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BPM OR CPM? A CASE STUDY OF CROSS-DEPARTMENT COMMUNICATION BUSINESS OPERATION AND HIDDEN COST RELATED TO AMBIDEXTERITY PERFORMANCE

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BPM OR CPM ? A CASE STUDY OF CROSS-DEPARTMENT COMMUNICATION BUSINESS OPERATION AND HIDDEN COST RELATED TO AMBIDEXTERITY PERFORMANCE

Research full-length paper

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Abstract

Business process management (BPM) as a mature business operation management method has been applied by many enterprises. Its main concerns focus on solving the cross departmental communication problems. Cross-department communication is a visible symptom of the growing business problems of companies related to complexity, it is also a problem strongly related to BPM. These barriers will lead to low efficiency and poor-quality work, which is common in most organizations in China. This will bring hidden costs to the organization and even impact long-term performance. In the digital transformation age, organization ambidexterity is more important than ever to obtain short-term and long-term benefits. This case study suggests to combine the ambidextrous and hidden costs theory for outlining a collaborative network communication model (CNCM) and theory relationship model of hidden costs and ambidexterity BPM, in order to investigate the effect between the cross-department communication operation structure and organizational performance. This case study provided data collection by three data sources: 40 interviews of managers and employees, company records, observations over 3 months. The findings of the field study of this case are that cross-department communication operation structure has an effect on organizational performance and digital innovation. It also suggests that CNCM positively influences organizational exploration and exploitation ability. It can also alleviate cross-department communication obstacles, low efficiency, and poor-quality work.

Keywords: BPM, Cross-department Communication, Hidden Costs, Ambidexterity.

1 Introduction

BPM as a mature business operation management method for scope, modeling, analysis, implementation, implementation, execution, monitoring and systems have been scientifically studied and, in most cases, can be deployed in practice (Rosemann, 2014). BPM is usually used as an effective means to solve cross-department communication through connecting business activities of various departments. Cross-functional teams are often considered crucial to achieving excellence within an organization. However, function diversity also introduces conflicts which may hinder the team's best performance (Blindenbach-Driessen, 2015). Research shows that, although cross-functional teams promise a lot, they do not always keep their promises (Johnson et al., 2015). For example, they may lead to deteriorated work quality and slow business decision efficiency (Savall & Zardet, 2008); such results are exacerbated for innovation and change capability (Strese et al., 2016). The organization's exploitation capability is based on the current stable capability, and many companies face challenges related to cross-department cooperation that strongly affect exploitation capability.

With the digital wave coming, the various emerging technologies impact public services, businesses, and individuals, no exception for business process management (BPM) (Ahmad & Looy, 2020; Mendling, Jan, Pentland, Brian T., & Recker, 2020). Importantly, the essence of BPM and digital innovation in the enterprise is a different paradigm. Traditional BPM focuses on endogenous growth, and digital innovation focuses on fundamental external changes (Mendling, Jan, Pentland, Brian T., & Recker, 2020). According to the viewpoint of ambidexterity held by March (1991), the ability to develop existing capabilities and explore new knowledge and opportunities is regarded as the key to enterprises' sustainable competitive advantage. Ambidexterity refers an organization being able to use its existing capabilities to exploit the organization and requires the ability to explore and face the uncertainty brought by future innovation and change (Koryak et al., 2018; Tushman & O'Reilly, 1996). Therefore, Under the ambidextrous strategy, ambidextrous BPM needs to be consistent with enterprise innovation and optimization into customer process because the understanding of customer needs is not only used in the production process of the organization but also to participate in the customer process (Trkman, P., Mertens, W., Viaene, S., & Gemmel, P., 2015).

