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Exploring the Collaborative Enabling and Value Innovation Mechanism in Platform Enterprises:A Case Study

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<u>**Full Research Paper**</u>

Exploring the Collaborative Enabling and Value Innovation

Mechanism in Platform Enterprises:A Case Study

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Abstract: The digital innovative evolution of platform enterprises has shown obvious advantanges in promoting the development of value creation, and encouraging business transformation in current digital economy era. However, we still know little about the value innovation mechanism in platform enterprises. Thus, based on grounded theory, this paper explores the characteristics of collaborative enabling and extracts three attributes -openness, symbiosis and collaboration- in driving the internal development of platform enterprises, by coding the relevant information of Shi Wai Tao Yuan (SWTY). Through the case analysis on SWTY, this paper proposes three enabling functions in the field of culture, technology and data, and builds the multi-level path of value innovation including value co-creation, resource sharing and idea symbiosis. Finally, this paper constructs a theoretical framework on collaborative enabling and value innovation in platform enterprises based on nine core categories. Overall, this paper contributes to research on the formation process and action mechanism of collaborative enabling and value innovation in platform enterprises, also shed light on the exploration on platform enterprises, and business ecosystems evolution. In doing so, this paper also provides novel insights into the sustainable development of platform enterprises in practice.

Keywords: Platform enterprise, Collaborative empowerment, Value innovation

1. INTRODUCTION

The evolution of digital technology has subverted people's lifestyles, triggered changes in organizational contexts, made multiple subjects connect and participate in organizational activities, and promoted the platform-development mode of inter-organizational connections[1]. Theoretically based on this reality and environment of Internet, platform enterprises will develop by paying more attention to embedding diversified products or services in virtual electronic trading spaces, gaining value by constructing network connections between multiple participants. In real life, the effective integration of digital technology and traditional business formats has triggered a trend of innovation in platform business, which has given birth to a large number of platform enterprises such as Alibaba, Didi, and Meituan. These platform enterprises have fierce competition, showing obvious growth in speed and scale, and are becoming a typical example for innovation in new economic mode of Internet. To give a summary, business model of platform enterprised, as a new business form, is attracting widespread attention from the commercial and academic community.

In academic, studies on platform economy, platform organization and platform model can be traced back to the 1990s, and then research on these topics becomes more and more popular[2]. Wang and Chen[3] found that the characteristics of "de-intermediation, decentralization, and de-boundaryization" of the platform business model accurately hit the uncertain features of new business era, which help companies find ways to develop, clarify core advantages and reshaping business form according to real situation. It not only creates symbiotic and synergistic business ecosystem while profiting, but also provides support for multiple interaction, balancing of demand and supply as well as value co-creation of platform users. No matter building platform organization

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inside the system or joining specific platform through enterprise alliance, the core target of a company always lies in giving full play to the complementary advantages of bilateral or multilateral platforms, stimulating vitality, and flexible efficiency.

Nowadays, platform economy often involves multiple subjects with different value appeals. As a result of that, when considering design of platform organization and innovation mechanism, it is necessary to solve integrational problem of different value appeals and encourage all participants to help realize overall creation and promotion of platform. Based on this condition, scholars introduced the research perspective of enabling, trying to answer how platform enables different entities as to further improves value creation and innovation of business model[4]. Some studies show that enabling is a significant concept in macro and micro management of organization, which aims to provide capacity and capability for related subjects to realize their goals[5]. And from the perspective of enabling mechanism on platform enterprises, different enabling models, such as structural, leadership, psychological, resource and cultural enabling, have become the key driving factors to enhance value of a platform[6]. However, what is the specific connotation of enabling for platform enterprises? What characteristics does it exhibit? How does enabling promote value creation and realization of platform enterprises? These questions still need further discuss and explore. Particularly, from the perspective of system integration, there is still lack of explanations on how and why platform enterprises can promote value creation through enabling mechanisms.

