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Abstract

We present a new conceptual framework for managing conflicting strategic themes of local adaptation and global integration. The two themes conflict because local adaptation tends to value independence of local operations while global integration strives for concerted efforts for scale and scope economies. The conflicting nature of the two themes gets drastically intensified when developed economy MNCs enter emerging markets due to the vast difference between developed and emerging economies. The new conceptual framework proposed in this paper is based on Giddens' structuration theory and constructs a co-evolutionary perspective for managing the two themes. We illustrate the framework through the case Panasonic Home Appliances in China.

1. Introduction

The tension between local adaptation and global integration is an age-old issue facing most multinational corporations (MNCs). The tension gets drastically amplified when developed-economy MNCs enter emerging markets due to the vast difference between developed and emerging economies. A prevailing view of the heightened tension among MNCs seems to be the tradeoff perspective: *i.e.*, one of the two competing themes can be pursued only at the expense of the other. We claim, however, that a more constructive perspective is to view the two themes as dynamically co-evolving competitive dimensions. Namely, deeper localization invites greater global integration, which in turn enables yet deeper localization. Central to this co-evolution perspective is the ability of the organization to instead view the adaptation-integration tension as a driver for creating competitive advantage through innovative products, new organizational practices and eventually new business models.

Panasonic China is a case in point. In its nearly 25 years of presence in China, Panasonic has gradually developed local capabilities in China through multiple phases, having increasingly addressed deeper localization enabled by more extensive cross-border integration of its homegrown resources and capabilities. At a recent phase of this evolutionary discourse, Panasonic created China Lifestyle Research Center in Shanghai in 2005. This milestone resource for deeper localization

uncovered a hidden local need for a particular feature in a washing machine, and Panasonic Home Appliances in China introduced a model that met this need through a technology which was specifically developed in Japan for the new feature. Their market share in China for this category of washing machines (*i.e.*, front-loading drum type) jumped from 3% to 15% in less than one year. By adopting the co-evolutionary perspective, any MNC should be able to exploit the tension, rather than simply tolerating it, for building global competitive advantage.

2. Meeting the Challenge of Local Adaptation vs. Global Integration in Emerging Markets

Since local adaptation and global integration are two base concepts in this chapter, we start with their working definitions. We then discuss how the tension between these two themes gets amplified in emerging markets.

Local Adaptation vs. Global Integration

Local adaptation refers to the creation of competitive value relevant to local conditions and constraints. The competitive value of local adaptation might be captured in new products, marketing campaigns, managerial practices, human resource development, administrative autonomy or any other aspects of a business aiming to enhance local competitiveness. For instance, when P&G introduced liquid detergent, it had to address various local conditions and constraints such as hard water problems in some markets, the cold-water washes common in Japan and the limited use of phosphates in some environmentally concerned markets¹. Global integration, on the other hand, refers to the creation of competitive value through effective management of networks of the firm's operations worldwide. The competitive value of global integration can be realized in multiple ways:

- **Resource transfer:** The firm can gain competitiveness by redeploying its “global resources”, *i.e.*, resources that were developed in specific locations of the network, often in its home country, but can be deployed in other locations. When the destination of resource transfer is a location new to the firm, the firm is expanding its network of operations. In other words, the firm is integrating a new location into its existing network.
- **Aggregation:** The firm can aggregate its functions such as production and procurement throughout the network, either partially or fully, for scale merit.
- **Cooperation:** The firm can also gain competitiveness through cooperative relationships among its locations having complementary resources. Arbitrage is one form of the cooperative integration. Another form is the creation of innovative products by putting together local market knowledge and global resources.

As an example, consider Zara, one of the most successful global retail chains in fashion industry².

When Zara opens new stores, it transfers its resources and capabilities for managing store operations through a variety of means such as information systems, selection knowhow of store collections and well-trained store managers (resource transfer). Zara is vertically integrated, and it centralizes the design and manufacturing functions in its home base, and in principle it offers no country-specific customization (aggregation). But most significantly, Zara's competitiveness rests on its unique and innovative form of the cooperation between its home base and individual stores worldwide (cooperation).

Thus, local adaptation and global integration represent two rather distinct competitive themes. Local adaptation emphasizes local relevance in individual locations and tends to value *independence* and *diversity*. On the other hand, global integration stresses the effectiveness of the whole network and tends to strive for *cooperation* and *uniformity* (which is important for resource transfer and aggregation). The tension between the two themes is fundamental, and most MNCs must cope with this tension. P&G, for instance, despite the intrinsic pressure for local adaptation for its lifestyle-sensitive products, must also address the challenge of global integration in order to remain competitive (cost competitiveness through aggregation, for instance). Similarly, Zara, despite its strategic focus on aggregation, must also address the challenge of local adaptation as their stores in places such as Tokyo and New York are likely to meet significantly different customer preferences.

The Tension Amplified in Emerging Markets

The tension between local adaptation and global integration exists rather universally for MNCs, but when developed-economy MNCs enter emerging markets, the tension gets drastically amplified due to the vast difference between developed and emerging economies. For instance, when Wal-Mart entered the Chinese market, it was challenged by a host of local conditions and constraints it never faced in developed economies: *e.g.*, transportation and communication infrastructure incompatible with Wal-Mart's logistics model, consumer behavior very different from bulk purchasing in the U.S., and government's regulations and guidelines often at odds with the core of Wal-Mart business model³.

