

# **Theoretical Framework : The Influence of Core Technical Competence and Core Marketing Competence to Competitive Advantage**

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## **Abstract**

Organizations are involved in a continuous process of change in order to renew capabilities and achieve a competitive advantage in a hyper competitive setting. The key, then, is to own and nurture the resources and competencies that make up the essence of the business. This paper proposes model for creating competitive advantage through core technical competence and core marketing competence. The approach is used by reviewing some concept about core competence.

## **Keywords**

Core Technical Competence, Core Marketing Competence, Competitive Advantage

## **1. Introduction**

A resources-based view of the firm understands that the heterogeneous resources and capabilities possessed by companies will explain both the existence of the firm and any difference in its results. The company is understood to be a specific set of resources. Amit and Schoemaker [1] define resources as a stock of factors which are possessed or controlled by the company.

Capabilities are the skills of resources co-ordination and mobilisation. Capabilities (flow) are resources (stock) which work together [2] by means of well established routines [3].

Resources and capabilities are core when they are fundamental to the performance of a company and its strategy [2, 4]. Growth, the opportunity to provide new products and enter new market, does not depend so much upon demand as upon the resources and capabilities possessed by a company [5]. Core resources and capabilities can be sources of sustainable competitive advantages for the firm if they allow it to develop strategies that generate value, if they are scarce, inimitable and difficult to substitute, and if they are appropriately integrated in the organization [6, 7]. The combination, development, exploitation and protection of the company's specific resources provide the basis for the competitive advantage.

Resources and capabilities are complementary when they lever the performance of other resources and capabilities [8]. Core resources and capabilities tend to require the presence of complementary resources and capabilities in order to create or add value.

The objective of this paper is to propose some factors or variables that influence of the competitive advantage which generate from modification and combination some concept about core competence.

## **2. Literature Review**

### **2.1 Core Competence**

Core competence is a set of skills and integrated technology that contributed to competitive position in its business [9].

A fundamental concept in the formulation of a technology strategy is core competence. An organization's core competence could be in a technology, a product, a process, or the way it integrates its technological assets [10]. An example of a technical core competence is the creation of a product or service with unique value to customers. An organization's may have core competence in marketing with its ability to access and serve markets in a unique way. Another example of core competence is an organization infrastructure that permits managing operations in a uniquely efficient and effective way. Core competence may also be the human knowledge or skill of an organization's employees.

Core competencies are collective sets of knowledge, skills, and technologies that a company applies to add value for its customers. This is what determines the company's competitiveness. A company can improve its competitive abilities by becoming a learning organization [11]. This means continuously learning and building capabilities that (a) cannot be easily duplicated by its competitors, (b) create new products and services for its customer, and (c) generate alliances and relationships with suppliers to provide its customers with cost and value advantage.

Prahalad and Hamel [4] propose that the core competencies of an organization "are the collective learning in the organization, especially how to coordinate diverse production skills and integrate multiple streams of technologies". Prahalad and Hamel use a tree analogy to illustrate the idea of core competencies in a diversified corporation: The roots are the competencies of the corporation, the trunk represents core products, the small branches represent business units, and the leaves are the end products, as shown in figure 1. Indeed competencies are the roots of competitiveness. The roots of the tree provide nourishment and keep the tree alive.

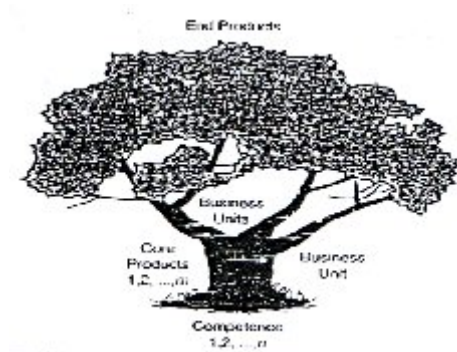


Fig. 1 Competencies: The Roots of Competitiveness

It is incumbent upon management to identify the organization's core competencies. The following common characteristics of core competencies may help an organization distinguish areas of competencies from the multitude of its other activities:

1. They provide the distinctive advantage of organization.
2. They are difficult for competitors to imitate.
3. They make a significant contribution to the end products offered by the organization.
4. They provide access to a wide variety of markets.

## 2.2 Capabilities Hierarchy

All organizations contain a large and diverse array of discrete activities, skills and disciplines (Fig. 2). These elements – termed primary capabilities – are the building blocks of core competencies. The development and operation of most primary capabilities are the responsibility of individual function of a company.

Certain capabilities are distinct from other primary capabilities in that they have a direct and significant effect on competitiveness in their own right. These capabilities, termed critical capabilities, can provide reduced cost, improved product or service differentiation, increased speed to larger barriers to competition. The development of critical capabilities is often a key element of strategies at the strategic business unit (SBU) level.

A useful way to think of core competencies is as *aggregates of capabilities*, where synergy is created that has sustainable value and broad applicability [12].