Therefore, this study selects case of Ningxia Shi Wai Tao Yuan Commercial Management Company (here it is shortened as SWTY) to explore, and conducts deep analysis through grounded theory, aims to answer the following research questions: (1) What type of enabling mechanism exists in platform enterprises and how do they make effect? (2) How do platform enterprises realize the goal of value creation through enabling?

2.   LITERATURE REVIEW
2.1.   Platform business model
The word "platform" can be traced back to theory of bilateral market of Rochet and Tirol[7]. Bilateral market refers to operators who provide services to platform and users who implement transactions through platform. From perspective of demand, products or services provided by users and platforms can be interconnected and interdependent. And from the perspective of supply, the existence of a platform is necessary, it should fully consider needs of bilateral users so as to provide services and create value. Besides, Zhang[8] stated that platform is a space for transaction, an interface to create and exchange value between different users; Wang[3] defined it as a multi-cooperation business model based on different target of enterprises. Therefore, the role of platform is to actively guide and enhance multi-customer transactions and finally maximize benefits of them[9]. Other researches on platform can start from perspective of product development platforms to exploration of bilateral market and strategic innovation platform. All in all, researches focus on product development platforms mainly devoted to explore design and implementation of products, structural connotation of the platform; researches focus on bilateral market platforms concentrate more on related strategy or rules about competition and governance of platforms; As researches on strategic innovation mainly cares about formation of business model, ecosystem and influence mechanism of platform[10].

Platform ecosystem has already realized an efficient and dynamic value creation network under guidance of technologies like Internet and big data, which motivate value symbiosis and mutual benefit of different entities. Among them, construction of business model based on platform has been the focus of researches. Previous studies have shown that the business model is an emerging model based on network effects and multilateral construction to realize value innovation[11]. They have found that, for one thing, companies need pioneering products to achieve accumulation of initial users to develop; for another, they can make

achievements by obtaining data resources, extending industrial chain, aggregating all parties and build an effective platform for sustainable operations. Also, Xiao [12] found that platform business model has different method on value creation compared to traditional ones. During process of upgrade and evolution, it connects different entities like customers, products, stakeholders, government, different core relations such as supply chain, value chain, innovation chain, service chain to form a multi-dimensional ecological environmental system.

2.2. Innovation mechanism of platform

With the rapid growth of Internet technology, platform business model is getting more and more popular, and the innovation of it can be summarized as transformation and subversion of existing thinking patterns of value creation. Here we can also consider it as an innovation of elements and links of business model. So far, while playing its basic role in the market, platform business model is also trying to change, upgrade and refactor.

By summarizing results of some studies, we found that innovation of platform business model mainly focuses on value model, competition model, operation model and profit model. More specifically, in terms of value model, platform business aims to realize value co-creation by re-discovering and re-thinking value of users, integrating multi-agent resources, empowering platform participants, reducing costs and eliminating multilateral information asymmetry[13]. For competition model, platforms will choose single or multi-homing mode according to environmental changes and use target pricing strategies and differentiate service strategies to qualify its system[14]; For operation model, platforms aim to achieve the optimal allocation of resources and establish a more effective operation mechanism. To reach this goal, they will use a hierarchical platform to form high- and low-level collecting systems and distribute products and services[4]. Besides, more and more platforms are using online and offline integrated to continuously expand growing space and stimulate innovation ability[15]. For profit model, some platforms either gradually cancel commission or use differentiated method to get it, they may also use customized mode and advertisements to win more money[13]. After analyzing these four models, we know that studies before have already discussed innovation mechanism of various business model of platforms, however, we still don't know how they interact and collaborate with each other, which in turn make some difficulty to better understand overall mechanism of elements in platforms.