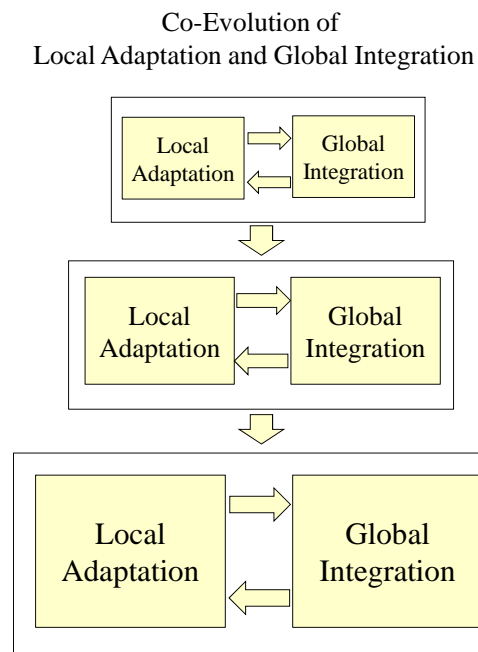
Faced with this amplified tension between local adaptation and global integration, a prevailing view of the two themes seems to be the *tradeoff perspective*: namely, the view that one theme can be pursued only at the cost of not sufficiently addressing the other. In the case of Wal-Mart China, its strategy was largely driven by its effort to transplant the homegrown business model in China, and Wal-Mart was not very willing to locally adapt their practices in any substantial way (*i.e.*, global integration at the expense of local adaptation). Even after several years of struggling performance, Joe Hatfield, CEO of Wal-Mart Asia, who was also overseeing Wal-Mart China, stated, "We have

the core beliefs and operating strategy of American stores, but it is critically important to let Chinese customers understand those. We should crawl, walk and eventually run”.

On the other hand, the other tradeoff option, namely, the pursuit of deeper localization without substantial deployment of global resources is not really a sensible choice for developed-economy MNCs as their local rivals are likely to outperform them along this dimension of competition.

3. Co-evolution Perspective⁴

In many specific situations such as development of products for local needs while considering the benefits of global scale, the tradeoff seems to be the reality one has to accept. However, the tradeoff perspective fails to serve as an effective strategic framework that recognizes the competitive importance of both local adaptation and global integration. A more constructive perspective for MNCs is to view the two themes as *dynamically co-evolving competitive dimensions*. Namely, greater global integration enables deeper localization, which in turn invites yet deeper global integration. Suppose, for instance, an MNC creates a local market research unit for deeper understanding of local needs (deeper localization).



Unique local market needs, when identified, might represent an opportunity to build more extensive cooperative relationships with the product development group in the home country (greater global integration). Once the cooperative relationships are built, the local market research unit may have greater access to various technological enablers for new product possibilities, which in turn help the unit identify yet deeper local needs (yet deeper localization).

Of course such co-evolution of capabilities for local adaptation and global integration typically face various organizational barriers and does not happen without a proper framework to nourish it. We call such a framework *tension-embracing structure*. A tension-embracing structure manifests as a collection of organizational resources and capabilities that help individuals and organizational units to embrace the two competing themes and views the tension as a driver for creating competitive value. More concretely, such resources and capabilities include:

- Routines practiced by members of a local market research unit to extend their understanding of

relevant global resources such as technological enablers available for new products;

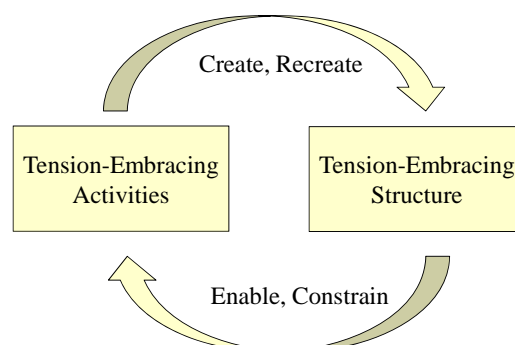
- An organizational unit with an active mission to address the challenges of both local adaptation and global integration;
- A promotional policy that requires substantial managerial experience in a local subsidiary for promotion in its parent business division;
- Human resources equipped with the mindset to embrace the adaptation-integration tension;
- Distribution of authority between a business division in the home country and its overseas subsidiaries;
- Quality of trust relationships between a business division in the home country and its overseas subsidiaries; and
- Distribution of information in a network of relationships involving a business division in the home country and its overseas operations.

The last three instances are examples of *relational resources*, which are defined as “qualities of relationships that enable people to work together”⁵.

A tension-embracing structure enables individuals to engage in activities that address both local adaptation and global integration. We call such activities *tension-embracing activities*. For instance, suppose a local market research unit has a mission of identifying local needs and proposing product concepts enabled by global technology resources. In pursuing the mission, the unit leader unceasingly encourages his staff to consider technological enablers and cost consequences when they craft product proposals. He also sets up regular meetings between his staff and the technology group of the business division in the home country, and maintains good cooperative relationships with the home base. Given this supportive environment, his staff is encouraged to go far beyond just local market studies and to seek out global resources that can be deployed for new product development. In fact, the very knowledge of available global resources, particularly technology enablers, might help the staff creatively articulate hidden local needs. Thus, the tension-embracing structure at the market research unit encourages and supports the research staff to engage in the tension-embracing activities.

