

# Organizational Ambidexterity: Balancing Local Knowledge and Global Knowledge

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**Abstract.** Because there are advantages and disadvantages in both local knowledge and global knowledge, for the firms in the cluster, they should balance the relationship but not just focus on either one to achieve good performance while maintain their competitive advantage. However, with the intrinsic tension between local knowledge and global knowledge, it is hard for firms to balance them. Though summarizing the prior research on this area and analyzing the business cases, we found that to balance the local knowledge and global knowledge, firms in the cluster can establish the different structural units, improve the capacity of employees to deal with the different activities and acquire the dynamical decision and support from management team.

**Keywords:** organizational ambidexterity, knowledge-based view, balance, local knowledge, global knowledge.

## 1. Introduction

Although the innovation capability of enterprise is affected by its own stock of knowledge, it can be improved by accessing external knowledge. Therefore, the search and absorption of knowledge is considered as the necessity for business innovation. Because of its spatial proximity, the knowledge spillover in the cluster contributes to the innovation capacity of enterprises. But some scholars believe that abundant of knowledge spillovers within the cluster will lead to the knowledge homogenization within the cluster, and thereby reduce the ability of cluster firms to innovate. If the enterprises focus on local knowledge of the cluster too much, they tend to ignore changes in the external environment, resulting in isolation. At the same time, the process of economic globalization accelerates companies participating in global co-operation with external companies actively to obtain a large number of fresh knowledge. This new knowledge can be effective in promoting business innovation. But the uncertainty of global market and technology makes companies suffer higher risk to use this knowledge to innovate. Therefore, how to balance the local knowledge and global knowledge is critical for enterprises.

## 2. Properties of Knowledge

### 2.1. Advantages of local knowledge

Scholars believe that face to face communication makes the knowledge, especially tacit knowledge effectively spread between local enterprises, which can greatly promote innovative activities of enterprises.

Tacit knowledge is experience and skills which exist in the individuals or organizations who engage in production and business activities in the long-term and it is difficult to express in words or writing [1]. Most of tacit knowledge is transferred through learning by doing and the knowledge transfer needs a long time of

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human interaction. Spender thought that tacit knowledge is the most important strategic resource [2]. Grant found that the difficulty of imitateness makes the tacit knowledge become a source of sustainable competitive advantage [3]. The spatial proximity of cluster can increase the regular face to face meetings, which provides the possibility for the tacit knowledge transfer between enterprises. Based on the survey data from 342 engineers in the Denmark wireless communication equipment cluster, Dahl and Pedersen found that frequent informal contacts between the staffs is an important way to obtain tacit knowledge from other enterprises.

Some scholars believe that the co-location within the cluster has stimulated the development of special institutional structure, which contributes to the formation of a similar business language, technical concepts and product solutions. These make the knowledge enterprises more likely to be understood by the enterprises within the same cluster. The same business language can greatly enhance the effectiveness of the knowledge aggregation.

## **2.2. Disadvantages of local knowledge**

The danger of local knowledge is its similarity and redundancy. Embedness in local knowledge makes enterprises easily surrounded by highly redundant old knowledge. Companies in the cluster rely heavily on shared information, resulting in the case of homogeneity of knowledge, and reducing innovation capacity of enterprise [4]. This similar knowledge can bring enterprises the incremental innovation, but it cannot bring the radical innovation, which requires a lot of new knowledge. Redundant knowledge also consumes a lot of resources of the enterprise, thus reducing the search for new knowledge. Therefore, enterprises had to screen and identify the knowledge before transfer it. The studies of Ruhr steel industry cluster have shown that those companies paying too much attention to local knowledge will be easy to overlook the change and development of technical and market-related knowledge outside the region, thus lost the creativity [5].

Second, knowledge as a public good faces special problems of appropriability. Appropriability refers to the ability of the owner of a resource gets the value created by that resource [6]. Anyone who acquires knowledge can resell without losing it. With the spatial proximity and cognitive proximity in the cluster, the new technical knowledge of one enterprise is easily learned and imitated by other enterprises within the same cluster. If it cannot avoid the loss caused by the imitation of core knowledge, enterprise cannot keep its long-term competitive advantage.

## **2.3. Advantages of global knowledge**

A large number of fresh markets and technical knowledge in worldwide not only provide critical knowledge of radical innovation for enterprise, but also activate and enhance the absorption of local knowledge, which make companies get more useful knowledge [7].

The high visibility of the global knowledge also makes the knowledge sharing among members within the enterprise easy. Whether it is global knowledge spillovers (press, products, manual etc.) or formal cooperation, transferred knowledge is mainly explicit knowledge. Explicit knowledge can be expressed, communicated and shared through words and documents. With the high visibility of the global knowledge, knowledge recipient is easy to understand and learn, and it is conducive to improve overall innovation capability of enterprises.