Cross-functional teams are often considered crucial to achieving excellence within an organization. However, function diversity also introduces conflicts which may hinder the team's best performance (Blindenbach-Driessen, 2015). Research shows that, although cross-functional teams promise a lot, they do not always keep their promises (Johnson et al., 2015). For example, they may lead to deteriorated work quality and slow business decision efficiency (Savall & Zardet, 2008), it also calls dysfunctions and these dysfunctions will lead to hidden costs. such results are exacerbated for innovation and change capability (Strese et al., 2016). The organization's exploitation capability is based on the current stable capability, and many companies face challenges related to cross-department cooperation that strongly affect exploitation capability. However, efficiency and quality exploitation capacity are not enough to implement digital transformation (Koryak et al., 2018). Therefore, how to alleviate symptoms of dysfunctional organizational cross-department communication and enable managers to implement digital innovation—which will further improve organization ambidextrous performance for exploitation and exploration—is the one of main organizational problems centered around digital transformation.

Therefore, how to alleviate symptoms of dysfunctional organizational cross-department communication and enable managers to implement digital innovation—which will further improve organization ambidextrous performance for exploitation and exploration—is the one of main organizational problems cantered around BPM in digital transformation. This case research aims to understand the relationship of cross-department communication problems and ambidexterity performance. Furthermore, it outlines the CNCM effect on hidden costs and ambidexterity.

The structure of this research is as following: the second part is about the theories basement which includes three theories: hidden costs, BPM and ambidextrous. The following left part are related to the research method, findings and discussion based on the case study, theoretical and practical implications, the final part make a conclusion, includes limitation and future research direction.

2 Theoretical Framework

2.1 Hidden costs

"Dysfunction" refers to problems or difficulties that constantly interfere with the company's regular operation. This dysfunction prevents the company from fully achieving its goals and effectively using its human and material resources (Savall & Zardet, 2008). Savall & Zardet (2008) identified six types of dysfunctions: working conditions, work organization, communication/coordination/cooperation, time management, comprehensive training, and strategy implementation. More precisely, dysfunctions will generate hidden costs monitor and management (see table 1), which are undetected costs and performance of the company (Savall & Zardet, 2008). For example, communication/coordination/cooperation may occur between departments or functions, such as the marketing and R & D departments, resulting in the delay of new product development. Dysfunctions will cause the company's hidden costs, In the practice, these hidden costs are easy to be ignored by the company management. Therefore, improving the hidden costs caused by cross-department collaboration can improve organizational performance.

Dysfunctions	ISEOR Model	Charateristic
1 Coordination between departments	Indicators of hidden costes	Absenteeism
2 Work Organization		Occupational injuries and disease
		Staff turnover
3.Time Management	Financial consequences of dysfunctions	Low-quality work
		Direct production gaps
4.Strategy Implementation		Excess salary
		Wasted time and/or overtime
5.Integrated Training		Overconsumption
		Non-production
6.Working Conditions		Non-creation of potential risks

Table 1. Indicators of hidden costs: financial consequences of dysfunctions (ISEOR 1974–2017).

2.2 Business process management (BPM)

In the mid-1990s, as interest in business process reengineering surged, the importance of BPM grew and attracted widespread attention from all variety of companies (Hammer, 1990).Currently BPM is as a way of management has been generally accepted and it even has been as an effective method and technology which is used to study organizational business processes(Denner et al., 2018). Davenport (1993) explained business processes are a set of dynamically coordinated activities controlled by a number of socially-dependent participants designed to achieve a specific operational objective. It is a management concept used to control, adjust, and optimize business processes. From a lifecycle perspective, BPM generally defines that each business process follows a lifecycle approach, including identification, definition, modeling, implementation and execution, monitoring and control, and process improvements, as a model that emphasizes the core activities performed by business process managers (Dumas et al., 2013).

More importantly, BPM needs to support effective organization management and improvement practices by explicitly modeling organization base processes (Harmon ,1990). BPM aims to improve company performance by optimizing and managing the business processes (Paschek et al., 2018), it mainly focus on improving enterprise operational processes through process designing, implementation, monitoring and improvement. Business processes should be consistent with business strategy, customer needs, and business objectives, so that the realization of process objectives can be measured and controlled. In short, BPM aims to achieve strategic and operational enterprise goals and improve effectiveness and efficiency (Paschek et al., 2018). Business process improvement is done by overseeing the process of performing work, utilizing gaps and inconsistencies to discover improvement opportunities to ensure consistency of results and expectations (Dumas et al. 2013). The goals of business process improvement include cost

reduction, efficiency improvement, quality improvement and error rate reduction. And the improvement of business processes focuses on improving organizational capabilities, rather than improving the way individuals move, ultimately add value to the organization and its customers (Denner et al., 2018).