Now suppose that the tension-embracing activities of the staff have repeatedly resulted in successful introduction of new products in the local market. These successes are likely to alter the trust relationships between the business division in the home country and the local market research unit, thereby recreating the tension-embracing

Dynamics of Tension-Embracing Structure



structure through renewed relational resources. In general, it is this dynamics of tension-embracing structure that propels the co-evolution of local adaptation and global integration⁶.

4. Panasonic in China

Panasonic in China offers an interesting illustration of the co-evolution perspective. In this section, we will provide some relevant background information relevant on this case.

In his historic visit to Japan in 1978, Deng Xiaoping met with Konosuke Matsushita, the founder of Panasonic, and asked him to help China modernize its industries. Konosuke Matsushita passionately responded to the request, and Panasonic immediately followed the commitment through a large of number of technology licenses to China. In 1987, Panasonic established its first joint company in China, Beijing-Matsushita Color CRT (BMCC). BMCC was highly successful and represented the cornerstone of Panasonic's extensive entries in China that began in 1990. Around this time, Panasonic was organized around considerably independent *Business Units* (BUs)⁷ segmented at the level of product categories such as washing machines, air conditioners, video players, and TV sets. Panasonic had over 100 BUs, and many of them established their own manufacturing companies in China, over 40 of them often in different locations, in the 1990's.

During the period from 2000 to 2006, Panasonic went through a radical transformation under the leadership of then CEO Kunio Nakamura. In 2003, as part of this transformation, Panasonic aggregated Business Units under higher-level units they call "Business Domain Companies" in order to minimize duplication of businesses and more effectively share resources such as R&D, product development, manufacturing and marketing, across related businesses. Through this reorganization, Panasonic created 14 Domain Companies, and one of them was the Home Appliances Company. Home Appliances Company was headquartered in Kusatsu, a city about 20km east of Kyoto. Correspondingly, there was an increasing realization in China that individual manufacturing subsidiaries of BUs were not competitive individually. With Domain Companies given the mission of creating cross-business synergies, there was a parallel effort in China to aggregate subsidiaries of related BUs. So, for instance, Panasonic Home Appliances China (PHACN) was established in 2003.

At the corporate level, Panasonic established Panasonic Corporation of China in Beijing in 2003, the regional management company for China, offering various higher-level shared services for manufacturing subsidiaries of BUs such as sales channel development, R&D, logistics, legal administration, and support for human resource management.

5. Co-evolution at Panasonic Home Appliances in China

Several manufacturing companies of Panasonic Home Appliances China are located in a city called Hangzhou. Hangzhou is a tier-one city located about 180km southwest of Shanghai, with population of about 8 million. Hangzhou has Economic and Technological Development Zone, which houses a large number of foreign firms including about 80 Japanese companies. Panasonic considers Hangzhou as a key location for its home appliances operations in China, and has gathered several of its home appliances manufacturing companies in the Development Zone. But due to the historical development of manufacturing plants by strongly independent BUs, some of its home appliances subsidiaries are not located in Hangzhou.

Manufacturing-Centric Beginning

As stated above, Panasonic entered China extensively in 1990's, establishing a large number of manufacturing subsidiaries. In the area of home appliance products, these manufacturing companies include Panasonic Home Appliances Washing Machines Hangzhou, Panasonic Home Appliances Air Conditioners Guangzhou, Panasonic Home Appliances Refrigerators Wuxi, Panasonic Home Appliances Rice Cookers Hangzhou, and Panasonic Home Appliances Hangzhou Export (dishwashers and vacuum cleaners). This extended network of operations was significantly motivated by labor arbitrage and considerable portions of their output were for export. In fact, 1990's, Panasonic positioned China as its global manufacturing base, and its BUs transferred resources in a variety of forms to their subsidiaries in China: *e.g.*, manufacturing process know-how, quality management techniques, and supply chain management. Through arbitrage and resource transfer, Panasonic has solidly integrated its operations in China into its global manufacturing network. In the early 2000's, in the area of home appliances, a large portion of its global productions (often over 30%) came from China.

On the local adaptation side, the opening and subsequent development of manufacturing subsidiaries meant the creation of local competitive value in the form of manufacturing facilities operational under the local conditions and constraints as well as local human resource development. In particular, key people on the shop floor, such as those in charge of production lines, were given extensive training at respective BUs in Japan. Thus, in this beginning phase, many locations in China were integrated into the Home Appliances' manufacturing network, and in the very process of this integration, the competitive value relevant to China's local conditions and constraints was created mainly in the manufacturing arena.

Notable also in this phase was the gradual buildup of in-factory design and development teams. Resource transfer in the design and development function was accomplished through extensive training of key local staff at the training site in Kusatsu as well as through on-sight coaching by

engineering expatriates sent from respective BUs in Japan. As in the case of the manufacturing function, the creation of local competitive value was mainly through this training of local personnel, who were presumably more familiar with local conditions and constraints. The product localization in this phase, however, was rather limited, and did not go much beyond simple modifications of products developed in Japan. There were some attempts to design and introduce more uniquely local products, and product planning staff from Japan was stationed locally for a short period of time, but their effort did not result in products significantly successful in the local market.

