

**Critical Dimensions of Strategy:
Industry Scope Shift and Reverse Strategy Trace**

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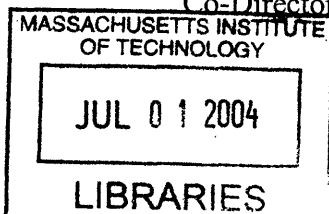
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Abstract

We would like to propose two critical dimensions for strategy: “Industry Scope Shift” and “Reverse Strategy Trace.” Recent changes in the progress of information technology and economic globalization raised the importance of these dimensions.

Rapid progress in information technology requires firms to respond to the changes of scope including market and product. The execution speed is increasingly becoming critical to keep uniqueness of product and service offerings. Industry Scope Shift helps the capturing of these changes into strategy.

Economic globalization demands the organizational challenge to manage conflicts between local market responsiveness and global operation efficiency. Reverse Strategy Trace gives a clear perspective to analyze emergent strategy to accumulate organizational learning from business operations.

We will examine the importance of these two dimensions and provides answers when and why these are critical in the strategy planning process.

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Chapter 1

Introduction

We would like to propose two critical dimensions of: (1) Industry Scope Shift, and (2) Reverse Strategy Trace. Recent changes in the progress of information technology and globalization raised the importance of these dimensions.

Rapid progress in information technology requires firms to respond to the changes of scope including market and product. The execution speed is increasingly becoming critical to keep uniqueness of product and service offerings. Industry Scope Shift helps the capturing of these changes into strategy.

Economic globalization demands the organizational challenge to manage conflicts between local market responsiveness and global operation efficiency. Reverse Strategy Trace gives a clear perspective to analyze emergent strategy to accumulate organizational learning from business operations.

We will examine the importance of these two dimensions and provides answers when and why these are critical in the strategy planning process

The rest of this paper contains the following contents. Chapter 2: Motivation of the Research Topic, and Objectives, contains the background information why we need to have focus in certain dimensions when we perform strategy planning. Then, we will

present two critical dimensions of strategy and when and why these dimensions will play important roles in strategy planning process.

In Chapter 3: Theoretical Foundation of Strategies, we will describe previous works in the field of strategy to provide the overview of basic understanding for readers who don't have previous exposure in the field. This field is very broad and it has integrated the insights from many adjacent areas such as Microeconomics, Marketing, Organization, and Human Resource. Furthermore, recent development of integrated strategic frameworks enabled effective strategic planning and execution. By providing overview of the field, we hope to delineate both overview of the field and positions of the focused two dimensions.

In Chapter 4 Research Methodologies and Analysis, describe the research methodologies regarding how we have used these two dimensions in our research and analysis.

Next, Chapter 5: Findings from Research will contain both effectiveness of the proposed two dimensions and other findings from the analysis.

Finally, in Chapter 6: Conclusions and Future Work, we will conclude when and why firms should focus on the proposed two dimensions. We also will touch on other implications from our research and possible further research direction.

Chapter 2

Motivation of the Research Topic, and Objectives

In this chapter, we will describe the motivation of our research from recent major changes in both technology and economy and why we believe we need to have focus in certain dimensions when we perform strategy planning. Then, we will present our research topic, two critical dimensions of strategy, and will describe our hypothesis when and why these dimensions will play critical roles in strategy planning process.

2.1 Motivation

First of all, we acquired the strong interests in recent important closely related changes in both technology and economy: rapid progress in information technology and economy globalization. The main question is whether these changes will need new ways for the strategic thinking or not. And we have started examining the impact of these changes and tried to extract the important dimensions for strategic planning process.

2.1.1 Importance of Speed

It is often said that the recent globalization often changed or increased the importance of business strategy. Globalization or network economy is not necessary the completely new concept, however, the recent changes of globalization which is partly brought by the

information technologies made the global business operations easier and faster in terms of both speed and economy. Now, to compete globally, firms need to operate their business globally or at least need to create global partnership in this redefined new economy.

2.1.2 Importance of organization capability

Recent emerging economies such as China and India have been creating many new talents. The number of new graduates from higher education is rapidly growing and relatively lower labor cost in these areas created strong incentive to move business operations to these emerging economics.

Establishing a new business operation is not necessarily an easy work. International Management itself inherently needs to manage conflicting issues: (1) responsiveness to a specific market to attract, acquire, and sustain customers, (2) global coordination to sharing knowledge in research and development to provide innovative products, and (3) global operation efficiency to achieve lower cost compared to competitors. These challenges for conflict resolution have been and continue to be the central theme in business strategy planning. And managing these organizational conflicts is clearly becoming important aspect for strategy.

2.2 Research Topic

To enable firms to gain speed and organization capability, we need to understand the actual changes necessary for firms in more detailed way. We need to answer the following questions: what exactly the progress of information technology has brought and continues to bring in, and what kinds of organization issues really gained importance for global

operations. By answering these questions, we believe we can extract the critical dimensions for strategy and establish the research objectives. First, we will closely look at information technology progress, and then we will look at changes in global operation to identify when and why we need speed and organizational capability.