2.3 Organization ambidextrous

The organization ambidextrous originated in March (1991), that is the ability of exploration and exploitation at the same time. Fundamentally, exploration and exploitation are two different learning activities, and enterprises need to allocate attention and resources between the two activities. Exploitation is related to activities such as "optimization, efficiency, selection, and implementation," while exploration refers to "search, variation, experiment, and discovery." Therefore, March (1991) believes that organizations need to be consistent with exploration and exploitation. A one-sided focus on exploitation may improve short-term performance, but it may also lead to capability traps, because enterprises may not fully respond to environmental changes. On the contrary, too much exploration may enhance the ability of enterprises to update their knowledge, but it may lead the organization into an endless cycle of search and unrewarded change.

In the changing environment, exploitation capacity is necessary but not enough (Cao et al., 2009). Combined with the theory of organizational dysfunctions and hidden costs, we divide the financial effect caused by organizational dysfunctions into the effect of exploration and exploitation, exploitation effect refers to productivity and excessive consumption; exploration effect refers to innovation risk caused. Brahmana & Christina (2021) pointed that integrating functional departments is not enough to achieve excellent performance. It benefits from cross-functional integration to enhance the competitiveness of enterprises. In this process, ambidextrous play a vital role in pursuing competitive advantage. Research from Zimmermann and Cardinal (2015) pointed out specific opinions on realizing this cross-functional ambidexterity. The research of Hu et al. (2018) and Strese et al. (2016) also indicated that cross-functional cooperation is positively related to innovation and organizational ambidexterity.

3 Research Method

3.1 Case description

This research describes a case of a high-tech manufacturing company in China. This company is facing the problem of cross-department coordination. Daily communication is frequent but ineffective; low work efficiency, low customer demand, and customer solution quality problems have become common. An example is that due to the deformation of customer demand transmission in the sales, R & D, production, and delivery, the design and implementation solutions are repeatedly modified. At last, the product function is unstable during the trial operation, and acceptance is delayed. In order to solve this problem, A large number of after-sales personnel are required to accompany customers for solving various problems on site. Moreover, these are not a few such examples, which have become widespread. These organizational communication problems lead to high internal costs, and many customers project delays and more complaints.

Another significant problem of the company is that there is no knowledge precipitation for the customer project management, including R&D technology precipitation, development method precipitation, delivery implementation process, and technology precipitation. Therefore, every problem is solved by the person raising the problem holding a cross-department discussion. However, in the daily discussion conference, everyone only focuses on their department objectives and the result, is not responsible for the customer's project overall target, so such communication efficiency and effect are not very good.

Most of the time, all the people are busy solving various cross-department coordination problems, so there is no time to consider the digital transformation initiative proposed by the business strategy. Therefore, the digital transformation strategy cannot be implemented. Although the management has willing to implement it, the energy involved is limited. From the outside view, digital transformation is just a slogan.

Senior managers are also distressed by this situation. Therefore, the management is ready to development the BPM plan to establish an organizational collaboration network to solve the above problems of cross-department and insufficient innovation ability to prepare for the organizational digital transformation.

From this case, the question of this research is as follows:1) to understand the problems related to dysfunction in the organization, especially the cross-department communication;2) to find the contribution of for resolving cross-department communication with BPM ; and 3) to find the relationship of hidden costs, BPM and ambidexterity theory.

3.2 Methodology

A case study explores a research topic or phenomenon within its context or within some real-life contexts (Saunders, 2021). The case research strategy will be relevant if research needs to gain a rich understanding of the research context and the enacted processes (Eisenhardt & Graebner, 2007). and case study also can generate answers to the question ‘why’ and ‘what’ and ‘how’ questions (Yin, 2017).