2.3. Empowerment and enabling of platform business model

In recent years, more and more studies are concentrating on how to explain innovation mechanism of platform business from the perspective of enabling, which seems a totally new one in the field. To a certain degree, this new perspective take place of traditional one, which is called empowerment. "Enabling" and "empowerment" have different meanings in this content. "Empowerment" is a traditional one to research on platform enterprises with a long history of study, it mainly concentrates on giving internal drving force to participants of platforms. In this circumstance, participants have more decision-making power and autonomy, and the plarforms, will have more time and energy to determine how to lead their participants. Then internet business and platform enterprises develop and more attention is paid to mechanism of "enabling", which is an improved pattern of "empowerment". Different from "empowerment", "enabling" stress more on how business model contributes to improvement of ability to create more value.Luo[2]has shown double effects of enabling, it is not only an internal driving force to platform enterprises, but also a main mechanism to push platforms for upgrading and value creation. Luo[2] believe that platform enabling refers to the ability of a platform to share and integrate information and technical resources at different stages of development to help enterprises or stakeholders win better place in competition. Besides, some studies also divide process of enabling as stage, object, subject to do more specific and detailed research, which will explain working patterns of empowerment of platforms more vividly.

Zhou et al. [6]analyzed that enabling of entrepreneurial platforms to promote performance from five

dimensions: structural enabling, leadership enabling, psychological enabling, resource enabling and cultural enabling. Additionally, some scholars have also conducted further analysis on empowerment/enabling and its significance stakeholders. Related studies have found that platform enterprises can make use of automatic data from platforms to provide basis for decision making and enabling, this will in turn improve regulatory capability and level of government[11]. Moreover, they can use technology enabling by providing technical access to other companies. Also, they play the role as value enabling to other entities in evolution of business ecology. Besides, platform leaders in a favorable position in platform ecosystem can also empower various enterprises through creation and coordination mechanism[14]. We can tell from the above that different patterns of enabling are vital for innovation mechanism of value creation of platform enterprises.

However, we can conclude from studies above: firstly, researches on enabling of platform enterprisess are still relatively limited, they still concentrate more on simple description on how different empowerment works and lack deeper research on effect, interaction and improving mechanism among different kinds of enabling, so there's still a failure to form a closed loop of dynamic effect and synergistic influence of platform enabling. Secondly, some researches about ecological and value enabling merely explain them as a certain dimension, which lack detailed analysis to overall dynamic and collaborative enabling. In this situation, it is not enough to efficiently explain and clarify inner relation of platform enabling and dynamic mechanism of stimulating enabling of platform. Therefore, this paper adopts a single case study method to explore the relationship between enabling and value co-creation, and to clarify and explain how platform collaborative enabling affect the value innovation.

3.   RESEARCH METHOD

3.1. Case sample selection

Single case study is often used to explain phenomenon which is not fully understood[16] and this method, with vivid description, is helpful for us to get more significant situation about the target research object[17]. We use single case study to conduct the whole work for several reasons. First, the purpose of this study is to explore how do platform enterprises enable and make value innovation, this is under the question scope of "how". Second, given the limited theory evidence, our main goal is to further develop theory of enabling and value innovation by recognizing key attributes and actions of platform enterprises, this is particularly relevant for exploratory question. Furthermore, nowadays, researches on how do platform enterprises try ebabling and value innovation are still in exploratory stage, it is still necessary to use scenario and vivid description to identify key factors during process of enabling and value innovation. Therefore, single case study is well qualified for this exploratory research.

According to Eisenhardt[18], standard of selecting a single case is, on the one hand, that the source of the case should be rare and unique to conform the principle of theoretical sampling, and on the other hand, that the case should have many characteristics as enlightening one. Based on this reality, we choose Ningxia Shi Wai TaoYuan Business Management Company (abbreviate SWTY) to study. It is a comprehensive community business service platform, which takes living community as service radius, takes AFA (all for all) as core business to serve all citizens. Gradually, it will cover a wide range of entities and users of platforms such as community, users, sellers, governments and so on. Therefore, it is more appropriate to choose SWTY as a case to understand the question of enabling and value innovation in platform enterprises.

3.2. Introduction of case

SWTY is obviously a typical one in developing period of digital platforms. It is a single service enterprise, and gradually becomes an innovative marketing enterprise. During this process, it keeps improving its own business and finally transforms into an platform enterprise focusing on community service for all. Under the

transformation of developing and business model, SWTY finally broke traditional system of single service and formed service system for all citizens based on AFA service system of all citizens like smart service station in community, home service station, which shows construction of integrated smart service. Based on growing history of this company, Table 1 lists the whole developing history of key incidents and turning point of business model of SWTY.