2.2.1 Information Technology

In early 90's, researchers from Computer Science field has started examining the real influence of information technology to business environment and proposed a notion of Ubiquitous computing [41], [42]. According to Weiser, the computer will be pervasive in everywhere and it will be disappear: become invisible in a sense that computers are embedded in equipments and networked by the wireless technology in 21st century. Even though, notebook, desktop PCs, and servers are still central part of office equipments, we have started seen lots of equipments, which embedded computers.

Advances in User Interface have also increased the ease of use of networked office systems in ubiquitous computing environment. After the availability of text database technology, people has started providing retrieval top level applications in addition to old editor top level applications. Global firms have started building file servers, databases, and digital libraries to accumulate their business knowledge and make it available to people, who needs to share those information. To gain effectiveness in accessing and using large amount of information, researchers have developed very sophisticated techniques to increase the bandwidth and quality of interaction between users and information [34].

Combined with heterogeneous sources of information sources and sophisticated 3D graphical user information technology, now we can safely say that office workers cannot perform their jobs without accessing information system.

Table 1 Information Access Techniques

Requirements	Techniques
Interactive Query Refinement	Browsing Subsets of Source Iteratively Viewing Context of Query Match Visualizing Passages Within Documents
Source Heterogeneity	Modeling Sources Rendering Sources and Results
Parallel, Interleaved Access	Reflecting Time Costs of Interaction Managing Multiple Search Processes
Large Work Process	Integrating Multiple Search and Browsing Techniques Visualizing Large Information Sets

What exactly will these changes affect businesses? The major impact of this change is that technology is redefining the business. Every player in a certain industry need to understand and apply these innovations and it is becoming difficult to differentiate just by using state of art information technologies. More importantly, the definition of scope of a certain industry is changing, and technology enabled industry convergences. Therefore, the speed in responding to these changes is the key for the differentiation for businesses, and firms often need to repeat the strategy planning process to respond to these changes.

2.2.2 Global operation

The global operation of business requires dealing with different viewpoints and conflicting opinions. It is not obvious to solve the issues easily because it is difficult to have one universal right perspective. We need to make business decisions from other aspects when necessary. The most challenging part is that it is quite difficult to have all the

perspectives at the same time due to existence of various cultural and political institutions are behind the scene. To accelerate the business towards the uniform decision, we need to have well-defined strategy to share among people to respond to both various and changing requirements.

Table 2 Number of U.S. jobs moving offshore

	2005	2010	2015
LIFE SCIENCE	3,700	14,000	37,000
LEGAL	14,000	35,000	75,000
ART, DESIGN	6,000	14,000	30,000
MANAGEMENT	37,000	118,000	288,000
BUSINESS OPERATIONS	61,000	162,000	348,000
COMPUTER	109,000	277,000	473,000
ARCHITECTURE	32,000	83,000	184,000
SALES	29,000	97,000	227,000
OFFICE SUPPORT	295,000	791,000	1,700,000
TOTAL	588,000	-	3,300,000

According to the Engardio [10], firms have started responding to the globalization by cutting costs. They are shifting white collar jobs such as information technology. Especially, both China and India has been providing many new talents from graduate schools and the trends are consistently increasing. Forecasting from the Forrester Research Inc. shows that over the next 15 years, 3.3 million US services industry jobs, which corresponds to the \$136 billion in wages, will move offshore. The information technology industry will be the lead for this exodus.

To keep cost competitiveness, managers in global firms need to respond to these trends and many companies started outsourcing and / or establishing subsidiaries in these emerging economics as well as manufacturing and market & sales they already engaged in.

What is the real challenge in global operation? Fundamentally, global operation demands general challenges as described in [9]. These challenges are mainly caused by conflicting requirements such as (1) responsiveness to a specific market to attract, acquire, and sustain customers, (2) global coordination to sharing knowledge in research and development to provide innovative products, and (3) global operation efficiency to achieve lower cost compared to competitors. Furthermore, especially in the emerging economics such as China and India, we need to deal with conflicts that come from other external environmental factors such as culture, institution, and government regulations. Clearly, these changes have increased the importance of organization capability to manage these conflicts. The organizational capability is necessary both inside the organization and outside the organization. In fact, we believe conflict management among outside organization in a certain value chain in the industry is difficult and expensive to manage.

2.3 Two Critical Dimensions for Strategy

As described above, information technology demands speed up when the scope of the industry changes. Also, capability to manage conflicts is necessary when we need to manage cross-organization operation. From these two points, we have defined following two critical dimensions for strategy: (1) Industry Scope Shift, and (2) Reverse Strategy Trace. We believe these two dimensions are critical when we perform the strategy planning. In this section, we will describe the basic ideas of these two critical dimensions.

2.3.1 Industry Scope Shift

The rapid progress in information technology is bringing radical industry convergences across many industries. First critical dimension that we will introduce is “Industry Scope Shift.” This dimension is intended to identify both internal and external important entities to make business analysis by reflecting the changing industry boundaries in terms of market, product, and other features which define the scope of business. “Industry Scope Shift” will give us different perspective for strategic thinking in a focused way in the clearly defined changing scope at each stage.

2.3.2 Reverse Strategy Trace

In the global operation, strategy tends to be abstract and bureaucratic management hierarchy obscures the strategic intent of top management in the real business execution in business units and / or functional organizations. Especially, when operations include many outside organizations, it is often difficult to grasp the business operations in the whole extended enterprise entity. “Reverse Strategy Trace” is a dimension we propose to clarify the links from actual operation results and business strategy to identify which part of links and / or strategic agenda, we need to improve. We believe “Reverse Strategy Trace” will be more effective to compare those links with a set of clear criteria to evaluate the bottom line of business operation.