This paper research uses the case study method, which was divided into two stages. In the first stage, through a review of company archives and open and face to face interview with 17 managers and 23 employees on the problems of organizational cross-department communication and low innovation ability. These interviews come from different departments, including R & D, marketing & sale, supply chains, project delivery, quality, and operation. Quality and operation are vertical departments, and the others departments are horizontal. The first stage took 2months. And about the archives, the important formation for this research observing and calculating the hiddent costs.,sunch as finace report, project report ,and IT system record .In the second stage, research took 3 months of close observation to verify the cross-department communications and organizational innovation effect. The case tracking lasted for five months. Retrospective research was used in this case research, which was commonly used to solve problems. The number and department of interviews per population sees Table 2& Table3.

Diagnoses Categories	Total Number of Interviews	Number of Interviews per Population			
		CEO	VP	Director/Manager	Employees
	40				
Horizontal Diagnosis		1	5	9	19
Vertical Diagnosis (Quality Assurance)				1	2
Vertical Diagnosis (Operation Assurance)				1	2

Table2. Number of interviews per population.

Department	Department Code	interviews Code
Company (CEO)	X	00
Marketing & Sales	A	A1 A2 A3 A4
R&D	B	B1 B2 B3 B4 B5 B6 B7 B8 B9 B10
Supply Chain	C	C1 C2 C3 C4 C5
Delivery	D	D1 D2 D3 D4 D5 D6 D7 D8 D9
Quality Assurance	E	E1 E2 E3
Operation Assurance	F	F1 F2 F3
After Sales	G	G1 G2 G3 G4 G5

Table 3. Department of interviews per population.

4 Findings and Discussion

4.1 Findings

4.1.1 Collaborative network communication

As organizations strive to integrate processes to simplify operations and improve performance, the demand for employees who support cross-functional integration skills is also growing (Bement & D'Souza, 2021). They are often regarded as the key to innovation projects. Research from Blindenbach-Driessen (2015) pointed out that cross-functional teams can easily achieve innovative performance in enterprises with more perfect functional organizations. Cross-functional teams create conditions for different role expectations. Role conflict is an important mechanism to help explain why cross-functional teams do not always provide better team results (Johnson et al., 2015). As an overall enterprise management method, business process management (BPM) is usually set to promote or accelerate cross-department problems resolved and role conflict (Brocke & Rosemann, 2014). BPM can break the organization department boundary wall and pay attention to quality, efficiency, and cost in the business process. The mission of BPM is to achieve the overall objectives driven by the value chain and customers (Denner et al., 2017; Paschek et al., 2018). Organizational governance is an essential part of BPM, which is mainly realized through the responsibility and operation mechanism of the business process owner (Brocke & Rosemann, 2014). BPM can alleviate the cross-department problem and enrich exploitation and exploration ability through organizational governance to a certain extent. Given the above, case proposes the theoretical framework model as figure 1:

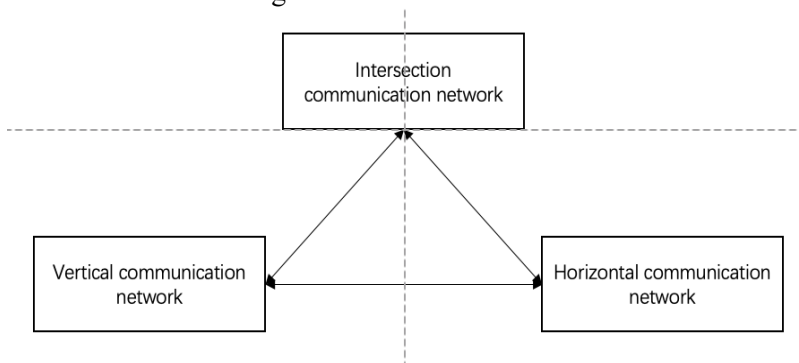


Figure 1. Collaborative network communication model (by author).