Table 1. Transformation history of business mode of Shi Wai Tao Yuan

time	key incidents (set up)	key points of business transformation
2002	Ningxia Zhongchen safety and technology company	Single service enterprise concentrating on business
2011	Ningxia Shi Wai Tao Yuan Agricultural Development Company	Innovative marketing enterprise focusing on products
2015	Ning Xia Shi Wai Tao Yuan business management company (SWTY)	Community service platform focusing on data of community
2015	Ning Xia Yi Dao Tong advertising company	Media service platform focusing on data from media
2017	Ning Xia health management company	Community service platform based on data of health
2018	Western (Ning Xia) smart industry developing company	Industrial service platform based on smart data

Data resource: internal data of the enterprise

3.3. Data sources

In order to ensure the reliability and validity of the study, we use triangle verification method composed of multi-source data[18]. And our data mostly comes from internal materials and internal interviews. Meanwhile, research record, official interviews and informal interviews, information from websites, news reports, WeChat platforms as well as chairman's report on government's reform and improvement in construction of smart city are also included. To have a deeper understanding, our team have a three-year long period of interview and data collection to SWTY. The first interview was in March, 2019, and after that we did more and more deeper interviews. People we interviewed covered from founders, manager of operation to monitor of marketing. Our interview and data collection mainly focus on three things, the first one is evolution and innovation of business model in community service; The second one is status and experience of community service content, service mode and profit mode, and the third one is construction process of value chain system in resource integration of SWTY.

3.4. Data analysis steps

This paper mainly adopts grounded theory when studying case of SWTY, using classical steps of case study for reference and analyzing data through three steps. Firstly, referring to process method of data research, the study sorts our key events of SWTY which is helpful to recognize and understand turning point of the company to know the whole process of its development better. Secondly, this paper focuses on key factors and mechanism of platform enerprises on enabling and value creation. Then we decode and analyze the collected data according to this logic. We divide our 6 research members into 3 groups and give them the standard training of decoding. After that, they code and analyze the collected case data sentence by sentence, and then integrate and revise previous round of coding by iteration. After three rounds of independent analysis, they form a consensus through comprehensive discussion, and determine the initial coding pool. Thirdly, in order to understand the relationship among the coded constructs, and recognize the changes of the constructs themselves in the research context, the whole work is carried out in the following three periodic steps: refine the decoding, emerging thinking, and refine theoretical mechanism. Finally, we end the analysis when our theoretical model can fully and appropriately used as a theoretical interpretation model[18].

4.   CASE ANALYSIS

4.1.   Open decoding

Open decoding is a process to have an overall arrangement for data we collected and give simplified and abstract analysis to common phenomenon, including labeling, conceptualization and categorization, which means, decomposing existing materials, refining information and finally shortening categorization entries with the method of comparative analysis and summary. This paper uses coding methods sentence by sentence to deal with relative information according to its content, and then finds sentences concerning empowerment of platform organization and value creation. Firstly, we give label (a) to them and then, we form 36 conceptualized sentences (A) according to these labels. By continuous comparison and refinement, these conceptions gradually grow into 23 categorical expression (AA). After method of open decoding, we finally get 36 labels and 23 categories to describe empowerment of platform organizations and value creation.

4.2.   Axial coding

Axial coding aims to build internal relations based on expressions from period of open decoding and gradually digs and understands materials deeper and better. We follow the logic of canonical coding paradigm of Glaser[19], which is "condition-action or interaction strategy-outcome". Condition is the reason and out come is what it forms, these two factors use "action and interaction strategy" to realize complete logic train, which is "axis". This paper firstly categorizes 23 initial categories in the open decoding and forms 19 sub-categories. Then we integrate these 19 categories with all information as axis. For example, "Platform has accumulated huge number of users' data", "deeply dig of data", "finding potential demand of users" are three sub-categories, and their internal logic is as follows: The platform has accumulated a large amount of data of users, so the next step is to have deeper analysis on these data and acquire information hiding in them, which is potential demand of users. These three sub-categories can be induced and concluded as "data enabling". After process of axial decoding, we finally get 9 main categories (see table 2).