Development of Local Product Planning Capabilities

Panasonic in its home country has a strong commitment to extensive studies on how individual households and people use home electronics products and their general lifestyles related to the use of such products. Home Appliances Company, for instance, has a Lifestyle Research Center which offers such study services for all of its BUs. More precisely, each BU has its own product planning team, and the Home Appliances' Lifestyle Research Center closely works with product planning teams of the BUs.

In overseas, however, Panasonic did not have similarly extensive lifestyle research activities, and their products in the markets outside Japan were largely modifications of base models developed for domestic markets. Although their overseas sales were continuously growing, there was a clear awareness among the top management at Panasonic in early 2000's that without deeper understanding of local markets, their competitiveness in overseas markets, particularly in emerging markets, would never reach a position critical for Panasonic's globalization agenda. This concern was particularly acute for China due to its mega-size and rapid economic growth as well as the long history of Panasonic's commitment in China that dates back to Konosuke Matsushita's promise to Deng Xiaoping.

Addressing this concern, Panasonic created China Lifestyle Research Center in Shanghai in 2005. The Center represented Panasonic's first serious attempt in overseas for a deeper understanding of local lifestyles. The Center's director had extensive experience as a product planner at a home appliance BU and closely worked with the Home Appliances' Lifestyle Research Center in Kusatsu. The director carefully hired local staff and personally gave them extensive training. Thus, the director was a powerful source of resource transfer. Through the Center in Shanghai together with the increasingly mature R&D team in Hangzhou, China was beginning to be integrated into the Home Appliances' product planning and development network, which represented the second wave of integration on top of the Company's manufacturing network.

The Lifestyle Research Center in Shanghai has proved to be the cornerstone resource creation in China for deeper localization. The properly trained staff at the Center in Shanghai has begun to collect critical knowledge and insight about the local lifestyles related to the use of home appliances. In addition to group interviews and other conventional marketing research, the staff visits individual homes and studies, for instance, their kitchens for various features and characteristics such as the size of the kitchen, the height of the kitchen counter, the location of their refrigerator, and the measures of the kitchen entrance. One of their findings is about the size of the space for the refrigerator in the kitchen. While the standard size of Panasonic refrigerators is 65cm wide, the finding shows that the typical refrigerator space in kitchens in Chinese households is 55cm wide. Based on this finding, Panasonic developed and introduced slimmer 55cm-wide refrigerators into the Chinese market. The market enthusiastically responded to this localization, and the sales increased ten-fold.

Another key contribution of China Lifestyle Research Center is the creation of a local lifestyle database. The database is quite extensive, covering many product categories for customer preferences specific to different income groups and regional characteristics. For instance, rice cookers must consider such regional preferences as short-grain rice in northern China, medium-grain rice in central China and long-grain rice in southern China. Similarly, rice porridge is popularly served for breakfast in China and many use rice cookers to prepare porridge. But in the north, thin porridge is preferred while in the south the porridge is served much thicker. Detailed lifestyle information of this sort was systematically collected into the database and made available to BUs and their subsidiaries in China. Note that the assembled information itself represents a value for local adaptation, but its availability anytime anywhere for BUs and their subsidiaries promotes resource sharing and hence strengthens cross-border integration.

Home Appliances in China Increasing its Local Autonomy

The mission of the Center, however, goes beyond mere market studies, and the Center aims to propose new product concepts based on systematically collected market data, knowledge on technological enablers, and cost considerations. A member of the staff at the Center is usually assigned to a particular product category such as washing machines and refrigerators. Staff members of the Center have regular meetings with engineers of corresponding BUs and their local subsidiaries as well as Home Appliances' Technology Center in Kusatsu. Through repeated meetings of this sort, staff members of the Center in Shanghai got to know their engineering counter parts in Kusatsu and local subsidiaries and they established informal networks with them. The staff members then began to interact with these engineers more informally through telephone calls and email exchange. Through formal and informal networks, the Center's staff in Shanghai gained technological

knowledge, and the engineers in home appliance bases in China (most prominently Hangzhou, Guangzhou and Wuxi) and Kusatsu developed a deeper understanding of the local markets in China. In short, the Lifestyle Research Center has developed effective cooperative relationships with BUs in Kusatsu and their local subsidiaries, and this was possible precisely because of the Center's ability to create deeper local knowledge. In other words, deeper local adaptation has led to correspondingly profound global integration.

A host of successful product introductions in the local markets through the cooperative relationships has resulted in solid trusting relationships between the Center in Shanghai and the engineers in Hangzhou on one hand and the BUs and Home Appliances Company in Kusatsu on the other hand, which have in turn altered the authority distribution towards greater autonomy of the local operations. Both as a placeholder and as an accelerator for this increasing local autonomy, Panasonic Home Appliances Hangzhou was established in 2003. Also in 2009, Panasonic Home Appliances R&D Hangzhou was established, with over 200 engineers, mostly local staff members. This establishment also signifies the increasing local autonomy of China's Home Appliances.

With the local R&D building up its capabilities, the decision on new product introduction for the local markets has, in effect, come under the local authority since around 2008. The final formal decision still belongs to respective BUs in Kusatsu, but this is to ensure global coherence for basic design elements such as chassis for washing machines. Thus, the deeper integration enabled by deeper cooperative relationships has now promoted the local autonomy, which is a critical foundation for local value creation.

