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Core Competence: Starting Point to Trigger Dynamic Management based on Firm Power Theory

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#### Abstract

Starting from core competence, this paper firstly develops firm power to explain value creation in a general manner with a rationale borrowed from physics. Firm power at a time can be expressed as firm size with product fit (prior indicator of revenue) and process fit (prior indicator of cost) determined as a result of innovation over time to meet needs with willingness to pay (WTP) based on core competence at starting time. Secondly this paper, based on firm power, dares design dynamic management as holism/synthesis/dynamism-based paradigm to deal with innovation adapting to needs evolution for sustainable growth, where/when power shifts from firms to customers and customer needs evolve so frequently since Internet revolution.

Keywords: Core competence; firm power; dynamic management; needs evolution; innovation; growth vector; adaptive goodness; sustainable growth

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## Introduction

Core competence as determinant of value creation, the output of an outstanding intuition from Prahalad-Hamel (1990), has likely been influenced directly or indirectly by Selznick's distinctive competency (1957) and/or by Wernerfelt's resource-based view (RBV) (1984) that also reflects Penrose's theory of the growth of the firm (1959). As a matter of fact, it has given rise to a sensation due to its vivid conceptual definition since its inception in 1990. Core competence stands for the source of one or more competitive advantage as something excellent or extraordinary in creating and delivering value to its customers in a chosen market (industry) that cannot be easily imitated. Of course, core competence itself is a static construct stayed in the realm of resource-based view and stood on the standpoint of reductionism, belonging to classificatory/typological model. In practice, it is not easy to measure due to lack of clear operational definitions. What's more, there is no mechanism to connect it to firm performance by viewing a firm as capability-driven paradigm without dealing with product(s), the only direct means for customers to pay to the firm. In spite of these limitations, however, it surely can work well, especially in the situation where/when a firm has more power than customers and the customers act as passive responders to the firm, and environmental changes are stable.

From dynamic core competence point of view, there are two constructs: dynamic capability (Teece, et al., 1997) and routines (Nelson-Winter, 1982). The former can be defined as 'a firm's ability to integrate, build and reconfigure internal and external competencies to address rapidly changing environments. And yet it must be a dynamic construct in meaning but still static one in form. Accordingly the nature of it is most likely the same as that of core competence. And the latter is the routines in evolutionary economics referring to intangible assets (internal factors) to adapt to technological change (external force). Therefore routines must be much closer to reality than core competence/dynamic capability but it doesn't pay any attention to customers at all, treating them as just passive responders.

And then, is it not possible to explain value creation universally in a general manner by taking into account the nature/characteristics of core competence, dynamic capability and routines? In order to answer to this question, basically it is required to have a strong rationale rather than just an intuition. With this recognition, this paper attempts to define firm power first based on a borrowed rationale from physics, especially for the situation where/when customers have more power than firms, acting active players not passive responders since Internet revolution.

## Firm Power Theory based on Social Physics

When we define firm power as a firm's core competence to dig out profit by meeting customer explicit needs, which refers to the needs with willingness to pay (WTP) as well as purchasing power, what does firm power consist of? To figure them out this paper borrows some ideas from physics in the name of social physics. According to the 2<sup>nd</sup> law of motion and some theorems in physics,

$$\text{Power} = \text{Volume} * \text{Density} * \text{Acceleration} * \text{Velocity}$$

$$\text{For Mass} = \text{Volume} * \text{Density} \text{ and } \text{Mass} * \text{Acceleration} = \text{Force} \text{ and } \text{Force} * \text{Velocity} = \text{Power}$$

In essence, when acceleration (a) as the rate of change in velocity, works on mass (m), it results in an increase in force (F), as shown  $F = ma$  in the name of the 2<sup>nd</sup> law of motion, and when velocity as vector having direction and speed works on force, it results in change in power.

Based on these relationships, we can draw the components of firm power by substituting the volume to firm size, the density to (product fit, process fit), the mass to the firm's core competence, the acceleration to the innovation and the velocity to the growth vector (Figure 1).

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As far as a firm's growth vector is concerned, the firm as profit-seeker should continue to grow through innovation for sustainable growth not only by enhancing or by destroying the existing core competence (exploitation) but also by building the new ones (exploration), keeping the balance of exploitation & exploration. This implies that innovation should be congruent with growth vectors, which also should be fit with needs evolution. Based on social physics, core competence can be expressed by the firm size having a specific product fit (prior indicator of revenue) & process fit (prior indicator of cost) at a given point in time. Here product fit refers to how well a firm's product meets customer explicit needs, and process fit shows that at how much lower cost a firm's extended value chain can produce/provide that product. Here also extended value chain refers to a set of both activities and resources, which adds entrepreneurial activities dealing with strategic domains and resources to the Porter's value chain.

