexity logic aims to establish its own ecosystem and gain lasting competitiveness [8]. Therefore, it must expand the types of organizations and coordinate these organizations to form the ecosystem.

Third, building an ecosystem and developing the adjustment capability are critical to an e-intermediary. The newly formed business ecosystem incorporates organizations from several industries to achieve the effect of resource complementarity and provide consumers with one-stop services. The improved service experiences strengthen the consumer stickiness and consequently allow the intermediary to gain a competitive advantage. The development of the adjustment capability indicates the successful formation of the business ecosystem [43]. It enables the intermediary to freely coordinate its relationship with other organizations offering complementary services, such as delivery and merchants, and lay a foundation to provide the one-stop services.

Managerial Implications

First, cooperation has been a vital part of e-intermediaries. The capability, guerilla, and complexity logics exhibit a common feature – emphasizing cooperation [31]. First, cooperation provides intermediaries more external resources to develop capabilities, consistent with the capability logic. Second, cooperation enables intermediaries to access extraordinary resources expeditiously, laying the foundation for a guerilla logic to disrupt existing business paradigms and gain a series of temporary advantages. Third, cooperation increases the diversity of ecosystems and makes them run smoothly, which is in line with the complexity logic. These characteristics respond to the digital context. The rapid development of digital technologies, especially the internet, facilitates information exchange. It becomes easier for intermediaries to seek partners and acquire resources [51]. Intermediaries prefer internalizing external resources through cooperation rather than developing the resources by themselves.

Second, resources (especially IT resources) and resource-focused actions play a focal role for the intermediary firm to bridge the supply and demand sides. The transformation of intermediaries, in addition to internal strength, emphasizes the roles of intermediaries in better linking supply and demand sides, while the transformation of non-intermediaries emphasizes more on the demand side. By using the resource orchestration perspective as the theoretical lens, the findings reveal the process of building and improving connections between supply and demand sides – intermediaries effectively act on focal and some complementary resources. Among the resources, the IT resource plays a focal role in bridging the two sides. In the beginning, a well-developed IT system could connect diverse resources to enable the intermediary to convey products and services from suppliers to customers. Then, with the increasing development of resources, the IT system allows the supply and demand sides to match quickly and facilitate the completion of transactions. Finally, the IT system evolves into the traffic hub of the ecosystem and plays a decisive role in the synergy effect. Meanwhile, other complementary resources, such as logistics, act as an offline connection between suppliers and customers.

Third, in addition to resources, resource-focused actions of intermediaries also contribute to building and improving connections between suppliers and customers. Identifying the necessary resources at the exploration stage enables intermediaries to discover the resources necessary to link supply and demand sides. Enriching and expanding at the breakthrough and consolidation stages plays critical roles in improving supply and demand sides and providing the foundation to strengthen linkages. Exploiting, operating and coordinating achieve and improve connectivity. We conclude by noting that while our analysis has significant implications for digital transformation in an Asian context, there may well be unique contextual circumstances in the Chinese economy which require these implications to be treated with caution in other jurisdictions.

Limitations and Future Research

Due to the challenges and complexity involved in the emerging digital world, it is important to study the digital transformation process model for purposes of both research and practice. Although this study provides new insights, certain limitations point to some directions for further research. First, we used a single case study to investigate and describe the intermediary transformation process in depth and in detail. However, the single case study can only provide a transformation path within a certain research context. Further research may consider a wider range of cases to explore other possible transformation paths. We also recognize there are particular cultural and institutional factors that facilitated the transformation in a Chinese context, which may be very different from other contexts where for example, the third-party online payment and logistics systems may be less advanced, or costlier, or where economies of scale are much more difficult to realize. Similarly, where payment and logistics systems are much more advanced than what we observed, intermediaries may seek a competitive advantage in entirely new areas. Finally, we acknowledge that as our data collection took place mostly during 2013-2016, there may be some concerns about the novelty of the data in a very dynamic market. Therefore, our follow-up data collection in 2020 was designed to ensure any significant developments were accounted for. Further research would be necessary to delve deeper into the effect of the changing dynamics on the strategic logics.

