

Dynamic Capabilities and its Mechanisms of Firms: constructing an analytical framework of the diversity of Japanese firms¹

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ABSTRACT.

This paper focuses on the diversity of trajectories between Japanese firms that is more clearly observed after the burst of Japanese bubble economy in the beginning of 1990s. Some Japanese and foreign researchers analyze this phenomenon in terms of corporate governance or human management. However, these studies tend to consider the diversity of Japanese firms as a new phenomenon emerged during lost decades of Japanese economy in 1990s and 2000s. In other words, the diversity of Japanese firms is conceived as the diversity of transition from a national representative firm model. Our purpose is to examine the origin of different trajectories between firms from the historical perspective. To do it, we pay attention to the concept of dynamic capabilities, as one of organizational capabilities, elaborated by evolutionary economists. From this point of view, we will analyze a mechanism to construct dynamic capability in a firm and its diversity. In particular, we will examine a role of human resource development that is played in the creation and development of dynamic capabilities in the firm.

Keywords: diversity of Japanese firms, dynamic capabilities, core competence, human resource development

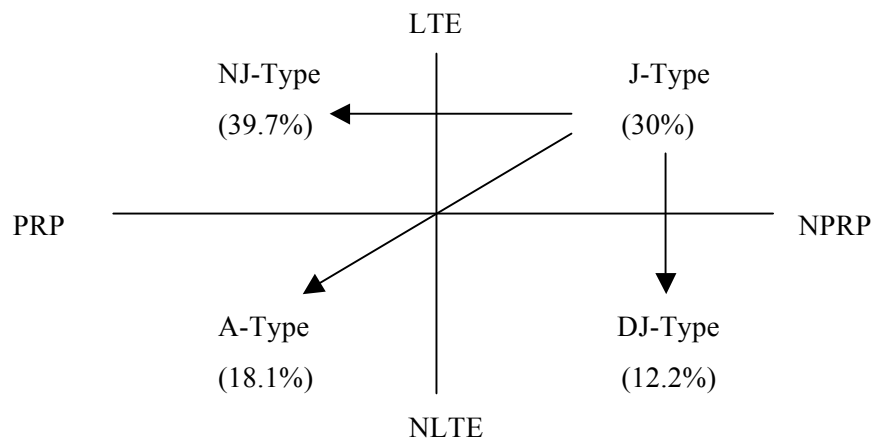
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INTRODUCTION

The Japanese economy entered in the lost decade or two lost decades after the burst of financial bubble in the beginning of 1990s. In addition, we observed the accelerated transition from industrial-based economy to knowledge-based economy in this period. The business environment around Japanese firms changed dramatically. Against this important transformation of macro- and meso-environment, most Japanese firms got down to restructure systematically their organizational structures and strategies to survive in the process of selection. Through some studies about Japanese firms in this period, one important problematic is posed in the theory of Japanese firm. That is the diversity of Japanese firms, which means that there exist several logics of firm growth in a same macro/meso environment, namely in Japan.

Traditional theories of Japanese firm suppose a representative firm model, such as Toyotism (Coriat, 1991), Lean production system (Womack et al., 1990) and J-firm model (Aoki and Okuno, 1996), in order to generalize and theorize organizational characteristics of growth and competitiveness of Japanese firms. However, we observed different measures and trajectories to overcome the very difficult situation in the crisis of Japanese economic and the important transition of social-economic regime. Some studies revealed the variety of trajectories from the representative Japanese firm model, represented by J-firm model. Jackson and Miyajima (2007) and Aoki and Jackson (2008) show two hybrid models between J-firm and A-firm : Type I hybrid with market-oriented finance and ownership and relational management and employment characteristics, and Type II hybrid with market-oriented employment patterns and low levels of lifetime employment and unionization. Miyamoto (2008, 2011) classifies Japanese firms into 4 types with two axes, Long-Term Employment or Not and Performance Related Pay or Not (Figure 1, below).

Figure 1 : Four types of Japanese firms



source : author, from Miyamoto (2008)

These studies showed the diversity of Japanese firms observed in the period of lost decade(s) of Japanese economy in the 1990s and 2000s. This phenomenon could be considered explicitly or implicitly as the diversity of transition from the representative Japanese firm model or J-firm model. But, why are emerged these different organizational characteristics between Japanese firms, while the traditional theories suppose that Japanese firms are homogeneous under the idea of national representative firm model? In the face of this situation around Japanese firms, it should be possible to suppose that there always exist the organizational and strategical varieties in

the historical process of growth and development of Japanese firms. That's why different trajectories of firms are more clearly observed by adapting the major transformation of social and economic environment since the 1990s.