Now firm power can be expressed as a dynamic relationship as follows.

$$\begin{aligned} \text{(Firm power)}_t &= [\text{Firm Size} \times (\text{Product Fit, Process Fit})]_{t-1} \times (\text{Innovation} \times \text{Growth Vector})_t \\ &= [\text{Core competence}]_{t-1} \times (\text{Innovation} \times \text{Growth Vector})_t \\ &= [\text{Core competence}]_t \end{aligned}$$

Firm Size\*(Product Fit, Process Fit) as core competence itself is a stock/structure at time, and (innovation\*growth vectors) as strategic behaviors is a flow/process over time. In fact, firm power is the output of innovation in accordance with growth vector over time (t) based on firm's core competence at the starting time (t-1).

Relating to innovation, Schumpeter (1934) advocates that it must be the driver of growth but he never states even a word concerning the premises/conditions about it. On the contrary, firm power shows that innovation becomes the driver only when it is to be fit well with growth vectors that also must be congruent with meeting customer explicit needs.

By the way, at a given point in time core competence as static concept is just the same as firm power as dynamic concept. However, there is distinction between them in the meaning that while core competence reflects just something at a time as scalars, firm power refers to the one reflected with direction & magnitude over time as vectors.

### **Different Mindset is required where/when customers have more power than firms**

In a situation where/when a customer has more power than a firm, and the customer does as an active player, his/her voices become strong and customer needs would become evolving so frequently and customer may or may not have willingness to pay (WTP). Accordingly when customer does play actively, what a firm should do first is to focus on customers rather than on competitors (Figure 2), for the success of innovation entirely depends upon customer needs. Therefore it can be said that needs-determined innovation would be required not firm-determining one.

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Insert here (Figure 2)  
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Now the fact that customer may or may not have WTP requires us to develop new constructs because that there is nothing more than one, demand in marketing now. That is, marketing defines demand as the needs with purchasing power.

And so this paper develops new constructs, explicit needs and explicit demand. Explicit needs refer to the needs with WTP as well as purchasing power, and explicit demand as group of customer with WTP.

And explicit needs exist as combination of needs attributes that can be classified into two groups: appealing needs attributes (ANA) to bring about customer satisfaction and basic needs attributes (BNA) without which customer dissatisfaction is given rise to.

Based on ANA & BNA, we are able to know that customer has WTP only when customer expects

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to get satisfied without being dissatisfied, that is, being ANA met as well as BNA without unmet. And we can get the propositions about that the more ANA gets met, the stronger the WTP and that when ANA 100% fully met, customer reveals the maximum level of WTP, which works as Norm as Ideal for a firm to get revenue maximally from customers through its product(s).

The fact that there exists Norm always makes a firm be able to do business in a much easier and clearer manner. For Norm as Ideal always provides us with a wonderful logic of strategy formulation & execution, Seek Norm & Get-to-Norm.

When it comes to meeting customer needs where customer plays actively, it requires a different mindset with which strategic focus should be on dealing with the relationship between core competence (supply side) and customer needs (demand side) in some way (holism) rather than with core competence and customer needs respectively (reductionism). As a matter of fact, there have so far been some attempts to link both supply side & demand side together from early 2000s and yet they still seem so primitive in theorizing. To cite an example, Priem (2007) asserts the necessity of consumer perspective on value creation and yet he lacks mechanism to connect both sides from profit-seeking point of view.

Anyway unless a firm meets explicit needs, he never expects profit at all. That's why it is required a quite different mindset focusing on firstly trying to meet customer needs as nearer to Norm at a stage of needs evolution (called here adaptive goodness as the degree of how nearer to the Norm) and secondly on achieving competitive advantage among competitors.

By the way, if adaptive goodness is so good, competitive advantage accordingly becomes stronger, but even though competitive advantage becomes stronger, it does not always make adaptive goodness better (Figure 3).

In fact, competitive advantage might not be the necessary & sufficient conditions for business (firm) success. For competitive advantage just means the relative comparison among competitors in meeting customer needs, the better adaptive goodness, the stronger competitive advantage. Operationally competitive advantage can be measured by comparing a firm's adaptive goodness with the best adaptive goodness. Here competitive advantage can be understood as a set of (product advantage, process fit) and adaptive goodness as of (product goodness, process fit), and product advantage can be measured as (a firm's product fit - that of the strongest) and product goodness as (a firm's product fit - that of Norm).