2.4 Objectives

It is quite difficult to identify the good strategic agenda by just analyzing competitiveness. We often end up with the new ideas for products or services for the

differentiations and new ideas for reducing cost by looking at current operation and available technologies. It is quite difficult to understand the degree of effectiveness of these individual ideas because of the uncertainty and contingencies in future, and it is quite difficult to predict all of them.

If we think about fundamental role of strategy, it is all about the evaluation and selections. In fact, it is quite difficult to do actual evaluation without executing it in the real business setting. We often only use traditional strategic frameworks and forget to think about actual fit for the firm in terms of culture, resource, organization, and technology in the particular business area.

Another pitfall is that we often get the wrong perspective. Sometimes, it might be more important to think about customers' customers to evaluate ideas. Study of competitors of customers often brings very important perspective for the evaluation of ideas. Requirements of global operation has contributed not to just raising importance of strategy planning, but also greatly to making it a really complex task to perform. By using information technology, we can alleviate some of this complex task to automate, however, it is not just your firm to get the access to the technologies, but every player has it.

2.4.1 Prove the effectiveness of identified dimensions

We are not providing a new framework for strategy. Therefore, it is true that if we can apply the right strategy framework in a right way, we should be able to come up with a right set of strategic agenda. However, it is not easy to master all the previous strategy work. Missing important point in strategy can bring firm a disaster when speed is critical. Our first objective of research is that we would like to prove the effectiveness of identified

critical dimensions for strategy, which we believe is important for the current changes and requirements of information technology and global operation.

2.4.2 Clarify when and why dimensions are critical

Another important research objective is clarifying when these dimensions are critical in business strategy. And we also would like to analyze why these dimensions are critical in a certain situation.

To accomplish these challenging research objectives, we will analyze the real business cases by using the two proposed critical dimensions for strategy. For each business case, we will use a set of existing frameworks with a focus in each proposed critical dimension. Then, we will analyze the effectiveness of having the focus in a certain dimension. We will also clarify why and when these dimensions are critical. We will also touch on other findings from our research.

Chapter 3

Theoretical Foundation of Strategies

In this chapter, we will describe previous works in the field of strategy to provide overview of basic understanding for readers who don't have previous exposure in the field.

Why do we need the business or corporate strategy in the first place? The basic answers to this question are (1) to save analytical work, (2) to have focus, (3) to align activity, and (4) to communicate better. In general, these four answers are corresponding to various aspects of strategy: microeconomics, marketing, organization, and human resource.

Even though, the market will not exactly act as we understand economics theories, it is still the core ideas to apply microeconomics of markets to make a strategic plan. Corts and Rivkin [6] describe the basic way to apply microeconomics to (1) Demand Analysis, (2) Supply Analysis, and (3) Market Equilibrium. We understand these only stand under the "Perfect Competition" and they explain how we can make a departure from Perfect Competition to analyze real markets. By making strategic plan, one can save the analytical work based on the microeconomics theories. We can say that this microeconomics aspect of strategy work raised the strategy to one of the area of management science with the extension towards the marketing area to make theory applicable to real markets. Having market and business focus is another important aspect of basic strategy because focus will define what people will do, and more importantly, it will define what people will not do.

We will examine the previous work in section 3.1, basic strategy based on the microeconomics and marketing.

Including organization issues into the strategy framework is the dominant paradigms in 2000's. In addition to the marketing, people have started integrating competency, resource, and organization issues. Alignments of activities are increasingly important to global operations to execute strategic plan in both an effective and efficient manner. To achieve alignments, people have made extensive studies in organization design and work process in organization. We will examine the Organization Strategy in section 3.2.

Next, we will focus on the human resource aspect of strategy in section 3.3. Due to increase of competition and demands in speed and complexity of works, people have realized that human resource management is one of most important part of firms. The issues will include the processes used to develop managers, socialization processes between employees and people from outside of firms, how to shape the shared value of management in firms, how to recruit young and talented people to firms, and how firms will help managing the careers of its employees. Requirements of global operation have added the need of understanding of diverse cultures and policies.

Previous work in international management gives us important insight to managing conflicting issues for global firms. Global operation often has an array of geographic areas to market their service and products. To create and capture values of their activities, they need to select the specific locations for their value adding activities. Those activities need the interactions among the organizations of crossing borders and raise many issues

including organization and operation effectiveness. We will describe frameworks from international management to handle these complex conflicting issues in section 3.4.

How can global firms keep their organization to be innovative to create differentiations in products and services? It is truly crucial to invest in research and development to sustain and grow the business in an increasingly competitive environment. The important aspect of technology strategy is what technology areas the firm should invest. Without having focus of technology and right portfolio to invest in research and development, firms will not be able to survive. We will describe the state of art work to illustrate technology strategy area in section 3.5.

Lastly, we will examine comprehensive strategy process, and we will clarify the positions of proposed two critical dimensions in section 3.6.