6. Dynamics of Tension-Embracing Structure: China Lifestyle Research Center

We will first introduce another success case of new product introduction initiated by the Lifestyle Research Center in Shanghai. The case involves washing machines. The research staff at the Center visited and studied over 300 households on how they use their washing machines. One of their key findings was that over 90% of the households was hand-washing their underwear although they all had washing machines. Through in-depth interviews, the research staff identified several reasons, but the key reason was a concern about bacterial infection through underwear when it was washed together with outerwear which was more likely to have been exposed to bacteria in the external environment. Based on these findings, the research staff came up with a product concept for a washing machine with a bacteria sterilization capability. They presented the product concept at one of the regular meetings with Home Appliances' Technology Center in Kusatsu. The feasibility of a washing machine with a bacteria sterilization device using silver ions was confirmed at the meeting,

and the Technology Center in Kusatsu in collaboration with Shanghai Jiao Tong University developed the sterilization device. Washing machines with a bacteria sterilization function were first introduced into the market in 2007 for the front-loading drum type. In less than one year, Panasonic's market share in China for this type of washing machine jumped from 3% to 15%.

In general, deeper localization exposes "missing resources" (*e.g.*, bacteria sterilization technology for washing machines), which then invites resource transfer and hence global integration (*e.g.*, development and transfer of the bacteria sterilization device). The market success of washing machines with bacteria sterilization is a superb example of the passage from deeper localization to missing resources revealed to more extensive integration, which we have observed in other firms as well.

At the same time, it is interesting to note that before Panasonic's launch, there were already washing machines with bacteria sterilization in the market. But, in China, there were over 80 manufacturers of washing machines, and it was not uncommon that newly introduced functions were not as trustworthy as their manufacturers claimed. So, the market did not always positively respond to product introduction with new functions. However, Panasonic was the first major brand in China to introduce washing machines with bacteria sterilization. Panasonic also publicized its study data, proving the effectiveness of its bacteria sterilization device. In addition, Panasonic made it open that the device was developed in collaboration with Shanghai Jiao Tong University. This university is one of the premier institutions in China, and the collaboration with the institution was likely to have contributed to the market acceptance of Panasonic's washing machines with this special feature.

Now we will trace the dynamic development of the tension-embracing structure through a series of tension-embracing activities initiated or driven by the Research Center in Shanghai. First note that the most critical element of the tension-embracing structure at the establishment of the Center was the director of the Center himself. His strong conviction that product planning requires in-depth understanding of needs, seeds (technological enablers) and cost through his extensive experience at a BU's product planning group was a primary resource in the initial tension-embracing structure. The director then established the Center's mission as the creation of market-leading product concepts, going beyond mere studies of local lifestyles. Through this effort, the Center's mission itself became a critical resource of the evolving tension-embracing structure.

The director then created and exercised a rigorous hiring practice to identify people with proper talent matching to the Center's mission. A large number of applications were screened and about 20 applicants were invited for an in-depth interview for each position. At one of the tasks for the

interview, applicants were given raw data and asked to interpret the data. Some applicants gave superficial interpretations, yet others were able to extract some interesting insights, which is critical for conceiving market-leading product ideas. Once applicants passed through the interview process and were employed, they were given training to gain knowledge on technology and cost aspects of product concept creation. In line with the Center's mission, the director emphasized data interpretation, not data collection. Ultimately, data interpretation is expected to culminate as new product concepts, and at this point, the very act of interpretation links the two themes of local adaptation (local lifestyle data) and global integration (transfer of global resources such as technological knowledge). Thus, hiring and training activities lead to the further evolution of the tension-embracing structure through the Center staff resources that can address the two competitive themes.

Note that the key contribution of the Center's director was the *structuring* of the workplace environment so that people at the Center and its vicinity (*i.e.*, BUs and their subsidiaries in China that the Center works with) could more effectively address both local adaptation and global integration. Most notably, his structuring included the creation of the Center mission, the implementation of the hiring practice, and the arrangement of regular meetings with Kusatsu for the Center staff. Given this initial tension-embracing structure that the director nurtured, the Center's staff was able to more effectively initiate tension-embracing activities. But, more profoundly, the Center's staff was also able to rebuild and strengthen their capabilities for tension-embracing activities as, for instance, they repeatedly participated in meetings with engineers in Kusatsu. Thus, the impact of the director's structuring was far-reaching, and fundamentally of a *recursive nature*, kick-starting the snow-balling chain of activity-structure reinforcement cycles (see the diagram, *Dynamics of Tension-Embracing Structure*).

Now consider relational resources involving the Center in Shanghai and BUs in Kusatsu working with the Center. We will see how activities of people in the relationships alter the nature of relational resources (and hence the tension-embracing structure). Recall the case of washing machines with bacteria sterilization. It is not difficult to see the Center's role was not so much of discovering "hidden lifestyle" such as hand-washing practice of underwear in China as there were already washing machines with bacteria sterilization in the market prior to Panasonic's launch. As the director of the Center noted, the tough part of their task is not to collect data but to convincingly convey the interpretation of the data to Kusatsu. Thus, the more significant role of the Center was to back up their product concepts with reliable, in-depth market data collected systematically, in order to secure Kusatsu's approval and commitment for developing proposed products⁸. Here consider the type of relational resource characterized by the distribution of information in the network of people

working together. In light of the distribution of information in the network of relationships involving the Center in Shanghai and the BUs in Kusatsu, one can say that a significant role of the Center is to generate the bulk of information at a locus of the network closer to the competitive theme of local adaptation, thereby altering the configuration of information distribution in such a way as to strengthen the power of those involved in local adaptation. Here again, the activities of the Center's staff reshaped the landscape of the tension-embracing structure, this time through changes in the distribution of information in the network of Shanghai-Kusatsu relationships.