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## **Dynamic Management as Holism/Synthesis/Dynamism-based Paradigm is required, especially in the situations where/when Customer Plays Actively and Customer Needs Evolves so frequently**

In reality, since Internet revolution, not only power shifts from firms (firm-centered) to customers (customer-focused) but paradigm shifts from knowledge-based to creativity-based. And customer needs also tend to evolve so frequently and speedily. It does mean that the Internet age requires management paradigm shift (Kuhn, 1962; Wheatley, 1992) from the one focusing on competitive advantage to Dynamic Management, which deals with industry and firm level simultaneously (Synthesis), takes up industry and firm as a whole respectively (Holism), and treats initial condition at starting time and the relationship/interaction between needs evolution and technological change over time (Dynamism) based on a stronger rationale rather than an intuition. Dynamic management can be defined as the one to deal with innovation adapting to needs evolution by meeting explicit needs through innovation with creativity at each stage of needs evolution for sustainable growth. In a word it can be referred to as innovation management to navigate in a non-linear world in the 21<sup>st</sup> century.

## **Core Competence Triggers Dynamic Management based on Firm Power Theory**

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From theorizing point of view, core competence provokes a thought about triggering dynamic management through firm power.

Generally speaking, a model should be refined to make the explanatory/predicting power improved, by enhancing the theoretical foundation (Dubin, 1978): from static to dynamic; from classificatory/typological level to contingency/relational/functional one; from intuition to induction, deduction or analogical one.

In this context, let's make a comparison between core competence, dynamic capability, firm power and dynamic management in terms of the nature of construct, framework of value creation, rationale, and direction of refining the model (Figure 4).

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Now it is understandable that each one's novelty must be situational. For example, where/when a firm has more power than customers, if the environmental changes are not dynamical, core competence is working well, while if environmental changes are turbulent, dynamic capability will do, both focusing on achieving competitive advantage. However, where/when customers have more power than a firm, regardless of the type of needs evolution firm power and dynamic management are working better, both on obtaining adaptive goodness. Of course, firm power concentrates on meeting explicit needs at a certain stage of needs evolution, on the other hand dynamic management covers multi-stages of needs evolution for sustainable growth based on just the same framework of firm power.

By the way, the case of core competence or dynamic capability can be considered as a specific one of dynamic management at a specific time in needs evolution. Therefore it can be said that dynamic management covers all the cases, making it applicable to any firm within any industry in all circumstances. In short, it would be possible for dynamic management to be called the general theory of business/firm strategy (Figure 5)..

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## Conclusion

Starting from core competence, this paper firstly develops firm power to explain value creation in a general manner with a rationale borrowed from physics and secondly it dares design dynamic management based on firm power to deal with innovation adapting to needs evolution for sustainable growth, especially where/when customers act as active players since Internet revolution.

As a matter of fact, dynamic management focuses on the relationships among agents in a non-linear world, comprising the relationship between core competence & customer explicit needs, explicit needs theory, willingness to pay (WTP) function, Norm as Ideal, business status, profit potential status, profit-seeking formula, needs-determined innovation & needs evolution, Seek Norm & Get-to-Norm, innovation rules for fostering creativity, growth vectors and balance of exploitation & exploration, adaptive goodness and so on with a quite different mindset, customer-focused view (Figure 6). The more description about them in detail, however, goes beyond this paper.

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Figure 1 Firm Power and Its Components