From this point of view, this paper does not consider the actual diversity of Japanese firm as consequence of external shock of economic crisis, but historical product depended on organizational knowledges and capabilities accumulated or constructed in the firm. In particular, we will emphasize an important role of dynamic capabilities played as key factor that produces the diversity of firms through the historical process. As Fujimoto (1997, 2003) points out, the dynamic capabilities are regarded as an important source of growth and competitiveness of Japanese firms after the WWII. However, this type of capability is accumulated in the long-termed through a particular mechanism constructed in the firm. It is thus very difficult to imitate for another firm. It is therefore possible to observe heterogeneous mechanisms between firms that realize a long-termed growth, in other words construct dynamic capabilities.

This paper will further explore an analytical framework to develop the analysis of diversity of mechanisms to construct particular dynamic capabilities of the firm, based on Yokota (2015) that examined the diversity of Japanese firms in terms of dynamic capabilities with a case study of Toyota and Honda. In the first chapter, we will precise the definition of dynamic capabilities. In the second chapter, we will develop an analytical framework of mechanism to construct dynamic capabilities according to Yokota (2015), especially focusing on human resource development in the firm as key factor of diversity of types of dynamic capabilities.

I DYNAMIC CAPABILITIES : ITS DEFINITION AND TYPES

1 DYNAMIC CAPABILITIES, CORE COMPETENCES AND INNOVATION

The notion of dynamic capabilities is elaborated and sophisticated in the framework of Evolutionary Economics. This capability focused on the dynamism of the firm concerns change, contrary to the operational capabilities, which enable an organization to earn a living in the present. The dynamic capability is defined as follows : « the firm's ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments » (Teece, Pisano, and Shuen, 1997) ; « Dynamic capabilities are the ability to reconfigure, redirect, transform, and appropriately shape and integrate existing core competences with external resources and strategic and complementary assets to meet the challenges of a time-pressured, rapidly changing Schumpeterian world of competition and imitation » (Teece, Pisano, and Shuen, 2000) ; « A dynamic capability is the capacity of an organization to purposefully create, extend, or modify its resource base » (Helfat et al., 2007). Building on these definitions given by the prior literature, this paper considers a dynamic capability as capacity to realize a long-termed growth of the firm, in creating, extending and modifying a core competence that plays a important role as fundamental source of competitiveness of the firm in a changing environment.

A firm enables to accumulate its resources or competencies in different organizational domains, production, product development, marketing, sale, purchase, etc. But, one or two domains are placed as more important domain according to competition and growth strategy of the firm. Such domain(s) on the top of hierarchy should lead the firm's growth as core of the competitiveness. However, what is important is that a firm continues having the competitive advantage on such domains in a changing environment. In other words, it is important for the firm to continuously supply an innovative or particular goods or services, and thus to construct an organizational process or mechanism to do it. Effectively, Nelson (1991) argues that it is organizational differences, especially differences in abilities to generate and gain from innovation, [...], that are

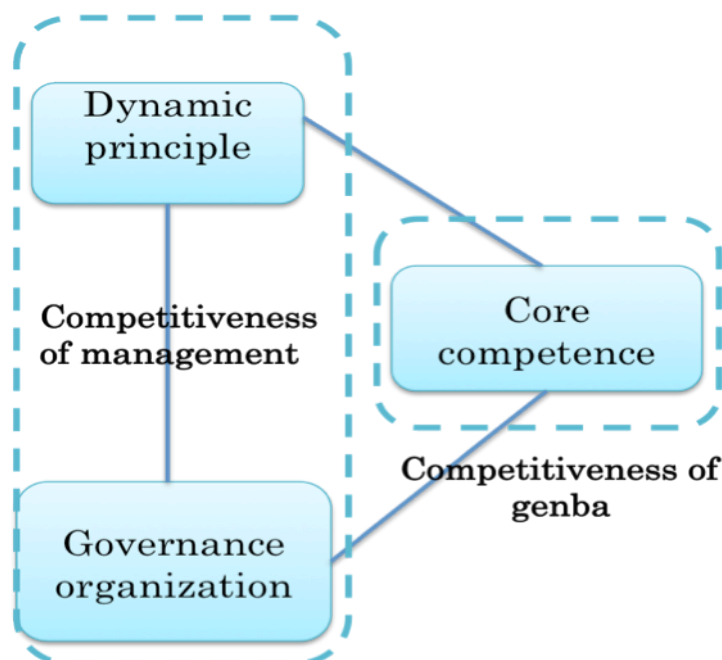
the source of durable, not easily imitable, differences among firms. Thus, a core competence means a capacity to innovate on a core domain of firm, and an organizational capacity to create, extend and modify such core competence in a changing environment is defined as dynamic capability.