Lastly, we consider another type of relational resources, namely trust relationships between the Center in Shanghai and the BUs in Kusatsu. The series of success cases initiated by the Center has definitely improved the working relationships between the Center and the BUs, which in turn positively altered the trust relational resources between Kusatsu and its local operations. Given the increased local autonomy since around 2008, it seems that the tension-embracing structure has matured substantially to accommodate the greater extent of local adaptation that the increased autonomy might create.

7. Panasonic in the Next Round of Global Competition: From Spontaneous to Deliberate Co-evolution

Looking through the lens of co-evolution into the future of its global competition, one can see some interesting moves Panasonic has taken. In 2009, Panasonic established Lifestyle Research Center in Europe. Some of the knowhow accumulated at China's Research Center was deployed at this European Center. In 2010, a group with similar missions and functions of lifestyle research was also created in India. These two moves represented the geographical dimension of co-evolutionary expansion. Business domains represented another such dimension. In fact, China's Center, in addition to Home Appliances, started working with other Domain Companies such as AVC Networks (TV, computers, DVD players, etc.) and Panasonic Electric Works (house/building interiors, personal care, healthcare, etc.). The Center's most visible outcome has been in the area of home appliances ("white goods"), as they were more sensitive to differences in lifestyles. AVC products ("black goods"), on the other hand, were largely standardized "global products". But, since 2010, the Center has also been undertaking studies on possible local features of AVC products such as how TV sets are attached securely to the wall or a large piece of furniture in the living space.

These two dimensions of co-evolutionary expansion, geography and business, are both important for Panasonic's next round of global competition, but perhaps the scope of the expansion is most profoundly enriched by Panasonic's recent strategic move of "Marugoto" solutions. "Marugoto" in

Japanese means “all-inclusive” or “wall-to-wall”, and Marugoto solutions are integrated electric/electronic systems for the entire house or the entire building, from electric wiring to kitchen and bath systems to networked appliances and electronic products. First note that Marugoto solutions create tremendous opportunities for significantly greater local adaptation, well beyond the possibilities that individual products can offer. Second, Marugoto solutions make it possible to exploit the drastically greater complexity of global integration deepened by the extensive needs for cross-business cooperation. A complexity of this magnitude is a daunting management challenge for any MNC. However, it is also a strategic asset of a firm because once it addresses the challenge and learns how to exploit it for competitive advantage, this very advantage tends to deter imitation due to the complexity engrained in the advantage.

Now given these future prospects for leveraging the co-evolution dynamics for competitive advantage, a key question we ask is how well Panasonic is prepared to capitalize on this potential. Panasonic’s co-evolution discourse described above certainly suggests their capabilities to co-evolve the two themes of adaptation and integration. But their co-evolution was a rather orderly step-by-step development where each step was a natural consequence of, or a spontaneous response to, another step. For instance, the shift in authority distribution towards the local operations (adaptation) was a peaceful, spontaneous response to the development of a cooperative trusting relationship between Kusatsu and China (integration), which in turn was a natural consequence of the local capability development for gaining deeper lifestyle insights backed by systematic field studies (adaptation). Throughout the evolutionary discourse, a “comfortable” balance was maintained between local adaptation and global integration, and there was no “hurricane” to swing the balance to the overdevelopment of one of the themes. In general, the co-evolution can take place through corrective efforts to recover from the “hurricane damage” to the balance. Given this full dynamics of co-evolution, our sense is that Panasonic falls short in deliberately leveraging the full range of options available for pursuing the two competitive themes. In particular, the extent of local adaptation has been fairly mild, and hence its ability to “invite” greater integration has been correspondingly limited. In the remainder of this section, we discuss three possible options towards the full-scale dynamics of co-evolution.

Establishing Strategic Co-evolution Outposts

At Home Appliances Company, the BUs, their subsidiaries and members of the Lifestyle Research Center working with BUs were the primary contributors to the co-evolution, and hence the co-evolution was more or less contained within each BU. But the co-evolution could take place outside BUs and directly under the top management of Home Appliances Company.

At GE's Healthcare Division, for instance, a small local organization, called the Local Growth Team (LGT), was created in China outside Healthcare's business units⁹. The LGT directly reported to the head of Healthcare Division. The LGT's mission was to develop and distribute drastically low-cost ultrasound medical imaging systems. These systems were originally developed for advanced markets and their prices ranged from \$100K to \$350K. It was not possible to reduce the cost sufficiently for emerging markets by stripping off various features and functions of the developed-economy models. The emerging-economy models had to be designed and developed from scratch. The effort to develop such models was not placed within a business unit of Healthcare Division, as a business unit tended to be preoccupied with their mainstream customers in developed-markets and they were unlikely to understand the emerging-markets. Hence the LGT was locally created in China directly under Healthcare. The top management of Healthcare ensured the LGT access to the GE's global R&D. Only with the cutting-edge R&D resources made available to the local team, was the LGT able to develop an emerging-market model with completely new architecture and drastically low cost. GE was able to introduce this model to the local markets at the price of around \$15K.