Because the co-operation with global enterprises is mainly in the form of co-R&D and strategic alliances, the knowledge transferred is highly complex and system embedded. Complex knowledge requires a lot of text and charts to express to be understood. In this cooperation, knowledge spillovers is small, even though some knowledge is overflowed because of movement of employees and other firms are hard to learn these knowledge without corresponding knowledge background. The appropriability of this knowledge leads enterprises to maintain long-term competitive advantage.

## **2.4. Disadvantages of global knowledge**

The transfer cost of explicit knowledge is relatively low, but to seek, evaluate, absorb and apply those existing encoded knowledge often require some time and costs. Due to the difference of language and

culture, global knowledge is not only difficult to identify and find, but also hard to be transferred with the problem of aggregation.

The distance further amplifies the dispersion of global knowledge. Dispersion of knowledge means that knowledge is usually found dispersion in different carriers. Dispersion of knowledge affected the sharing and transfer of knowledge between different groups. Because firms are not familiar with distant knowledge topography with the knowledge path-dependence, dispersion of knowledge makes it harder to search useful knowledge. Even finding a suitable partner for the new knowledge, with the lag of performance firms may give up this knowledge source. So company needs a long time of repeated exploration and trial in its search and transfer process of global knowledge.

Grant suggested three characteristics of knowledge and they are transferability (tacitness), capacity of aggregation and appropriability [8]. The comparison of local knowledge and global knowledge according to these three characteristics of knowledge is shown in Table I and the comparison of advantages and disadvantages of local knowledge and global knowledge is shown in Table II.

A preponderance of local knowledge may enhance short-term performance but can result in a weak competence as firms may not be able to respond adequately to environmental changes. Principally pursuing global knowledge is an inherent risk because its returns are difficult to estimate and may take a long time to materialize [9]. Because of these characteristics of knowledge, so if an enterprise in the cluster pays too much attention to local knowledge it will suffer "success trap", which means the firm follows the knowledge path which brought it success but will lose the innovation potential; similarly, if an enterprise blindly pursues foreign knowledge, it will fall into the "failure trap", which means the failure of knowledge search push firm invest more in searching global knowledge and the poor short-term financial performance and high cost of knowledge make the firm suffer high risk of failure. Global knowledge and local knowledge are mutually complementary [10]. And the balance between local knowledge and global knowledge can make firms have good financial performance in short-term and maintain their long-term competences. Thus, to balance the local knowledge and global is the main task of improving the innovation capacity of firms in the cluster [11].

Tab. 1 : Comparison of different properties of Local knowledge and global knowledge

	<i>Local knowledge</i>	<i>Global knowledge</i>
Tacitness	Tacit	Explicit
Capacity of Aggregation	Easily	Hard
Appropriability	Low	High

Tab. 2: Comparison of local knowledge and global knowledge

<b>Local knowledge</b>	
<i>Advantages</i>	<i>Disadvantages</i>
1. Spatial proximity contributes to the spillover of tacit knowledge.	1. Relying on the shared information leads to knowledge homogenization.
2. The same language enhances the capacity of aggregation.	2. Low appropriability harms the innovation enthusiasm.
<b>Global knowledge</b>	
<i>Advantages</i>	<i>Disadvantages</i>
1. Novelty and visibility of global knowledge contributes to innovation.	1. Different language and culture enhance the difficulty of knowledge aggregation.
2. Complexity and system embedness of knowledge endows firms competitive	2. Distance amplifies the dispersion of knowledge, increases the difficulty of

### 3. Tension between Local Knowledge and Global Knowledge

However, enterprises often find it is difficult for them to balance local knowledge and global knowledge well. When firms use local knowledge for product innovation, they usually ignore global knowledge, which was eventually surrounded by a large number of redundant knowledge. The active exploration of global knowledge will interrupt the development and utilization of local knowledge which makes firms withstand the higher risk. Therefore, without understanding the formation mechanism of the tension between the local knowledge and global knowledge firms cannot balance them.

To sum up, the tension between the local knowledge and global knowledge mainly consists of the following four reasons:

#### 3.1. Resource

The access of local knowledge and global knowledge sources consumes the limited resource of enterprises. This situation is more serious in SMEs which have few resources. Too much acquisition of one kind of knowledge will inevitably reduce the input for another kind of knowledge. If the firms are deeply embedded in the local network to access local knowledge, it is bound to reduce its worldwide access to new knowledge, and thus cannot closely follow the latest technology and market development, which causes the loss of long-term competitive advantage. If the firms explore too much global knowledge, it is bound to reduce the use and development of existing knowledge and technology, which affects its short term financial performance.