The CNCM comprises the vertical communication network, horizontal communication network, and intersection communication network. It has the following characteristics:

- 1) Vertical communication network: retain the responsibilities and rights of the existing organizational communication function.
- 2) Horizontal communication network: add process owners' responsibilities and rights, to solve cross-department problems and ensure the connection of horizontal communication function.
- 3) Intersection communication network : assume the cross-department boundary role of the ambidextrous organization.

Although the vertical communication network will arise cross-department bureaucratic and mechanical problems, according to classic organization theory, the stability of this management organization can ensure that the enterprise has a clear division of labor, accelerate the operation efficiency of the enterprise, and play the role of planning, organization, coordination, and supervision in the organization. The horizontal network set combines the BPM method mechanism to increase the communication mechanism of the process owner. The vital role of BPM is to break the departmental structure chimney, realize value delivery for the customer (Brocke & Rosemann, 2014). This horizontal communication mechanism can

make up for the shortcomings of the traditional vertical mechanical organization communication mode. Horizontal and vertical communication networks both need to be responsible for exploration and exploitation two types of businesses. Therefore, intersection that connect with them also need to be responsible for exploring and exploiting two types of business communication. Three types of communication networks: vertical, horizontal, and intersection communication networks, can form itself network independently, and also can integrate among them when necessary. For example, vertical and horizontal communication networks can integrate, and intersection network and vertical communication networks also can integrate. So CNCM reflected agility in communication networks. The case selects the hidden cost of quality and efficiency in exploitation and exploration capability to observe the effect of CNCM. In the first stage, cross-department communication problems are as follows. Interviews data see Table 4.

Categories Code	Categories	Problems Code	Data of Business Problems	Hidden Cost
A	Lack of innovation	X01	Lack of technology accumulation and insufficient research on underlying technology.	innovation and change Lack
		X02	Less initiative and innovation of resource department.	innovation and change Lack
		X03	R&D reliability design innovations are few.	innovation and change Lack
		X04	Customer delivery mode lacks innovation and focuses on solving problems.	innovation and change Lack
		X05	Without innovation and change planning, and there are almost no change projects and management improvement projects.	Low quality work Production and efficiency Gap
B	Unclear responsibilities	X06	The responsibilities of the project manager and members are not clear, the authorization of project manager is not enough, which affects the implementation effect and efficiency.	Low quality work Production and efficiency Gap
		X07	Cross-functions process responsibilities are unclear, and marginal work is vague.	Low quality work Production and efficiency Gap
C	Poor project coordination and poor communication	X08	Customer sales projects involve multiple departments, difficult coordination, and poor communication, affecting delivery time and quality.	Low quality work Production and efficiency Gap
		X09	Due to the difficulty of coordination, the project manager took multiple roles at the same time, the efficiency and quality of project delivery are not high.	Low quality work Production and efficiency Gap
D	Poor cross-department coordination and poor implementation	X10	The unstable business model and customer's requirement frequent changes, which is not synchronized with the change information of R & D, delivery, and supply chain.	Low quality work Production and efficiency Gap
		X11	Often inconsistently understood and poorly implemented for the customer requirements by the sales, R & D, and delivery departments.	Low quality work Production and efficiency Gap
		X12	Complex coordination between sales and delivery departments in customer requirements and customer solutions, affecting customer delivery time.	Production and efficiency Gap
		X13	The coordination between delivery and purchase is not timely, and the materials and products delivery time cannot be met.	Production and efficiency Gap
		X14	The R&D project process coordination, which involves promoting hardware, software, and algorithm delivery, and the implementation effect is poor.	Production and efficiency Gap
		X15	The project key review is not formally carried out, and there is often a lack of representatives of key departments.	Low quality work
E	Unclear business rules	X16	In the R&D process, the work standardization and process are not solidified, and special customization requirement is very time-consuming, and there are many mutual commissions.	Low quality work Production and efficiency Gap
		X17	The delivery time of the project is too tight, there is little summary, and there is no baseline design specification and process.	Low quality work Production and efficiency Gap
		X18	Business processes and rules are not clear, especially across departments. Problems encountered in each project need repeated communication and confirmation	Low quality work Production and efficiency Gap
		X19	The business process is relatively scattered, there is no overall planning from top to bottom, there is no unified management of the architecture, the information system needs to be improved, and it is often necessary to organize meetings to communicate and solve problems.	Low quality work Production and efficiency Gap

Table 4. Interviews data of hidden costs.