Acknowledgements

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Appendix A. List of Interviewees

Categories	Summary of interviewees	
Sectors the interviewees were drawn from		
DZI	• Mr Qiu – founder and the senior vice president, DZI • Mr Liu – CEO, DZEC • Mr Wang – general manager, DZI • Mr Zhao – senior manager, DZEC • Mr Hao – senior manager, DZI • Mrs Han – senior manager, DZI • Mrs Liu – senior manager, DPPTC • 23 department managers and employees, DZI	56%
Suppliers	• Mrs Liu – middle manager, Metro • Mr Gao – manager, Jinma Supermarket • Mr Zhang - middle manager, China Post • Mrs Li – middle manager, Baidu Take-Away	8%
Merchants	• 9 heads of community convenience stores	17%
Individual users	• 10 individual users	19%
Total	• 53	100%
Gender		
Female	• 21	40%
Male	• 32	60%
Total	• 53	100%

Appendix B. Examples of Interview Questions

Questions for DZI
- What are your main responsibilities in the transformation?
- Why did you choose to transform? What did you do?
- In your view, how many stages did the transformation process go through？ And why?
- What impressed you most? Could you give an example?
- What do you think are the most important factors in the transformation? For example? Why do you think so?
- What did you do to make the transformation successful? Can you tell me more about that?
- Why did you decide to do that? The results?
Questions for suppliers
- When did you start cooperation with DZI? Why choose to cooperate with DZI?
- What do you mainly offer for DZI?
- What benefits has the cooperation brought to both of you？
- What do you think are the most important factors in the cooperation? For example?
- Did you have any problems during the cooperation?
Questions for merchants
- When was your first cooperation with DZI? Could you tell me more about that?
- Why choose to cooperate with DZI again?
- What's different about this cooperation?
- What do you think are the most important factors in the cooperation? For example?
- Did you have any problems during the cooperation?
Questions for users
- When was the first time you bought something on Easy-Life?
- Why did you choose Easy-Life at that time?
- What do you think of your shopping experience on Easy-Life?
- What advantages and disadvantages do you think Easy-Life has?
- Will you continue to use Easy-Life? Why?

Appendix C. Summary of Secondary Data

Categories	Amount and source	Descriptions
Online articles	The official website of DZI: http://www.1-ka.com/zhongding/	This website helped us to comprehensively understand the main business, development history (Milestones), and cooperative partners of DZI.
	The official micro-blog homepage of DZI: https://weibo.com/onlycard?is_all=1	This website shared some promotional activities of DZI and it also provided some examples of DZI's interactions with its customers and partners.
	More than 70 online articles from various sources such as the social media account (i.e. Wechat, Easy-Life, etc.) and more than 20 articles from the newspaper, academic website - China Hownet, etc.	These articles showed the changes before and after the transformation and we noticed that terms such as "IT," "technology," and "resource" were frequently used in these articles describing DZI's digital transformation, which helped us to design our initial interview questions.
Internal documents	One internal document introducing the strategic planning of DZEC.	This document, along with the interview data, helped us to better understand the development stage of transformation and the following strategic actions.
	One internal document about crisis management instructions of DZEC.	This document gave a detailed description enabling us to understand the feedback from customers. Some concrete examples are listed in the case body.

Appendix D. Data Structure of the Exploration Phase

Quotations	1st Order Concepts	2nd Order Themes	Aggregate Dimensions
• "Our offline business encountered a bottleneck because of changes in national regulation and online payment." (Mr Qiu) • "The development of the internet was an opportunity for us. We decided to build an e-commerce platform." (Mr Liu) • "To achieve online operation, we first needed to know what we have and what we need. And the next step is to supplement the resources we need." (Mr Qiu)	▪ Identifying environmental changes; ▪ Planning to transform to cope with environmental changes; ▪ Complementing deficient resources and exploiting them to build online operational ability;	Capability logic	Strategic logic
• "We had accumulated more than a million customers." (Mr Wang) • "However, we lacked IT-related resources to support the transformation. Except, we also needed suppliers and logistics." (Mr Wang)	▪ Possessing a lot of customers; ▪ Lacking IT, suppliers, and logistics;	Identifying necessary resources	Resource orchestration
• "Acquiring DDPT made us gain both IT personnel and capability within a short period." (Mr Zhao) • "We chose Metro as our first cooperating supermarket, and customers could buy Metro's products on our platform." (Mr Liu) • "At the beginning, we hired about 20 people to take charge of distribution." (Mr Zhao)	▪ Acquiring a software development firm to access IT resources; ▪ Choosing a supermarket as its supplier; ▪ Establishing a small logistics team;	Exploiting complementary resources	
• "Finally, Easy-Life app was launched in September 2014." (Mr Liu) • "I enjoy shopping on Easy-Life because I do not need to go out and goods will arrive later." (a user)	▪ Launching the e-intermediary platform; ▪ Customers enjoy shopping on the platform;	Capability for response to the market	Capability