#### 3.2. Path dependence

Both local knowledge and global knowledge have the characteristic of self-reinforcing and path dependence. The balance between these two knowledge sources will easily be damaged by this feature. The organizational inertia and present knowledge usage habit will push the enterprises using the old ways to engage in business activities. Myopia of organization means firms tend to follow the path of its existing successful product to develop innovation which weakens the creativity of firms. The global knowledge with its high degree of dispersion and uncertainty often causes the innovation fails. Escalation of commitment pushes the firms to increase resources to constantly study global knowledge to get success and fall into fail trap probably.

#### 3.3. Structure

The access of local knowledge and global knowledge requires a different organizational structure for support. To obtain local knowledge usually requires formal, rigorous and efficient organizational structure while a loose, flexible structure may be better to access global knowledge. However, two different organizational structures are difficult to exist in the organization at the same time.

#### 3.4. Culture

The access to local knowledge and global knowledge requires different organizational cultures, resulting in the cultural conflict. Search and use of local knowledge requires firms follow established regulations to achieve the optimal input-output ratio. Thus this kind of culture is risk averse and present knowledge focused. While to better access to global knowledge, firms need the atmosphere of risks-taking, failure tolerance and exploration encouragement.

Because there are inevitable tensions between local knowledge and global knowledge, companies must balance the relationship between the two to achieve better performance and long-term competitive advantage.

### 4. Organizational Ambidexterity

How can companies strike a balance between local knowledge and global knowledge? Some scholars have suggested that outsourcing one of two knowledge sources to other enterprises or establishing strategic

cooperative relations works [12]. But knowledge not only refers to the knowledge bases, but also includes the ability to explore and absorb knowledge, which cannot be transferred by outsourcing or strategic alliance. Some scholars believe that focus on local knowledge at a time and then focus on global knowledge in the next phase can handle this problem. But with the organizational inertia and knowledge path dependence, the transfer cost between the two knowledge models is very huge.

Some researchers proposed that companies can cultivate their capacity of organizational ambidexterity to strike a balance between local knowledge and global knowledge. This organizational ambidexterity can help companies effectively manage the current needs and adapt to environmental changes. Organizational ambidexterity becomes a dynamic capability if local knowledge and global knowledge can be strategically integrated.

#### **4.1. Architectural ambidexterity**

According to Gibson and Birkinshaw, ambidexterity in organizational structures is achieved by “developing structural mechanisms to cope with the competing demands faced by the organization for alignment and adaptability” [10]. Organization can use the semi-structure to meet the requirements of both knowledge sources. It can also use complex structures that combine organic and mechanistic structural elements. The firms can create separate units that acquire either local knowledge or global knowledge. This makes the each unit configured according to its task environment’s specific requirements. Organizational unit which accesses global knowledge is better to be small and decentralized with loose processes, while organizational unit that acquires local knowledge should be larger and concentrated [13]. The different structural establishment can help organizations to balance these two kinds of knowledge sources [14]. The successful enterprises such as Canon and Toyota are examples of structure ambidexterity. They establish the special units to arrange employees to search and absorb global knowledge, which weaken the restriction of existing routine to product innovation.

#### **4.2. Contextual ambidexterity**

Contextual ambidexterity means behavior capacity to deal with local knowledge and global knowledge simultaneously. Contextual ambidexterity essentially encourages individuals to use their ambidexterity capacity to learn knowledge initiatively and creatively. However, there is defect about contextual ambidexterity. For example, the investment to employee is too much and actually not everyone is suitable for training to be contextual ambidexterity. This ambidexterity, related with behavior, processes and beliefs of the individual situations, can guide members to arrange the reasonable time to search and absorb activities of local knowledge and global knowledge.

#### **4.3. Leadership-based ambidexterity**

Leadership-based ambidexterity means leadership as a supportive method plays an important role in establishing the capacity of organization. Gibson and Birkinshaw note that “it is an important role played by senior executives in making an organization context effective and developing ambidexterity” [15]. Managers can balance the local knowledge and global knowledge through importing the new product while developing the well-established product. Besides, management team can dynamically shift the resource between local knowledge and global knowledge according to the environment outside.

In short, in the solution to deal with the tension between local knowledge and global knowledge above, structure ambidexterity manages the balance though different business units. Contextual ambidexterity improves the capability of individuals to realize the activities in the same unit. Leadership ambidexterity requires managers to provide the decision and support to activities and shift the resource dynamically.

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