Primary capabilities may be usefully divided categories, as follow:

- Market-interface capabilities – capabilities that are used in the marketplace or that are clearly visible to it; selling, advertising, consulting, invoicing or customer satisfaction monitoring are generic examples of these capabilities.
- Infrastructure capabilities – capabilities that concern the internal operations of the company and that are invisible externally; for example, management information systems or internal training.
- Technological capabilities – technical capabilities providing direct support to the product or service portfolio; these may be further subdivided into:
  - Applied science capabilities – fundamental know-how derived from basic research.
  - Design and development capabilities – disciplines employed in converting a product idea into an operational reality.
  - Manufacturing capabilities – capabilities employed in, or directly supporting, established manufacturing or operations.

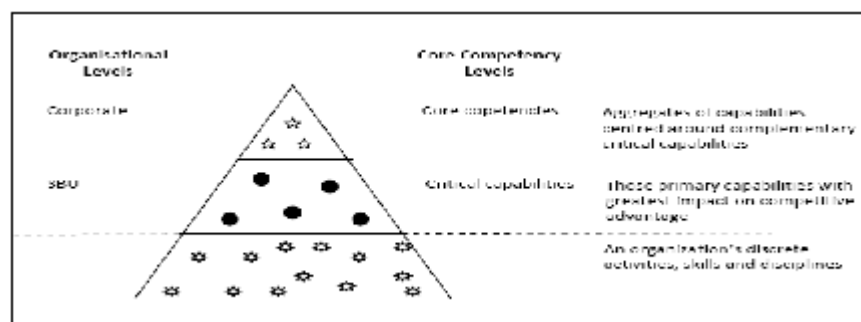


Fig. 2 Core competency thinking involves a hierarchy

Most core competencies thus rely on technological and market interface capabilities, two general categories of competency depending upon which group of capabilities predominates within the competency aggregate:

- Core technical competencies (CTCs) – where the majority of the underpinning critical capabilities are technological in nature (where technology is major determinant of uniqueness).
- Core marketing competencies (CMCs) – using the term marketing to embrace product management, pricing, communication, sales and distribution (where most of critical capabilities are market interface capabilities). CMCs are sometimes referred to as non-technical core competencies.

Competencies in each category can be equally powerful, but CTC's are especially important because they are more frequently able to cross market boundaries and can provide the basis for significant product superiority.

### 2.3 Competitive Advantage

Competitive advantage is created through the achievement of five qualities superiority, inimitability, durability, non-substitutability and appropriately. Core competences or distinctive capabilities are combinations of resources and capabilities unique to a specific organization and generating competitive advantage by creating unique customer value. A core competence must be distinctive, complex, difficult to imitate, durable and adaptable to ensure it is a sources of sustained superior performance [13].

Li Hua & Simon [14] argue that it is the triple alliance of foreign technology, government support, and excellent performance of enterprise(s) in implementing the appropriate technology strategy, that contribute to the core competitiveness of Chinese firm. The primary aim of conducting China firm competitiveness research is to apply such conceptual model and establish a practical guidance for firm to understand what their current competitive position is, hence to take the advantages of their existing strengths and enhance their performance.

Matthyssens, P. And Vandenbempt [15] argue that superior value, though, must be sought elsewhere, for instance in service integration or innovation (see infra: key success factors). Superior value creation results from a balanced and inspired management of the value drivers, “assets” and “unique skills” of the general competitive advantage model (figure 3).



Fig. 3 : Competitive Advantage: Sources and Customer Value

Superior value is received customer representing early the achievement competitive advantage for company. Competitive advantage is created through the achievement two matter, differentiation leadership and cost leadership.

### 3. CONCEPTUAL FRAMEWORK

That was review literature and various research in the past which fundamental thinking to proposed topic in this paper. I enclose various concept about core competence as shown in table 3.1

Table 3.1 : Core Competence Concepts

| No. | Name                         | Concept                                                                                                                                                                                                                                                                    | Indicator                                                             |
|-----|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|
| 1.  | Kotler (2010) [16]           | Core competencies tend to refer to areas of special technical and production expertise                                                                                                                                                                                     | Special technical, production expertise                               |
| 2.  | Umar (2008) [9]              | Core competencies is a function of technology, process and learning outcome.                                                                                                                                                                                               | technology, process, learning.                                        |
| 3.  | Mooney (2007) [17]           | Core competence must be a skill or capability of a firm. A core competence is central to a firm's value-generating activities.                                                                                                                                             | Skill, capability                                                     |
| 4.  | Rao (2005) [18]              | The fortunes of high-technology firms depend on investments in intellectual capital – R&D capability, human capital, and the like – has been well established, the central role of complementary marketing capital – in the form of brand name and other marketing assets. | R&D capability, human capital, brand name and other marketing assets. |
| 5.  | Hunger & Wheelen (2003) [19] | Distinctive competencies are special skill and resources own of the firm and pre-eminent way which its uses                                                                                                                                                                | Special skill, resources, pre-eminent way                             |
| 6.  | Barney (2003) [20]           | The drives of competitive advantage, ranging from resources, capabilities, competencies and assets                                                                                                                                                                         | resources, capabilities, competencies, assets                         |
| 7.  | Tarek Khalil (2000) [4]      | Core competence could be in a technology, a product, a process, or the way it integrates its technological assets. Also in marketing, infrastructure, human knowledge or skill.                                                                                            | technology, marketing, infrastructure, human knowledge or skill       |