Appendix E. Data Structure of the Breakthrough Phase

Quotations	1st Order Concepts	2nd Order Themes	Aggregate Dimensions
• "After operating for a while, we lost a lot of customers because other platforms (e.g. Taobao) had more and cheaper products." (Mrs Han) • "We proposed the one-hour delivery. This disrupts the routine of the e-commerce business." (Mr Zhao) • "Sometimes I value speed more than price. I love Easy-Life. It is very fast." (a user)	▪ Losing competitive advantage; ▪ Disrupting existing business paradigms; ▪ Creating a new competitive advantage;	Guerilla logic	Strategic logic
• "Logistics was very important for one-hour delivery. We hired some part-time delivery couriers to save costs." (a department manager)	▪ Expanding the logistics team by employment;	Enriching inadequate resources	Resource orchestration
• "We delivered some orders through Baidu Take-Away or China Post." (a department manager) • "Everyone could register as a courier on our platform. They could choose whether to accept orders or not." (Mr Zhao) • "We began to cooperate with more supermarkets, such as Tesco, Jinma, etc." (Mr Liu)	▪ Cooperating with professional logistics firms and individuals; ▪ Cooperating with more supermarkets;	Cooperating to obtain resources	Resource orchestration
• "I bought some fruits before eating and the fruits were delivered as soon as I finished eating." (a user) • "One-hour delivery brought us competitiveness in the e-commerce market." (Mr Hao)	▪ Quick speed; ▪ Competency;	Capability for agile reaction	Capability

Appendix F. Data Structure of the Consolidation Phase

Quotations	1st Order Concepts	2nd Order Themes	Aggregate Dimensions
• "To survive the severe competition, we have to build our own ecosystem. Before the transformation, we had cooperated with various merchants, such as restaurants, shopping mall, supermarkets, etc. They were very useful for building our ecosystem." (Mr Liu) • "It was more difficult to ensure the diversity and stability of the ecosystem than to establish it." (Mr Qiu)	▪ Building an ecosystem; ▪ Maintain healthy operation of the ecosystem;	Complexity logic	Strategic logic
• "In terms of ecosystem, we first thought of establishing a payment platform, similar to Alibaba's Alipay." (Mr Liu) • "JD, DPPTC, previous merchants, and some other supermarkets…, we tried our best to cooperate with all of them." (a senior manager)	▪ Developing a payment platform; ▪ Cooperating with multiple types of organiztions;	Expanding diversified resources	Resource orchestration
• "For example, consumers who used to shop at Metro stores could scan the Easy-Life two-dimensional code and shop on the online platform. Easy-Life's users also became the potential users of Metro. This was a win-win situation." (Mr Zhao) • "I used to purchase Metro's products on the Easy-Life. But now, I occasionally went to Metro's offline supermarket." (a user)	▪ Sharing users' information with cooperators;	Coordinating resources	
• "The discount point system prompted me to develop the habit of shopping on Easy-Life." (a user) • "The diversity of internal organizations ensures the stability of the ecosystem. Thus, we are not afraid of losing any partners." (a senior manager)	▪ Improving customer stickiness; ▪ Ensuring the stability of the ecosystem;	Capability for adjustment	Capability

Appendix G. The Relationship between Different Entities

The exploration phase	
The breakthrough phase	
The consolidation phase	

Note: ⟶ represents the information flow; — — ➤ represents the product flow;

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