3.1 Microeconomics and Marketing Strategy

Porter has been greatly contributing this area [30], [31], [29]. The strategy frameworks, which he has proposed includes: five force to examine industry structure, value chain to examine competitive advantages in organization's internal activities, and diamond to analyze nation's competitive advantages.

According to the microeconomics theory, the model of pure competition implies that the rate of return should be constant across firms and industry. However, evidences and studies show that the profit abilities are different among industries due to asymmetric

information, heterogeneous products, and barriers to entry. The industry structure analyzed by this framework can explain the discrepancies (Figure 1).

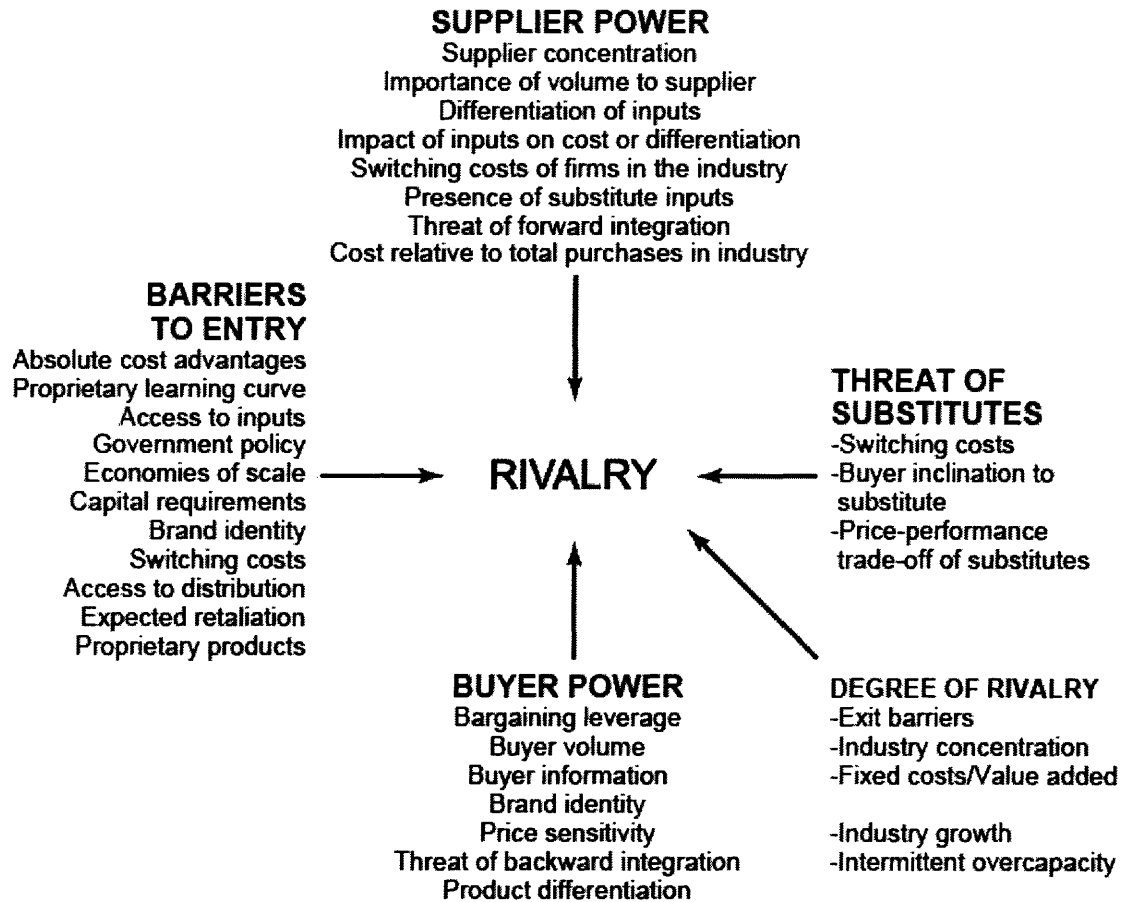


Figure 1 Five Forces

Five forces will examine the outside or inside of the particular firm or more specifically business. Another framework, value chain enables people to analyze inside of the firm. The framework make people to think various activities as separate ones and help identify the activities to generate competitive advantages or profit margin (Figure 2).

Porter [29] has proposed the value chain to analyze the specific activities which can create a competitive advantage (Figure 2). Ghemawat and Rivkin explained that we can

use value chain model to create marketing strategy [11]. They connected the marketing notion of the origin of value creation and distribution to the activities in the firm and explained the mechanism to generate the competitive advantage by raising the willingness to pay or reduce the cost.