|     |                                             |                                                                                                                                                                                                       |                                                                     |
|-----|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| 8.  | Day George (1999) [21]                      | The Sources of competitive advantage are superior skill, resource, and controls.                                                                                                                      | superior skill, resource, and controls.                             |
| 9.  | Stone and Pemberton (1999) [13]             | Core competences or distinctive capabilities are combinations of resources and capabilities unique to a specific organization and generating competitive advantage by creating unique customer value. | resources, capabilities unique                                      |
| 10. | Matthyssens, P. dan Vandenbempt (1998) [15] | Superior value creation results from a balanced and inspired management of the value drivers, “assets” and “unique skills” of the general competitive advantage model.                                | asset, skill                                                        |
| 11. | Machado (1997) [11]                         | Core competencies are collective sets of knowledge, skills, and technologies that a company applies to add value for its customers.                                                                   | knowledge, skills, technology                                       |
| 12. | Gallon, Stillman dan Coates (1995) [12]     | - Core technical competencies (CTCs) : technology<br>- Core marketing competencies (CMCs) : product, pricing, communication, sales, distribution                                                      | technology and product, pricing, communication, sales, distribution |
| 13. | Prahalad dan Hamel (1990) [4]               | Core competencies are the collective learning in organization, especially how to coordinate diverse production skills and integrate multiple streams of technologies.                                 | skills, technology                                                  |

Based on table 3.1, indicators that clearly expressed through expert concepts are tabulated in table 3.2.

Table 3.2 : Indicator Frequency

| No. | Indicator                                        | Frequency |
|-----|--------------------------------------------------|-----------|
| 1.  | Technology                                       | 8         |
| 2.  | Technical skill (special technical, skill, etc.) | 8         |
| 3.  | R&D capability (knowledge, learning)             | 3         |
| 4.  | Process                                          | 1         |
| 5.  | Infrastructure                                   | 1         |
| 6.  | Production expertise                             | 1         |
| 7.  | Controls                                         | 1         |
| 8.  | Marketing                                        | 5         |

### 3.1 Framework Model

As according to table 3.2 with higher cumulative indicator core competence, I further uses the definition Gallon, Stillman and Coates (1995) about core competence which divides into two categories, so that :

1. Core technical competencies – **technology, technical skill and R&D capability**
2. Core marketing competencies – **marketing mix**

Thus framework model the influence of core technical competence and core marketing competence to competitive advantage, design as shown in model structure at Fig. 4.

For this model structure, key success factor competitive advantage company is created through its own capability that representing core competence. Core competence is consist of core technical competence and core marketing competence. Core technical competence is consist of technology, technical skill and R&D capability. Core marketing competence is represented by marketing mix.

Finally all of variables: technology, technical skill, R&D capability and marketing mix influence of competitive advantage for a company.

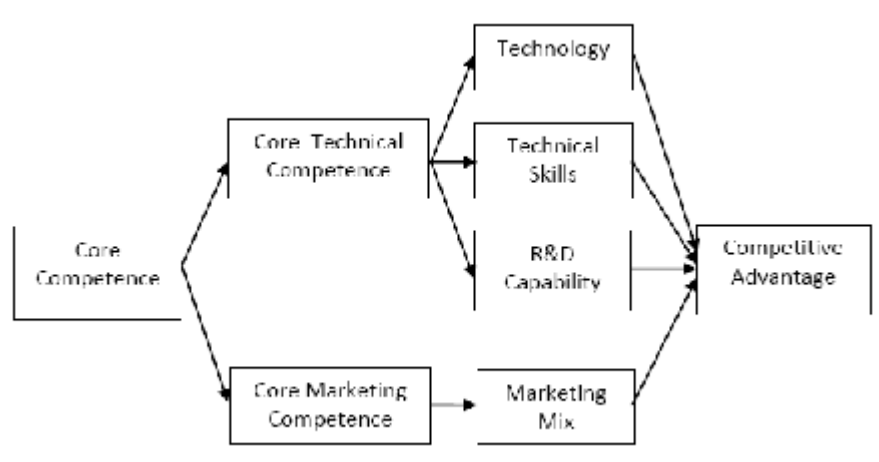


Fig. 4 Model Structure

#### 4. DISCUSSION

Based on study about the influence of core technical competence and core marketing competence to competitive advantage which presentation in this paper, there are something materials for discuss among others:

1. This model proposes real variables which influences of competitive advantage, especially for high tech industry.
2. This model is designed based on theoretical study so that require to be conducted empirical examination.
3. For future research direction, this model will be applied on telecommunication industry in Indonesia.
4. This model have limitations – not including variable about production/operation control (i.e. process, infrastructure, production expertise and control, as shown in table 3.2) which expressed into error model.
5. This model based on Resources Based View (RBV).
6. This model emphasizing at Core Competence.

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