2 ANALYTICAL FRAMEWORK OF DYNAMIC CAPABILITIES IN THE FIRM

According to the prior literature on innovation², we can classify innovations into three types as follows. Firstly, the technological innovation concerns a development and research of new products and new technologies. Secondly, the organizational innovation is created by the development and adoption of new methods or measures concerning labor organization, employment relation, interfirm relation, etc. Thirdly, the strategical innovation of market or business model innovation is defined as important change of game's rule at present about a mechanism or condition of supply to market, such as exploitation of new market, supply of new service to consumers, development of new business model, etc.

Firm's type of dynamic capabilities to create an innovation, among three types referred above, is related with its organizational mechanism. We add two other components to core competence as core component of dynamic capabilities. Firstly, it is a dynamic principle that means a principle of competitive strategy, namely how does a firm adapt a changing environment to survive in the competition with other firms. Secondly, we take account of a governance organization, namely organization of decision-making on top management. Thus, a mechanism of dynamic capabilities inside the firm is composed of core competence, dynamic principle and governance organization, meaning competitiveness of *genba* (shopfloor) or *genba*-capability for the former and competitiveness of management for the two latters. This organizational mechanism of dynamic capabilities is figured as below :

Figure 2 : Three components of organizational mechanism of dynamic capability



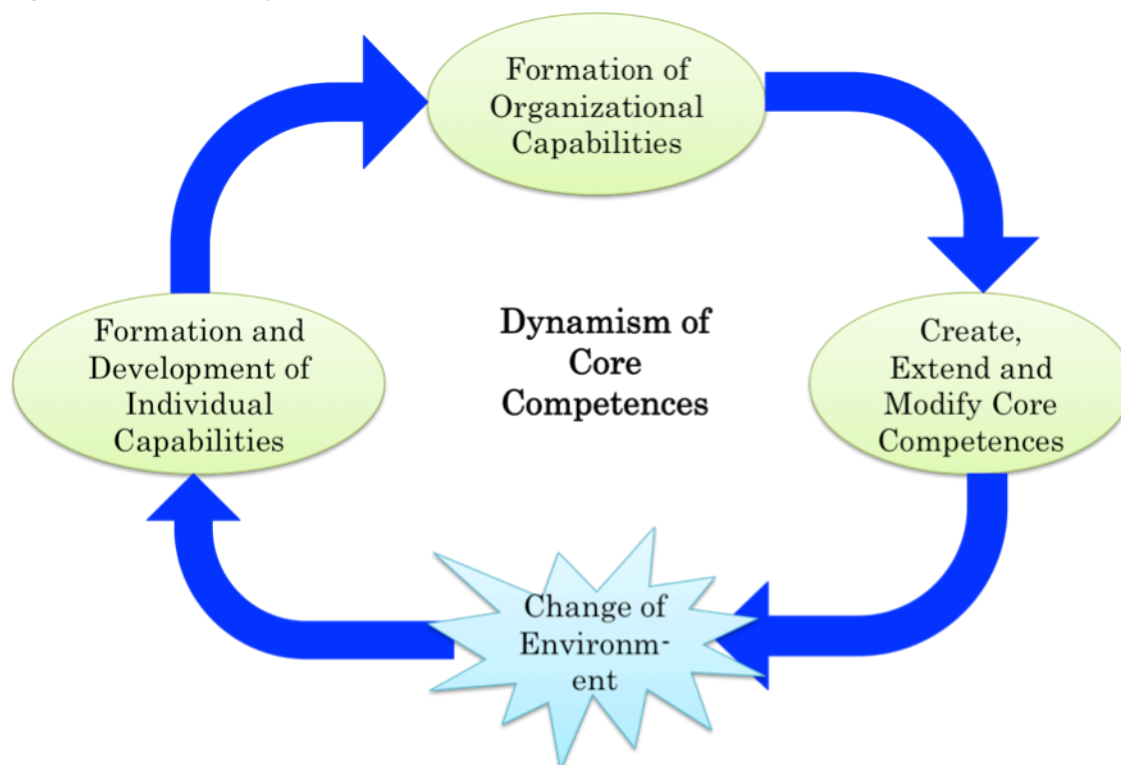
² See Shulpeter (1934), Abernathy and Clark (1985), Morris (2006), Corbel (2009), and Itami (2009).

In this organizational framework of dynamic capabilities, it is in particular important to construct a virtuous cycle of core competence –create, extend and modify—in a changing environment. From this point of view, we pay attention to a role of human resource development as fourth component of mechanism of dynamic capabilities of firm, namely a transformation from individual capabilities to organizational capabilities and a development of organizational capabilities. In next chapter, we will further explore the mechanism of dynamism of core competence, focusing on the role of human resource development.