Table 2. Results of axial coding

Main categories	Sub-categories		
	Condition	Action or interaction strategy-outcome	Results
Openness attribute	the existence of market environment, multilateral competition and cooperation relationship,and network externality	make the best of the situation, seize market opportunities, break barriers with the advantage of the platform, and promote cooperation	from "Single-win" to "Multi-win" to "Win-win"
Symbiosis attributes	from "Single-win" to "Multi-win" to "Win-win"	cross-boundary cooperation stimulates network effect, clarifies market positioning and profit model, and formulates platform ecological rules	forming a ecosphere including multi-subject and multi-chain
Collaboration attributes	forming a ecosphere including multi-subject and multi-chain	integrate resources, break the boundaries of information dissemination and communication, and extend community functions	achieve industrial linkage and mutual benefit
Culture enabling	achieve industrial linkage and mutual benefit	honesty is the foundation; strengthen cultural soft power	focus on research and development input on brand and technology
Technology enabling	focus on research and development input on brand and technology	technology innovation, introduction and application	accumulated massive user data
Data enabling	accumulated massive user data	dig deep into the data	discover the potential needs of users

Main categories	Sub-categories		
	Condition	Action or interaction strategy-outcome	Results
Idea sysbiosis	discover the potential needs of users	provide users with extended services	constantly innovating products and services, extending to the whole industry chain, from online to offline
Resource sharing	constantly innovating products and services, extending to the whole industry chain, from online to offline	provide one-stop service	constantly upgrading and evolving business models
Value co-creation	constantly upgrading and evolving business models	enterprises of all sizes interact and cooperate to support each other and empower each other across borders, to improve people's lives	ecosphere ebable all subjects to create value

4.3.   Selective decoding

The aim of selective decoding is to tell a good story, which means by describing phenomenon, we can stress key categories after clarifying relations between main categories. To increase theory saturation, we uses method of theoretical reference and comparison between literatures, we establish a solid and sufficient model by comparing original data and the on-going built theory model, The story line is as follows.

Due to open nature which is also called market-oriented environment, multilateral competition and cooperation relationship and network externality, platform organizations should make full use of the situation and seize opportunities in market, break barriers with help of advantages of platform to promote cooperation. This can be considered as a way from "single-win" to "multi-win" and then to "win-win". Under this mode of "symbiosis", it is necessary to have accurate market position and profiting mode, make ecological rules of platform to further form ecosphere including multi-entities and multi-chain. By doing this, platforms can successfully break through boundary of information transformation and communication, and then extending function of community to realize industrial linkage and mutual benefit. Under function of station of platforms, we can use cultural enabling, technical enabling and data enabling to dig potential demand of users and make more innovation on products and services. From online to offline, our production chain will extend gradually and provide high quality of one stop service. During whole process of platform enabling, business model of enterprises will be constantly updated and upgraded, each entity in this ecological circle will cooperate with each other, help each other, and gradually realize enabling cross boundary, finally, resource sharing and enabling for value creation is achieved on the whole.

5.   CONCLUSION AND DISCUSSION
5.1. Conclusion

Through normative case study procedure, this paper explores the logic relationship between collaborative enabling and value innovation. We construct a theoretical model to reveal the mechanism about how platform enterprises achieve value innovation through their collaborative enabling (See Figure 1). Also we conceptualize three attributes that drive the internal development of platform enterprises, they are openness, symbiosis and collaboration; we summarizes three types of enabling in the field of culture, technology and data; and conclude three paths in value innovation,they are value co-creation, resource sharing and idea symbiosis. We explain the constructed model as follows.