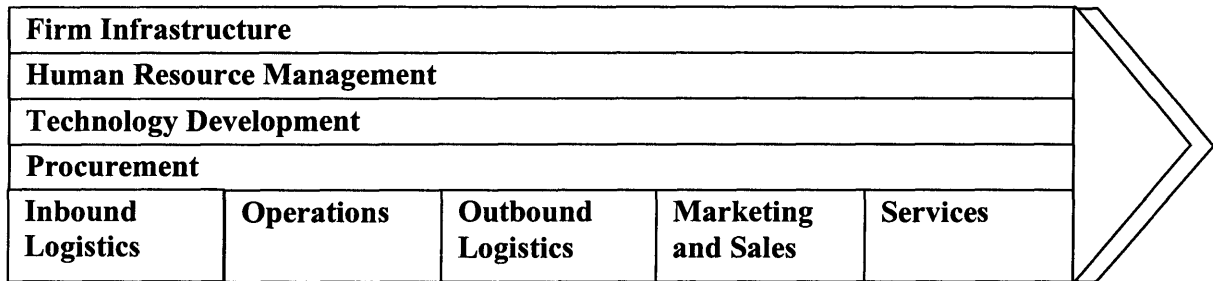


Figure 2 Value Chain

Another contribution by Porter is Diamond of National Advantage. Traditionally, international trade theory proposed that nations have advantages because of what those nations have or inherit, such as land to use, natural resources to mine, availability of labor force, and market or population for consumption. Porter has pointed out that nations can gain comparable advantages from other things such as skills of labor force, competitive technology and knowledge, government supports, and cultures (Figure 3).

Both Bain [2] and Scherer [36] previously pointed out the importance of industry structure. However, Porter is the first person that mentioned about the external environment of the firm in a clear and straight framework to explain competitive advantages in the relative positioning. He emphasized importance of positioning, focus, and fit.

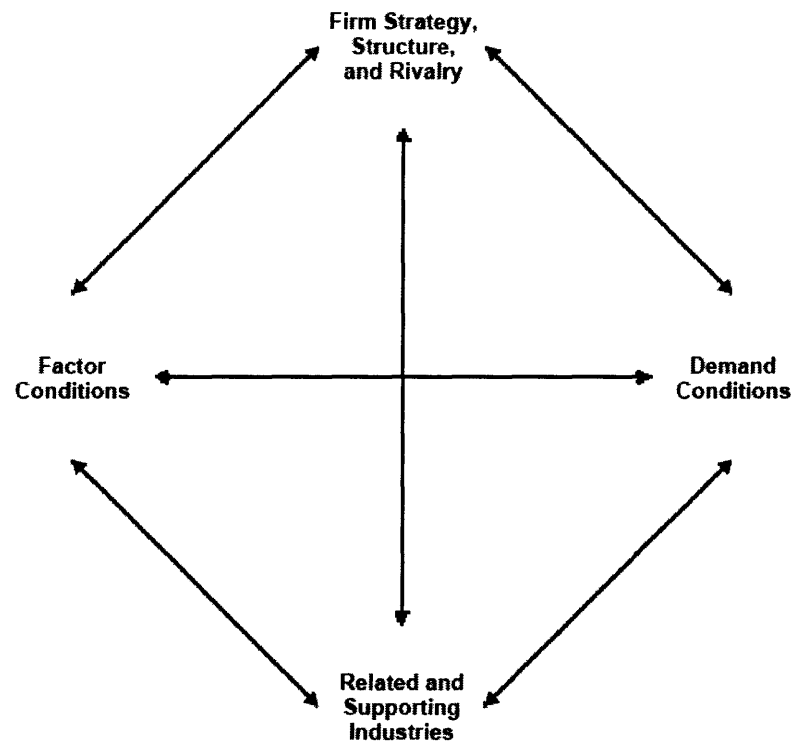


Figure 3 Diamond of Nation's Advantage

Gulati and Garino argued that managers need to think about the integration of business by explaining the mix of the Internet business and traditional business [13]. In responding to the criticism that the Internet has changed the importance of competition, Porter argued completely opposite and responded that competitive advantage is way more important in the Internet era, or advancement of information technology. Porter even argued that general changes in industry structure and value chain activities are provided by information technology advancements [28]. One thing we can criticize about Porter's work is that his notion of profit or value creation only comes from the competition and winning through this competition war is the firm's objectives and center of the strategy.

3.2 Organization Strategy

Next, we will look into strategy from organization perspective. McCaskey explained the framework for analyzing work groups in [24]. He emphasized the importance of group culture of the organization and provided clear dependencies of design parameters and outcomes of the group: productivity, satisfaction, and individual growth (Figure 4).