The autonomy of the LGT was critical for the success, and unlike the case of Panasonic, the autonomy was not developed gradually, but rather it was deliberately instituted top down. Note also that the LGT was well integrated into the GE's global R&D network, again through top-down deliberate decision. The autonomy for undisturbed local adaptation and the cooperation for integration of cutting-edge technologies were simultaneously instituted top down. Such creation of local outposts for top-down deliberate co-evolution may well complement the BU-contained gradual co-evolution Panasonic seems to excel in.

Jumpstarting the Co-evolution through Adaption-Intended Acquisition

Although Panasonic entered China mostly through joint ventures, later many of them became 100% subsidiaries. The expansion of their presence in China was largely driven by organic growth through the gradual transfer of resources and capabilities. While this expansion strategy was aligned well with their step-by-step, well-balanced co-evolution dynamics, Panasonic was still a minor player in many of its businesses in China. Home Appliances in China, in particular, still falls far behind domestic players. For instance, as to washing machines, in which Panasonic had established a relatively stronger presence, it had a 9% of market share in 2010, ranking 3rd after domestic makers, Haier (27%) and Little Swan (15). For other categories, the presence of Panasonic was far weaker. For the refrigerator, Panasonic's market share was 2% in 2010, ranking 10th falling incomparably behind dominant domestic players such as Haier (22%), Midea (12%) and Meiling(11%). Similarly, for air conditioners, its share was 2% in 2010, ranking 8th, again markedly behind domestic players such as Gree (26%), Midea (22%) and Haier (11%).

Here recall the case of Wal-Mart China introduced earlier. Despite its overwhelming leadership in global retail industry, Wal-Mart still ranked 20th in China in terms of sales in 2004. After nearly 10 years of struggle characterized by its single-minded integration focus, as opposed to a more balanced adaptation-integration engagement, Wal-Mart finally shifted its China strategy and made a series of concerted strategic moves for deeper localization. One of them was acquisition. In 2007, Wal-Mart acquired Trust-Mart for \$1.32 billion. Trust-Mart was ranked 13th in sales in 2004, significantly above Wal-Mart in China. With the acquisition, Wal-Mart surpassed Carrefour, which was ranked 5th in China in 2004.

The combined scale was critical for their competition in China, but more significantly, Trust Mart, being Taiwan-based and without the Wal-Mart legacy often incompatible with the local conditions and constraints in China, was far more deeply localized in China than Wal-Mart. Given the Wal-Mart's legacy business model that was developed in the drastically different environment, the Trust-Mart acquisition was the cornerstone for Wal-Mart's accelerated local adaptation in China. Unlike Panasonic's self-contained gradual co-evolution, Wal-Mart created a strong swing towards local adaptation through the acquisition, which in turn opened up a "blank space" to fill in with strategic moves to promote global integration. Again, this acquisition-driven co-evolution may well be a powerful complement to the self-contained gradual co-evolution Panasonic has been pursuing in China.

Cultivating the Co-evolution Mindset

Recall the dynamic nature of tension-embracing structure that we illustrated through the series of activities undertaken by the Lifestyle Research Center in Shanghai and the BUs in Kusatsu. Here the tension-embracing structure was constantly created and recreated through mindful activities, as witnessed in the director's leadership at the China Lifestyle Research Center and the staff interpreting the data in terms of lifestyle, technology, and cost implications. This was an excellent example of the dynamics of tension-embracing structure unfolding positively. However, note that in general, tension-embracing structure can also constrain and even discourage tension-embracing activities. A good example is organizational matrix structure. A typical matrix structure for MNCs has two dimensions, one representing the geography mainly for local adaptation, and the other embodying the business primarily for global integration. Many corporations adopted the matrix scheme, only to abandon it after some years of unsuccessful attempts to make it functional. The key reason behind this near universal failure was the rigidity of the formal matrix structure which constrained and often discouraged tension-embracing activities, instead of facilitating and enabling them. Thus, as an executive correctly observed, "the challenge is not so much to build a matrix

structure as it is to create a matrix in the minds of our managers”.¹⁰

“A matrix in the minds of our managers” is essentially what we mean by the co-evolution mindset. But, to give a little more precise definition, we first elaborate on the meaning of mindset. “Mindset”, in the context of the co-evolution perspective we have been discussing, is the *interface* between tension-embracing activities and tension-embracing structure, and it refers to cognitive scheme shaped by two primary dimensions of mental engagement, namely, *differentiation* and *integration*. In the discussion of human cognitive capacity in general, “differentiation” refers to the extent to which human mind can withstand distinctive elements in the given domain of mental operation while “integration” measures the mental ability to exercise synthetic views on dissimilar elements in the given cognitive domain. When one can deal with a larger (smaller) number of more (less) distinct elements, the person is said to have a mindset with *high-differentiation (low-differentiation)*. Similarly, when a person can hold a more (less) profound and more (less) extensive synthetic view over diverse elements, his mindset is of *high-integration (low-integration)* nature.¹¹ Now, in the context of the co-evolution perspective, differentiation refers to the capacity for accommodating the variation that results from or can result from local adaptation while integration corresponds to the synthetic outlook associated with the extent of global integration. The co-evolution mindset is then the high-differentiation/high-integration mindset in the context of pursuing both local adaptation and global integration.