Nowadays, competitions in internet industry are always fierce, industrial chain of platform including platform, customers, sellers has already formed initially, which in turn brings out phenomenon of homogeneous competition[20]. Based on this marketing reality and in order to adapt to rapid development of digital technology,

avoid homogeneous competition and reach demand of sustainable development of company, platform enterprise, as a new business mode, should transform its mode of value creation into interaction between enterprises and value co-creation of customer and company[21]. By efficiently integrating internal and external resources, enterprises can make fulfilling multi-demand of users and providing characteristic service a reality. According to our study, fundamental innovation development of SWTY is "openness, symbiosis, collaboration", and these three attributes are also the driven forces to reach the goal of platform' users. Therefore, this paper considers "openness, symbiosis, collaboration" as three attributes of enabling, which are the detailed explanation for the enabling connotation in platform enterprises.

When it refers to enabling, the use and development of digital technology has made platform enterprises have the stronger ability of identification, judgement and control to its environment and objective condition. However, changes in ways of production and living from information age, the mode of platforms will turn from "empowerment" to "enabling", and better show their value creation. Therefore, according to the analysis results we stressed above, enabling of platforms now can be divided into culture, technology and data three aspects.

Cultural heritage, as endless vitality of platform enterprises, links future with history. However, since rapid growth of technology on mobile internet and blockchain, cultural enabling is growing toward digitalization, informatization and intellectualization, and gradually makes full use of innovation mechanism of platforms[22]. Core ideas of cultural enabling is to put culture into innovation of business model of platforms. By enhancing soft power of company culture and concentrating on researches of brand culture and technology, this kind of enabling will bring some value for platform enterprises' innovation to a certain degree as well as deeper cultural connotation, which further realizes innovation in content and mode[4]. For example, SWTY specially developed a kind of rice that can listen to music, giving specialized "rice culture" to Ningxia rice and broaden the market relying on this. In the case company itself, cultural atmosphere for more concentration on researches on brand and technology is formed and plays as a foundation for technical enabling.

Technology can enable the innovation of business model of platforms[1] and can push platform enterprises to better accumulate resources and realize value co-creation. Relying on technical innovation, technical import and technical application, enterprises will acquire good economic benefit and lead themselves to update. This mode will bring business model positive influence and enhance competitive power of platform enterprises as well as strengthen effective integration among platform ecosphere[23]. According to our case analysis, we can find that in model of AFA community platform, technical enabling has played a very significant role in accumulating large sum of users' data and further improving the process of business innovation for SWTY. For example, it introduced smart medical examination and health management technology to help basic construction on internet medical popularization; it uses "community housekeeper" to acquire data of high frequency and high viscosity, and accumulate about 300 thousand precise users in a very short time.

However, it is still not enough for platform enterprises to have sustained achievements by just having large sum of users' data. Platform enterprises should also try deeper dig to digital trajectory of existing users. Only after that they'll find potential demand of users and try precision marketing, and this is main significance and value of data enabling. Also, data enabling can tell economic effects from big data to traditional business analysis[3].

Above all, under this three kinds of enabling, platform enterprises can have better interaction with users and maximize benefits of them to further improve innovation of business model, and gradually they work as keys effects to value innovation mechanism. Platform enterprise is a key factor in platform industrial chain, it leads and forms multi-entity ecosphere including users, developers, suppliers and so on. However, the multi-entity as the participants object of platform enabling, will always realize "common ideas, resource sharing, value so-creation" relying on culture, technology and data. Also, it is a way to express the importance of

enabling behind platform mode to development of enterprises.

To make a summary, common ideas, resource sharing and value co-creation has combined action to objects of platform enabling. They contribute to well-being of ecological platforms on innovation of products and service, extending industrial train, online and offline extension, evolution of business model and value creation of entities.
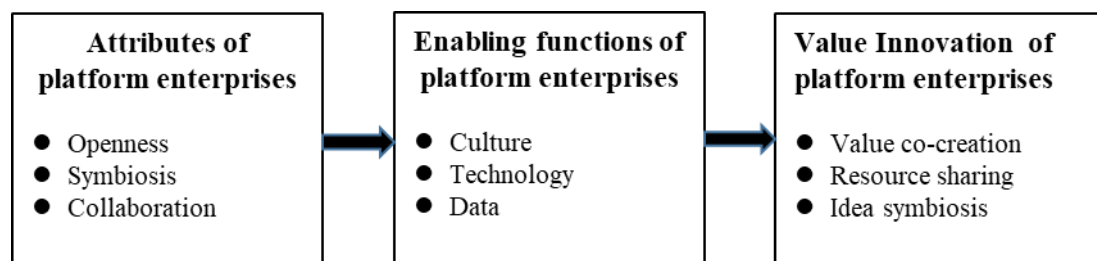