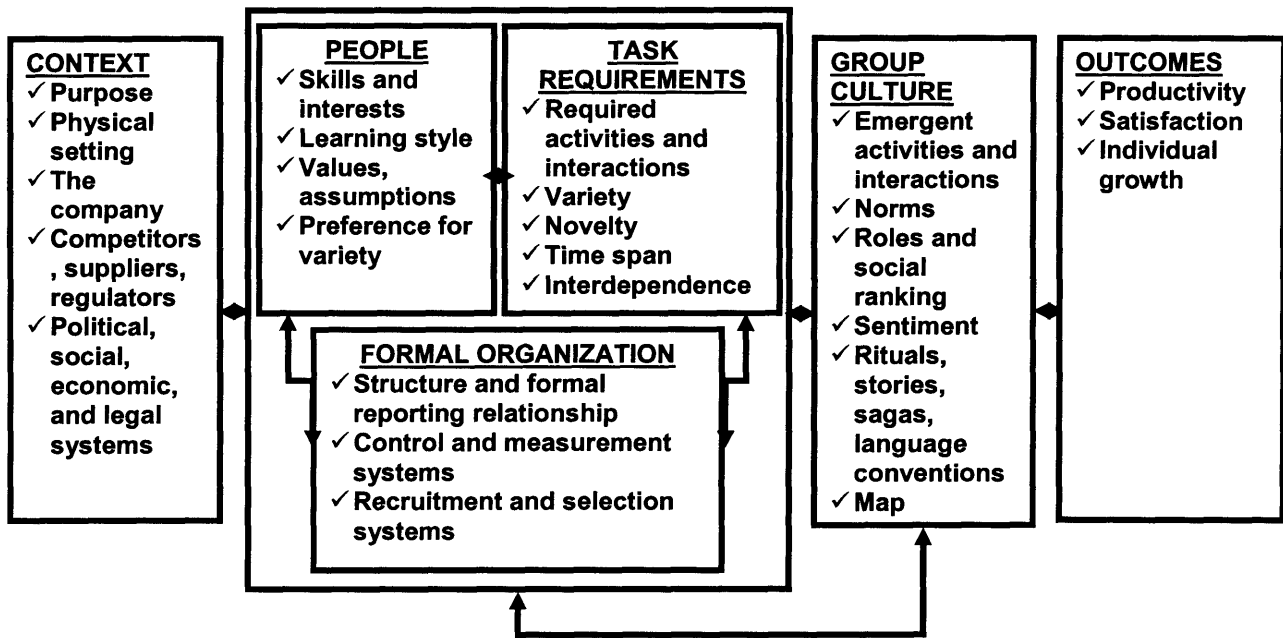


Figure 4 Model for Analyzing a Work Group

Waterman et al. has established a new view of organization called the 7-S framework and emphasized that to solve organizational issues; we need to look at related factors and should not just focus on organizational structure [40] (Figure 5).

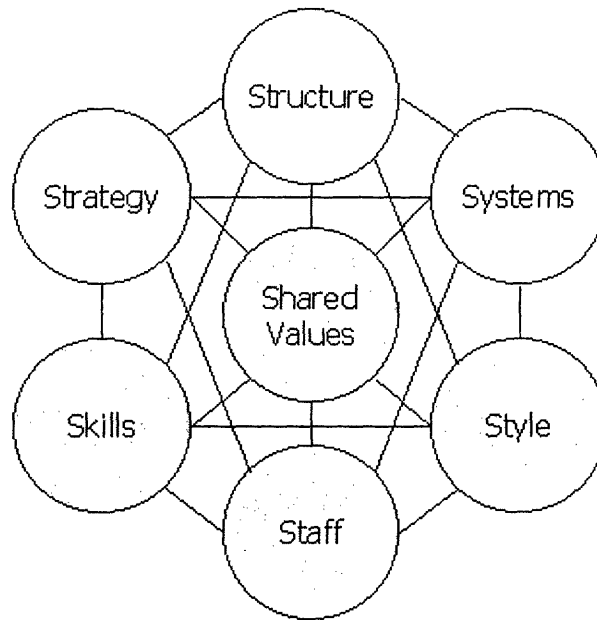


Figure 5 McKinsey's 7-S framework

Another important contribution for the strategy is called Resource-based view [12]. To develop competitive advantages, firm must have both resources and capabilities: the source of differentiation. Combining resources and capabilities together, we call these as competencies, which is the source of new business development [33]. Slywotzkly and Wise have identified the 4 categories for 15 types of hidden assets, from which firm can exploit value [38]. Clearly, that managers should correctly grasp what they have in terms of resources, capabilities, and other intangible assets is truly a basic step to set the strategic business focus. Finally, managers should be aware that defining structure is not enough and we need to focus on actual work process of organization.

3.3 Human Resource Strategy

As for the Human Resource (HR) Strategy, there are two main themes: (1) how we manage the firm's HR, and (2) what we should do both to implement HR policies and to achieve competitive advantage. HR can be regarded as precious assets for firms and an important source of competitive advantage. Product design, production technology, and marketing strategy is very important to have, however, without effective system to acquire and manage HR is often more important.

The first theme addresses the implementation of firm's strategy. Wageman identified the seven critical success factors to lead the team [39] as shown in Table 3 below.

Table 3 Seven critical success factors to lead the team

1. Clear direction
2. A real team task
3. Team rewards
4. Basic material resources
5. Authority to manage the work
6. Team goals
7. Strategy norms

To apply this framework, she prepared the diagnostic questions to each factors and we believe this is a very practical way. We believe if we can add how we can apply this framework in which levels of organization depends on the firm's situation and organization structure, it would become more useful, because aligning HR practices in the organization is very important to make firm's strategy actually work.

The second theme in HR strategy will address how to develop effective organization by HR system that managers adopt. By using cases of Metro Bank and National Insurance, Kaplan and Norton emphasized that the Balanced Scorecard is not the tool to formulate the strategy [18], [19], [20]. It is used for the translation of strategy into a measurement framework for organization to three perspectives in addition to traditional financial point of view (Figure 6).