Given the definition, now the question is how the firm can actually cultivate the co-evolution mindset so that its tension-embracing structure can facilitate, rather than constrain, tension-embracing activities. Again, a good example is Panasonic’s Lifestyle Research Center in Shanghai, more specifically what the Center’s director has done since its launch. As discussed earlier, the essential nature of the director’s contributions was the *structuring* of the workplace environment so that people at the Center and its vicinity (*i.e.*, BUs and their subsidiaries in China that the Center works with) could pursue local adaptation and global integration. In other words, he was driving the co-evolution process, and through participation in the process, other people were acquiring the co-evolution mindset. We call managers in charge of driving the co-evolution process *co-evolution drivers*. Thus, one effective way of nurturing the co-evolution mindset in organization is to allocate co-evolution drivers in key positions for local adaptation or global integration.

It should also be noted that the full-scale dynamics of co-evolution is likely to necessitate top-down leadership engagement. In today’s global competition, the top management simply cannot afford to be a mere observer for spontaneous co-evolution. The top management should serve as a critical co-evolution driver and proactively recreate the tension-embracing structure in order to lead more

deliberate co-evolution strategies.

8. Conclusion

In today's global competition, an effective strategic framework for MNCs is to create and harness complexity so that the competitive advantage they derive is less likely to be copied by their competitors. A source of such complexity is often a pair of competing strategic themes, with each representing a critical dimension of global competition. The tension intrinsic to such a pair, when addressed properly, can be a great source of competitive advantage, as we have discussed through the case of local adaptation vs. global integration. The adaptation-integration tension in global competition is increasingly intensified as the locus of growth shifts from developed to emerging economies. MNCs, from developed or emerging economies, must cope with the vast differences between the two economies, and hence the intensified tension between the two themes. But again, the intensified tension means greater complexity *available* to the firm. It is tempting for the firm, however, to view the tension from the tradeoff perspective, as the tradeoff is an immediate real issue in many specific situations. As we discussed, from a larger strategic standpoint, the co-evolution perspective, coupled with the notion of dynamic tension-embracing structure, is more appropriate in framing and exploiting the complexity, and leveraging the intensified tension for global competitive advantage.

Thus, a good strategy for a developed-economy MNC to outperform its local rivals in an emerging market is to create, towards increasing complexity, an effective tension-embracing structure that accommodates global resources unavailable to the local rivals. Similarly, a good strategy for a developed-economy MNC to outperform its global competitors is to cultivate a superior tension-embracing structure, again of increasingly complex kind, that is capable of deeper localization and correspondingly profound global integration while its global rivals are suffering from the tradeoff perspective for the two competing themes.

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Endnotes

¹ C. Bartlett and S. Ghoshal, "What is a Global Manager?", Harvard Business Review, 2003.

² P. Ghemawat and J. Nueno, "Zara: Fast Fashion", HBS case 9-703-497, 2006

³ A. Farhoomand, “Wal-Mart Stores: ‘Every Day Low Prices’ in China”, Asia Case Research Center, the University of Hong Kong, HKU590, 2006.

⁴ Another articulation of “co-evolution perspective”, without the notion of tension-embracing structure, is given in Y. Sugiyama, “The Evolution of Global Strategy” (in Japanese), Yuhikaku, 2009.

⁵ M. Feldman, “Resources in Emerging Structure and Processes of Change”, *Organization Science*, Vol.15, No.3, pp. 295-309.

⁶ The notion of “structure” here follows Giddens’ dynamic view of the concept. In his view, “... structure exists only in and through the activities of the human agents”, A. Giddens, “A reply to my critics” in D. Held, J.B. Thompson, eds. *Social Theory of Modern Societies: Anthony Giddens and his Critics*, Cambridge University Press, Cambridge, 1989, p.256, cited in W. Orlikowski, “Using Technology and Constituting Structures: A Practice Lens for Studying Technology in Organizations”, *Organization Science*, Vol.11, No. 4, 2000. Thus, this dynamic notion of “structure” is intrinsically equipped with self-renewing force which expresses itself through “the activities of the human agents”. In the context of “tension-embracing structure”, tension-embracing activities represent the engine of the co-evolution of the two competing themes (local adaptation and global integration).

⁷ More precisely, these “Business Units” were called “Product Divisions” within Panasonic till the large-scale reorganization in 2003 led by then CEO, Kunio Nakamura.

⁸ This insight on the role of the Lifestyle Research Center is discussed in “On the Localization Pathways of a Japanese Home Appliances Firm: A Study of the Firm in the Chinese Market” (in Japanese), Kyoko Shiramomo, Degree-completion Thesis, University of Tokyo, 2007.

⁹ J. Immelt, V. Govindarajan and C. Trimble, “How GE is disrupting itself”, *Harvard Business Review*, 2009.

¹⁰ C. Bartlett and S. Ghoshal, “Matrix management: Not a structure, a frame of mind”. *Harvard Business Review*, 1990.

¹¹ For an in-depth discussion on “mindset” in the context of global strategy and organization, see “5. Cultivating a Global Mindset” in “The Quest for Global Dominance: Transforming Global Presence into Global Competitive Advantage”, A. Gupta, V. Govindarajan and H. Wang, 2nd edition, Jossey-Bass, 2008.