Figure 1. Theoretical model about enabling and value innovation in platform enterprises

5.2. Theoretical contribution

This paper chose SWTY as a case and conducts further exploration on enabling and mechanism of value creation for platform enterprises, providing research ideas of value co-creation for enterprises on carrier, method and logic. Our study introduced the concept of enabling, using culture, technology and data as driving factors to clarify the path mechanism of value innovation, given theoretical brace for practice of platform enterprises, which not only enrich and polish research system for platform enterprises in innovation field, but also contribute to systematicness and depth of related researches. Theoretical contribution can be concluded into the following three aspects.

Firstly, this paper fully clarifies concept of enabling of platform enterprises. Based on objects of enabling, this paper extracts three attributes as "openness, symbiosis, collaboration", specifically explains the connotation of enabling for platform enterprises. Also, since previous research has fuzzy statement on what is platform enabling, this paper helps make up for this shortcoming[23]. Platform economy is a typical representative of innovation of business mode, but construction of platform is not the destination of enabling and value innovation. Aattributes of platforms is the premise of development of platforms[21], this research has distinguished characteristic of SWTY. In detail, openness reflects in constructing thoughts of AFA community business platform. From the perspective of vertical development and transformation of platform, AFA community business platform is transformed from a traditional community fire service company to a smart community service platform through development of community agricultural products company. The open nature of platform enables SWTY to integrate needs of multiple participants, and with the help of platform thinking, expands externality of platform network. Symbiotic attribute is embodied in business ecosystem of AFA community. In this system, through embedding of internet technology and interaction of new media information, traditional subjects such as residents, communities, neighborhood committees, streets, government, property companies and so on are incorporated into a complete system, which makes symbiotic cooperation of multiple subjects possible. Collaborative attribute is reflected in the fact that AFA community business platform, as a professional community service function platform, has integrated platform resources of enterprises, suppliers, communities, property, government, finance, colleges and universities, providing smart community platform for community neighborhood committees, digital property management for community property management, and services for community businesses to meet their own industry management and service needs. Meanwhile, the platform also integrates payment platform of public utilities (e.g., water, electricity, gas, telecommunications) and bank payment gateway to meet needs of different participants. Compared with

previous research on platform, this paper can explain essential characteristics of platform enterprises in more detail, which provides a new idea for further exploring commonness and heterogeneity of community business platform.

Secondly, this paper clarifies the process of collaborative enabling, and also helps to expand explanation on different platform enterprises' enabling differences. Difference of operation effect of platform enterprises is directly reflected in enabling of different platforms, that is, different enabling means will produce different collaborative results. Enabling of AFA community business platform is reflected in the whole process of its operation. In this process, platform meets needs of multi participants in its ecosystem from three aspects (technology, data and culture). First of all, technology is foundation of business development of platform enterprises. The case enterprises use new technologies such as social media, mobile Internet, Internet of things and big data to promote communication of participants and the integration of internal resources, provide extreme and closed-loop customer experience for platform participants, and promote interaction between platform and participants. At the same time, this study also found that in order to break through traditional business model, platform enterprises need to first use technology as support to try to combine traditional services and mobile Internet point-to-point, and realize connection of internet platforms. Different from other scholars' view that sharing economy platform is a core-periphery value creation system, this paper holds that community business platform is a hierarchical complex system composed of multiple participants, which is not only an information platform[23], but also a platform for value creation and symbiosis. Among them, interaction of information among participants is reflected in the process of collaboration, data and cultural enabling. The creation and symbiosis of value is reflected in the fact that each subject does not use value consumedly, but pursues creation of new value in the way of mutual cooperation. Therefore, this paper reveals and discusses empowerment and means of community business platform in detail, which is an in-depth excavation of business logic behind platform economy, which, to a certain extent, drives development of theory of empowerment for platform under the background of sharing economy.