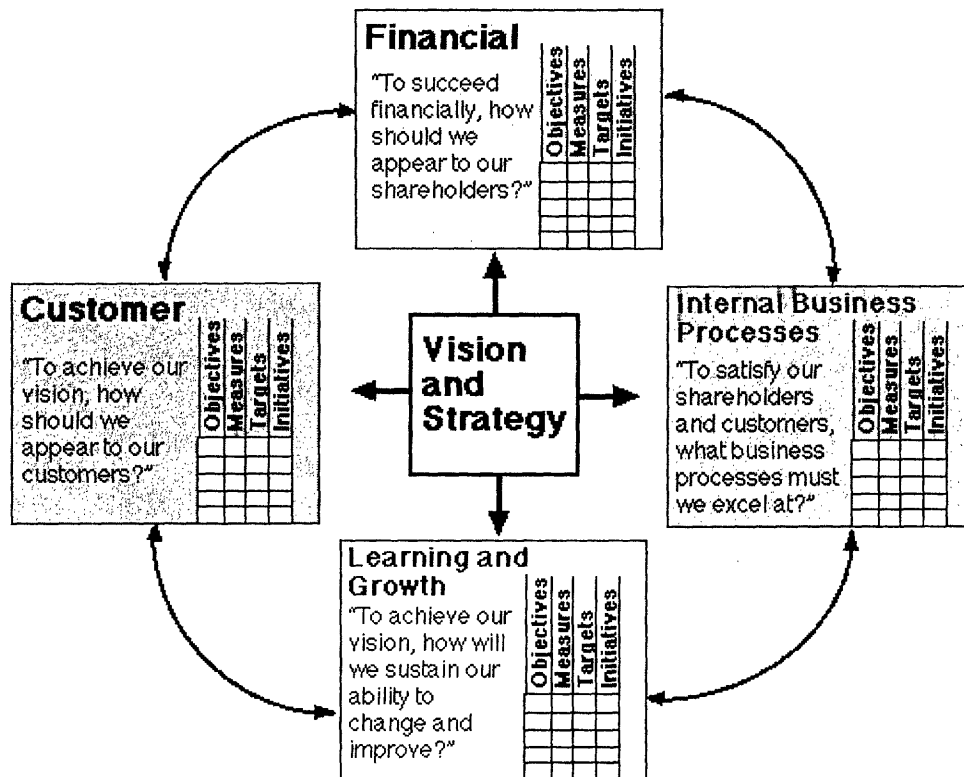


Figure 6 Balanced Scorecard Measurements

Combined with the compensation to the employees, the disciplined measurement framework will stimulate a great interaction for the specific meaning and implementation of strategy. It means the scorecard departs from the original measurement framework and articulates for organization's vision, shared understanding, and focused change efforts. The holistic model of the strategy can be provided by having right scorecards in hand.

Furthermore, if the cause-and-effect hypotheses are clearly stated in objectives and measurements, managers can test the strategy in real-time and adapt as they learn. This will create the culture of learning organization and can be crucial source of competitive advantage.

There are other interesting works from Human Resource (HR) perspective of strategy. Lawler et al. argue that HR should act not only as a strategic partner to serving decisions, but also leverage Information Technologies and act true value creating role by automate routines HR works and collect and evaluate the effectiveness of HR [23].

Simons emphasized that effective managers empower their organizations because they believe in the innate potential of people to innovate and add value. On the other hand, he added that they need the balance of empowerment and control and they need to use four control levers: Beliefs systems, Boundary systems, Diagnostic control systems, and Interactive control systems [37].

In sum, right kinds of measurements corresponding to firm's strategy will clearly define how and who to invest in people in terms of training and career development, and encourage team work towards the learning organization. Of course, these need to be based on incentives matched with measurements and information needs to be shared among the whole organization. Clearly, HR is very important for achieving strategy alignment and employee motivation.

3.4 International Management

There is another interesting work about dealing with strategy and organization issues in the cross-border environment. International expansion gives global firms many opportunities including (1) local market responsiveness, (2) global operation efficiency, and (3) Shared knowledge leverage across borders. According to Bartlett and Ghoshal [1], they believe these three are the leverage points that different types of internationalization give to global firms. A key argument here is that different firms are particularly good at adapting to one or another dimensions of performance. It is very difficult to establish excellence in all the three areas. They used the examples that traditional firms from Europe were very good in responding to various local market needs and Japanese firms especially in 1980s did excellent job in global operational efficiency.

It is true that meeting these three areas has a fundamental challenge because of possible conflict. However, recent move to the globalization with IT and transportation infrastructure progress raised the bar of expectations for global operation. It is crucial to have strong excellence in all the three areas. In addition, we need to have new innovation as a source of competitive advantage and we need to have clear game plan for the operation.

Prahalad and Doz [32], in their seminal analysis, map industries along two dimensions (1) Globalization and (2) Localization, reflecting the pressures and benefits of global integration and / or local embeddedness and the required competences to exploit each. It is still true that how global firms can have cost or differentiation advantage in a certain industry, the international geographical dimension is also need to be taken into the consideration. In the global business context, we need to define clear geographic scope for

a particular industry and factors that affect the industry. However, it is important these scope and factors are not just one set for a certain industry or a business, actual operation in a particular business is likely to have different needs.

3.5 Technology Strategy

In the current global competitive landscape, differentiation in technology is increasingly becoming important. In some high tech industry, it can take a very long time from the R&D to the product launch as much as 20 years and investment can be enormous amount of monetary value. It is crucial to have a clear strategy in which technology we will invest and in which we will not.

The area of technology strategy study has greatly contributed especially for high tech global firms. It covers not just only the creation of the value out of innovations, but also covers how we deliver and capture the created value from the innovations.