II DYNAMISM OF CORE COMPETENCE : INTRODUCTION OF A ROLE OF HUMAN RESOURCE DEVELOPMENT IN THE DYNAMIC CAPABILITY MECHANISM

A virtuous cycle of dynamism of core competence could be figured as follows:

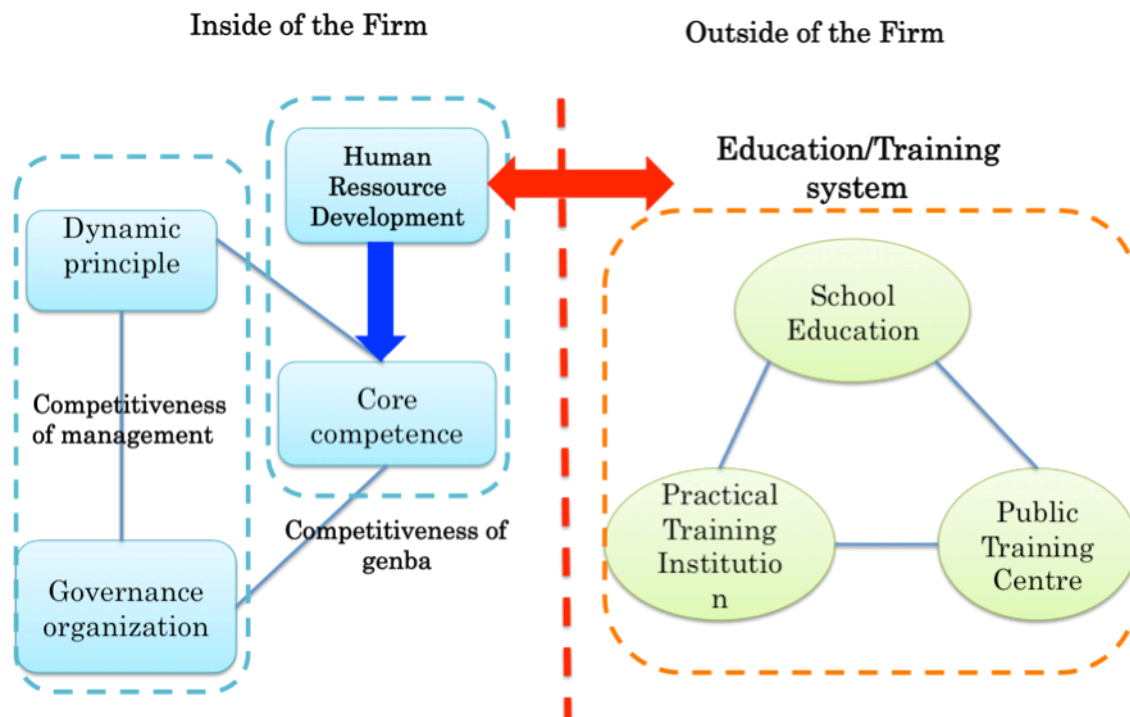
Figure 3 : Process of dynamism of core competence



Before entering in a firm, individuals are educated and trained in a system of education and training in educational institutions. Then, in the firm, they obtain some capacities/competences that are specific to a firm in Japanese case. These individual capabilities are transformed into organizational capabilities through a professional education and training in the firm and also through experiences. A core competence is created as core source of growth and competitiveness of the firm on the basis of its organizational capabilities. In order to adapt a change of environment, the firm educates and trains its employees to develop their individual competences. The development of individual competences is returned to the development of organizational capabilities. As a result, the core competence is extended or modified in such cycle.

Thus, Figure 4 shows our analytical framework of dynamic capabilities of the firm, in introducing the role of human resource development. In our framework, the core competence to innovate plays most important role to construct a specific type of dynamic capabilities of firm. The existence and type of core competence of firm are closely related to its system of human resource development. The dynamism of core competences completed with the human resource development (competitiveness of *genba*) is assured by the dynamic principle and governance organization (competitiveness of management). That is a mechanism to construct dynamic capabilities of the firm, focusing on the role of human resource development.

Figure 4 : Analytical Framework of dynamic capability and human resource development



source : author

CONCLUDING REMARKS

This paper tried to construct an analytical framework to study the diversity of Japanese firms in the long-term. Towards this objective, we placed the concept of dynamic capabilities on the centre of our analysis. In the process of construction of dynamic capabilities in the firm, we emphasized the role of human resource development that educates and trains individual competences as elemental source of organizational capabilities. The dynamic capability could be defined as capacities to construct a virtuous and continuous cycle of reinforcement of core competences, transforming individual capabilities into organizational capabilities, in a changing environment.

Next step of our research will be to develop our case study of Japanese innovative firms, such as Toyota and Honda (Yokota, 2015), in this analytical framework.

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