Thirdly, this paper establishes community platform innovation mechanism model, which has a certain contribution to research on value creation process of platform enterprises and value innovation mechanism of platform economy under background of digital economy. Nowadays, community business platform enterprises are developing rapidly, but discussion on value innovation mechanism of platform enterprises is not enough. For example, interaction, process in value innovation of platform, and the way of user's co-creation and win-win mode still needs to be further discussed. Value innovation mechanism of community business platform no longer presents a one-dimensional static mode dominated by platform enterprises, but a multi-dimensional dynamic mode with multi participants[20]. Based on theoretical logic deduction of "platform attribute-enabling-value innovation", this paper constructs a theoretical model of collaborative enabling and value innovation of platform enterprises, and explores value innovation in dimensions of value co-creation, resource sharing and common idea, which depicts motivation and process of value creation of platform enterprises and describes their leading law of value creation. Also, research process and results of value creation of platform enterprises deepen and enrich current research on digital transformation of enterprises driven by new technologies[5].

5.3. Practical enlightenment

First of all, platform enterprises should pay attention to construct efficient enabling mechanism, and this mechanism needs benefit sharing beyond normal condition and stresses the importance of integration of cultural ideas. Foundation of platform community if to fulfill different demand of different participants, which is, accurately acquire, scientifically recognize and match demand of sharing. Therefore, it is vital for platform enterprises to build enabling mechanism and have "win-win" culture. Also, they can break boundary of

informative transformation and communication, extend community function of enterprises by constructing community service platform. Based on this, value sharing is getting smaller and cultural thoughts are gradually put into ecosphere of platforms. By using online and offline path, it provided convenient service for different participants in platform enterprises.

Then platform enterprises have to fully concentrate on creation, collection, sharing and application of data, innovatively apply information and optimize business model and value creation according to digital information. Sharing of digital information is the driving force of participants to participate in community platforms, so these platforms should fully analyze and build ways of information sharing and applying. Therefore, value of information can be applied innovatively. "community housekeeper" is an app of SWTY to acquire qualified data of users, so this app gives a channel for information sharing by platform enterprises. As a result of that, platform enterprises can have a deeper research to data of users and give accurate information of users in a very short time. This helps quickly understand interests of users, and enterprises can design innovation mode accordingly to raise innovative ability under the condition of information sharing.

Finally, under the background of smart community and smart city, based on wide application field of business mode of community platform, enterprises can stick to characteristic of "win-win" and collaborate with different entities including government, company, social organizations. Also, they have to concentrate more on mechanism of value innovation to have more vitality of sustainable development. Shi Wai Tao Yuan has deep relation with community, advertisements and government, whey form "value alliance" and try to make value creation among ecological platforms. Besides, in period of COVID-19, communities form a tiny system to help each other to a certain degree, and this also brings some suggestions for smart business platform of smart city in the coming future.

5.4. Limitation and future direction

Though this study has given some valuable suggestions for development of theory and practice, there still exists some limitations, which needs to be further discussed in the future. Firstly, this paper didn't conduct analysis by categorizing multi-participants according to their different characteristics and needs when exploring enabling and value creation of SWTY AFA community business. Community platform and other entities (governments, communities, citizens) have form symbiotic business ecosystem, and characteristics or demands of these participants have great impact on enabling and value reation. Future research can consider multi participants' characters, systematically understand the process and outcomes of enabling and mechanism of value creation. Secondly, the case lacks consideration on community platform business mode. Due to lack of ways to collect information and limit of reference sample, this study conduct exploration by using single case. However, in real practice, there are many kinds of community platforms and different kinds of operation modes, current analysis may be not fully appropriate for the discussion on enabling and innovation mechanism in similar platforms, thus, comparative studies of multi-cases can help enhance the generalability of the proposed theoretical model in the future.

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