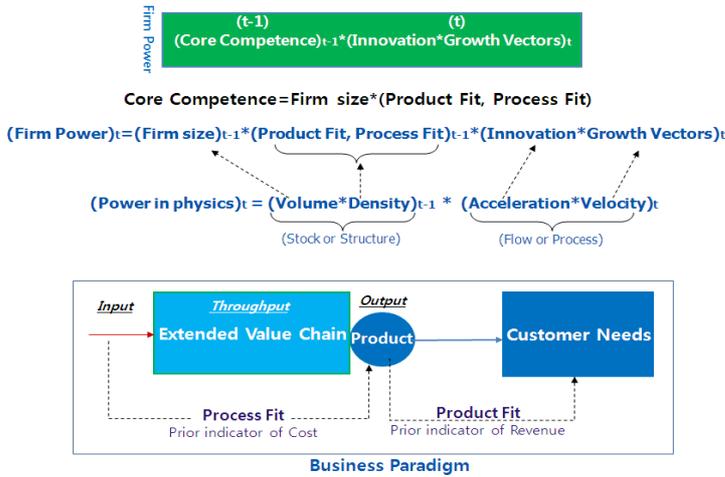


Figure 2 Power Shift and Change of Strategic Focus

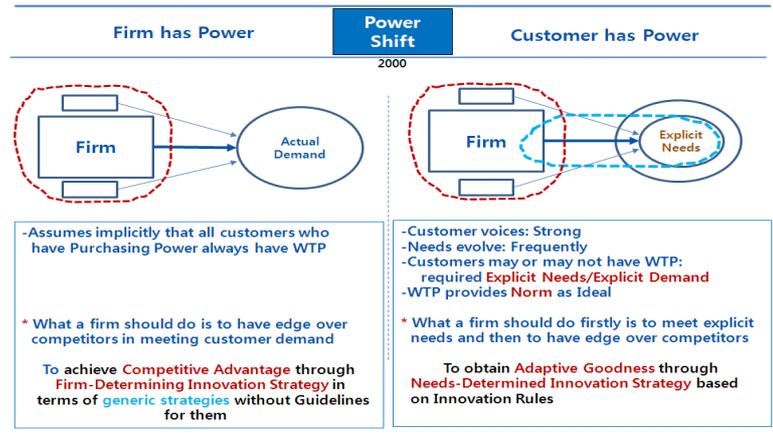


Figure 3 Adaptive Goodness VS Competitive Advantage

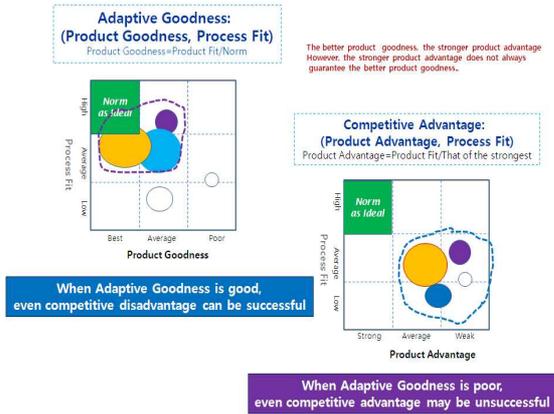


Figure 4 Core Competence Triggers Dynamic Management

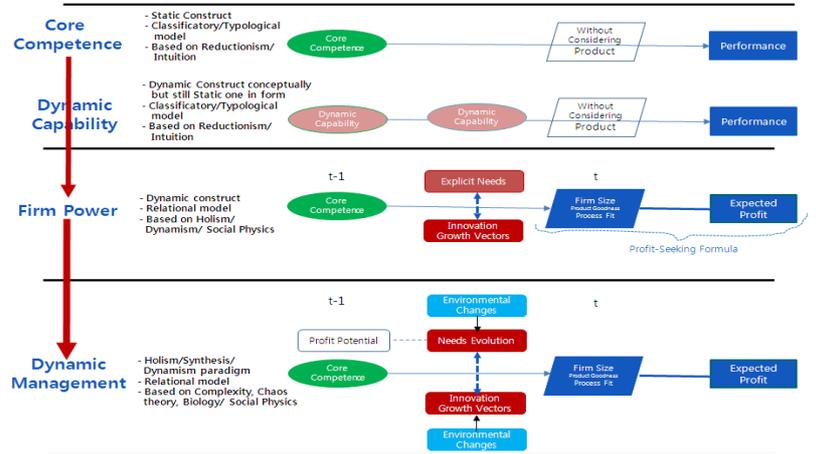


Figure 5 Focal Points & Domains in terms of Situational Approach

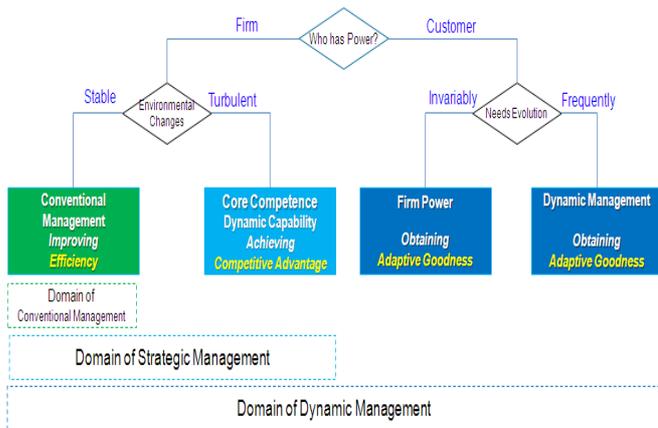


Figure 6 Schema of Dynamic Management