4.1.2 Effect on exploitation performance

Exploitation is related to activities such as optimization, efficiency, selection, and implementation (March,2009). Exploitation efficiency is the primary manifestation of productivity. Organizational productivity objectives refer to quality and efficiency. Therefore, in the research case, we select the hidden cost of low-quality work and the productivity gap caused by dysfunctions, which is the main effect of the exploitation.

1) Low quality work

In the first stage interview, interview (00, A1, A3, B1, B2, C1, D2, D3) said that the cross-department communication efficiency is low, and many departments are involved in the customer project. Especially when facing customers, it will involve multiple departments such as regional sales, key account sales, after-sales team, R & D resources, project management. Customers want to have a unified interface, and PM is not granted enough authority to lead this work so that coordination will rely entirely on the rela-

tionship between people rather than perfect processes. This resulted in incomplete design requirements, decomposition of resources object no align, mutual repeat review.

Marketing and R&D interviews (A1, A2&B2) said that through the setting of business process owner, the breakpoint of cross-department flow can be connected, which can play a significant role in customer-oriented demand and design. Because process owner responsible for the unified output value and work results. For example, at a business meeting, in order to solve the problems of product design and optimization, the R&D process owner (B2) requires that customer data can be brought back from the customer site, and make that a routine process of R&D and marketing process, to solve the problems of new products on the customer site in advance. This example shows that the process owner has solved some cross-department problems through horizontal connection, which is realized in business design. However, we also observed that although the process owner can improve the work quality by making up for the defects brought by cross departments, this work quality improvement is strongly related to the process owner's business experience. Otherwise, it will only play the role of connecting multiple departments, which is another form of cross-department communication meeting. This phenomenon is particularly evident in the field of marketing. Due to the strong independence of the marketing business and lack of understanding of R & D and delivery solutions, it is challenging to fulfill the rights and responsibilities of the process owner.

As before said, horizontal process owners play a role in cross-department communication. Process owners play the role of advisor and thruster in the CNCM, and these process owners initially are managers. The responsibility of cross-department communication has always been one of their principal works. Under CNCM, the only change is from passive to active management for cross-department problems.

The case organization set up a full-time boundary department engaged in cross-departmental problem handling for intersection communication network. There are five people in this department, with connecting different business problems. The full-time boundary department is responsible for daily problem handling and "COE" of business process management. This kind of intersection communication can supervise, control, and promote daily cross-department and process problems. However, some managers and VP believe that the cost-benefit should be balanced as a full-time role.

Horizontal network communication help organizations improve the efficiency and quality of cross-department problem-solving by establishing rights, responsibilities, information transparency, and other measures from the two aspects of business design and execution problem-solving.

2) Efficiency gap

In addition, in the interview, we found that a complete customer project involves 11 departments and 102 activities, including R & D, marketing, supply chain, commerce, legal affairs, etc. It is challenging to coordinate the quality and efficiency of these activities. Therefore, there is a particular "coordination network" in the horizontal network organization. This "coordination network" is flexibly established according to customers' project objectives and is operated by the project team and PM.

The "coordination network" is a part of CNCM, currently applied in R & D and marketing. This agile network aims at customer needs and promotes project efficiency and quality. Before, there were many problems from different people, and solving problems came from different departments. This "coordination network" combines the problems with the project dimension for customers, which improves the problem processing efficiency and transparency.

One of the ways to improve organizational ability is knowledge standardization through knowledge extraction and absorption. It can enhance the exploitation ability of enterprises (Paschek et al., 2018). In the first stage interview, a significant problem is the lack of business precipitation (B3, B4, B5, B6, D1, D2, D3), including technology precipitation and working methods and processes. An important factor affecting the gap and improvement of productivity is knowledge precipitation. The CNCM has improved it through the business process owner and business executor. It extracts best practices, solidifies business processes, and solidifies knowledge in business processes, such as supply chain processes, development processes, etc. However, during the three-month observation, Operational knowledge precipitation is better shown in cases, such as supply chain processes, the precipitation of knowledge-intensive played a rela-

tively slow effect, such as technology R & D processes and flexible marketing fields. Respondents B1&B2 said that they could not precipitate better practice in the short term.

4.1.3 Effect on exploration performance

Digital transformation requires exploiting and exploring to balance the organization's short-term and long-term interests and ensure that the organization has an advantage in the long-term market competition. Exploration will be connected with new possibilities, including research, change, adventure, experiment, game, flexibility, discovery, and innovation. so that enterprises can adapt and accept new knowledge (March, 2009).

In CNCM, the process owner needs to undertake the business change which is also responsible for change and innovation management. In ambidextrous theory, this model is considered time independently, and the same organization needs to undertake exploitation and exploratory responsibilities in the same role. These two responsibilities are independent in time, but unified in space (Raisch et al., 2009).

Innovation and change planning

In this case, the exploration and innovation ability of the organization is carried out through change planning and change projects, which mainly depends on the horizontal organization, process organization and vertical functional organization. The responsibility of the process owner and the department boundary is to implement the organization's strategic planning and plan the innovation ability needed in the future. In the three months under CNCM, the process management department (intersection communication network) which handle cross-departmental problem has played a significant role in this process. Through it promotes the process owner to think about the future innovation plan and require it to be implemented into specific change initiatives and innovation projects. For the decision-making of change and innovation projects, the cross- department decision-making team composed of process owners is responsible. Under CNCM, the company has formed 64 change projects and sub-projects through formal discussion, which shows that this communication model is conducive to planning the company's future business capabilities. However, we also found that during the first change planning and project discussion, the project initiatives formed by the process owner still focus on the department inside.

We observed that the innovation strategic consistency and the possibility of executive are guaranteed through the form of the project rather than the form of multiple daily communication.

Innovation implementation

From a strategy view, although 64 change initiatives have been planned, and it is difficult for all people to decompose the initiatives, which is caused by the lack of matching between the organization's capabilities and personnel. these 64 change initiatives is related to digital transformation, including some AI projects, which refer to the marketing, R&D, supply chain and HR etc. The delivery senior manager D3 said that it is not easy to form such future business capability planning and blueprint through everyone's efforts, and it is excited about such initiative planning and blueprint. However, how to implement it next is compressive. During the 3-month observation period, only five projects have explicit decomposition and are ready for implementation.

The research case also shows signs of "getting smaller and smaller" for change projects, focusing only on the parts they can solve, which is also the predictable resistance in change. At this time, the role of " intersection communication network " came into play. At the discussion and decomposition meeting, " Business process management " raised their hands to express their opposition. However, there is also the phenomenon of failure. At the recent discussion meeting, everyone compromised to narrow the project's scope and cancelled most of the business capacity planning implementation to achieve short-term performance goals.

Fortunately, we also observed that the CNCM had been extended to customers in some departments, such as marketing brand innovation cooperation and technical cooperation under digital technology, but this is only a temporary incident and does not serve as the standard innovation capability mechanism.

4.2 Discussion

With the change of digital technology and center-customer, BPM research have recently focused on ambidextrous BPM and CPM (Ahmad & Looy, 2020). Rosemann (2014) provided ambidextrous BPM, it includes exploitative BPM and exploratory BPM. Exploratory BPM development and optimization is a method of incremental daily continuous improvement, while exploratory BPM presented fundamental change process development and optimization.

BPM principles see "customer oriented" as one of BPM's core values should start from customer needs (Vom Brocke & Sinnl, 2011), so these initiatives focused on improving internal business processes are no exception. Implementing BPM means identifying, evaluating, and improving these cross-functional business processes and highlighting a process-and customer- oriented way of thinking. While business process management is designed to improve and manage organizational processes, provide maximum value for customers, most of organizations also claim to adopt "customer - centered" principles on the process, but often most academic literature and practical work focuses on modeling and improving internal organizational processes (Trkman et al., 2015). Despite customer is importance, actual customers almost never participate in the analysis or design of business processes (Rosemann, 2014) , most process improvement and technical efforts do not take into account the customer (Gersch et al., 2011). Over the years, with the application of digital technology, proposed new research and practice direction for customer process management, customer process management is urgently called for (Trkman et al., 2015).

CPM presents an impact on traditional BPM, strategic level implications for shifting focus from exploitative BPM to exploratory BPM, New process design increasingly uses insights from design thinking (Mending, Jan, Pentland, Brian T, &Recker, 2020).

For the hidden costs of efficiency gap and quality improvement is related to exploitation BPM, it can be dealt with by the traditional BPM theoretical framework and CNCM. However, for the opportunistic hidden costs of innovation and change, it can be dealt with through exploration BPM, especially CPM. Therefore, in solving cross-department communication problems through CNCM and combined with ambidexterity BPM, including the theory of customer BPM, we can effectively improve cross-department communication problems and improve innovation performance.

CNCM integrated with BPM or CPM realise by the three types communications networks. BPM with internal company communications, CPM with external company communications , especially on the horizontal and intersection network, these communication always refer to the cross-department. Combined with the theory of hidden costs, we divide the performance effect into exploration and exploitation. Exploitation effect refer to productivity and excessive consumption; exploration effect refers to innovation risk caused. As the above hidden cost, CNCM and Ambidextrous, this paper outlines the theory framework see figure 2:

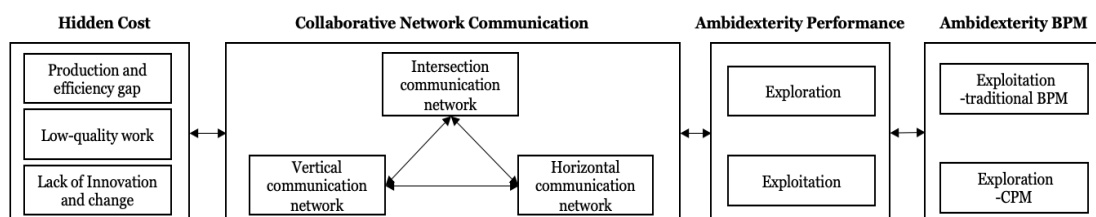


Figure 2. Relationship of hidden costs and ambidexterity BPM Theory Model (by author).

5 Theoretical and Practical Implications

5.1 Theoretical implications

This case study suggests to combine hidden costs theory with ambidexterity theory, and outline the relationship of hidden costs and ambidexterity theory framework. Furtherly, it also suggests an CNCM

model to solve the cross-department problem. Due to this case is a study of process manufacturing enterprises, non-manufacturing process enterprises have different business models, non-manufacturing hidden costs are the direction of future research. In addition, the hidden cost is one of the symptoms of organizational dysfunctions. Therefore, how to solve a broader range of organizational dysfunctions through ambidexterity theory is one of the future research directions.
relationship of hidden costs and ambidexterity BPM theory Model.

5.2 Practical implications

This case study provides a reference for large enterprises to solve the hidden cost caused by communication in China. At the same time, this case study shows that CNCM can solve problems of organization communication. This case also shows that CNCM has certain expansibility, organization communication can be extended to customers and join the customer communication net into CNCM network, for example CPM by digital technology.

6 Conclusions

In this case, management and most people are involved in the daily cross-department problems, resulting in many hidden costs. These hidden costs effect the exploitation and exploration performance of the organization. In the organizational dysfunction theory, innovation potential is not regarded as financial performance and hidden cost. However, whether as hidden cost or financial performance, the effect on innovation ability is noticeable. This research shows that the change of organization communication structure can alleviate communication obstacles, low business efficiency, and non-quality work. Furtherly, it has effect on crucial exploitation and exploration performance. Fortunately, we also have observed that this CNCM can be the extension into CPM. For example, through process expansion, customers, suppliers, and partners can be included in this model. This expansion is more effective for exploring performance because the essence of exploration comes from the external market and customers.

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