Christensen [3] proposed a very popular view that a large firm's leadership will bring failure. The trivial technology will disrupt the large firm's business model. Disruptive technology is the simple technology that challenges existing business model. It is usually technology that enables applications to move down market to new uses. When the technology provides more functionality than demanded, functionality ceases to be a basis of competition and disruptive technology will insidiously sneak into incumbents' market. He claims that we should establish separate small organization to be innovative and create disruptive technology.

Another interesting theory is even though the transaction cost is higher to manage, open innovation is likely to succeed in current rapid changes. Chesbrough compared close and open innovation paradigms in [7] and claims open innovation can create better structure and process for innovations by linking organization across boundary. Henderson [16] also mentions that “spillover” is very important and activities linking inside and outside organizations will enable the management of architectural knowledge, which is very important to assure the right connection between innovations and organizational capabilities [17].

Current global firms have a network of suppliers and customers in the extended enterprise and you need to have a clear understanding to manage reputation and expectation in the network of organizations. "Transaction Cost Economics and the Theory of the Firm" in [21] gives us a basic framework to consider organization issues in terms of structure and transaction cost. Especially, excellence in relational contracts and governance structure can fundamentally change the cost of transaction and competitive landscape in turn.

3.6 Towards the comprehensive strategy planning process

In previous sections, we have reviewed the large number of strategic planning theories and frameworks from many perspectives. It is quite natural to have a question like what kind of framework is appropriate in a particular business. Should we use only one framework, or combine these frameworks? Most of the strategy experts say “it depends.”

And we would like to make clear when we should use what framework(s) in what kind of businesses and situations.

There are some very interesting works, which regards strategy process in broader perspective and in a comprehensive way. Hax and Wilde have proposed the new strategy framework to position the business from the perspective of extended enterprise [15] chapter 1-5. According to their framework, Porter's strategy is one of the strategic options: Best Product. Their emphasis in relationship with other entities such as suppliers, customers, and customers' customers etc. provides new way of differentiation. The triangle (Figure 7) captures the strategic position of business.

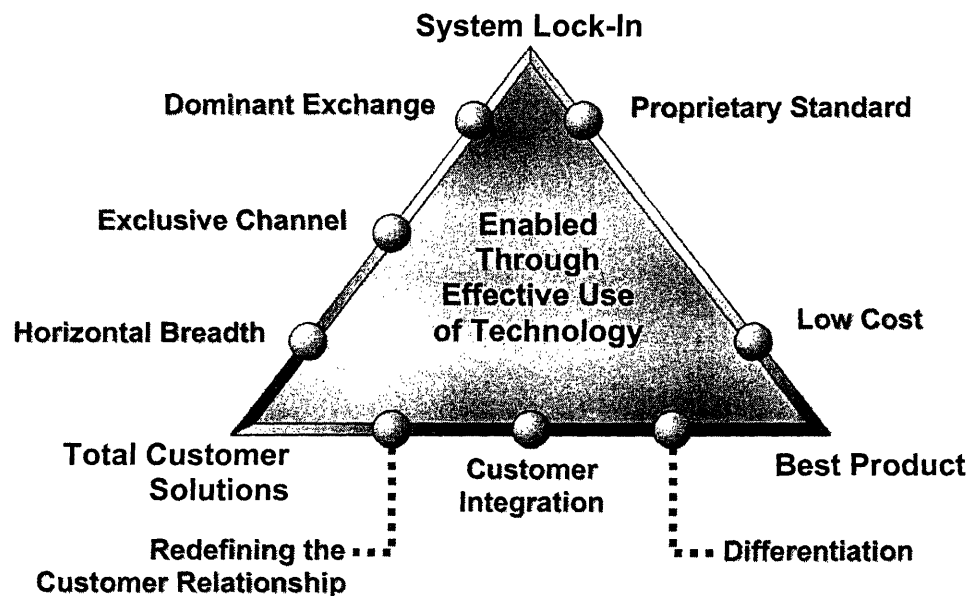


Figure 7 The Delta Model: The Triangle

As we examined, there are many attempts at strategy theory establishments. Lots of these frameworks often only capture limited number of aspects of the business issues and people who use those frameworks need to identify the right ones for use to perform

planning and overseeing created strategies. However, Strategy as a whole is like kitchen sink area of study. Mintzberg et al. have argued that there are too many schools for strategies and we should get real and target establishment of practical strategy practice [24].

How do the proposed two critical dimensions fit in these previous works? First, having a scope is traditional way to analyze business. As described in [14] Chapter 4, when you identify the mission of business, you need to determine the segments in terms of market and product. It clarifies the growth strategy alternative to select and leads us to what exactly challenges in market, product, or other scope of business. Industry Scope Shift will provide focus to capture the changing scope of business in which area and direction. This clarifies the business challenges to address and it leads us to identify changes in strategic agenda.

As for the “Reverse Strategy Trace,” it has similar definition of strategy with Mintzberg [25] and [26]. Mintzberg defines a strategy as “a pattern in a stream of decisions” and strategy formation over time follows some important patterns in organization. This emergent strategy formation resides in the opposite end from the deliberate strategy formation and it focuses on learning in the strategy formation process. Especially, emergent strategy is often not intended in the previous deliberate plan and will help business to use insight to next cycle of strategy planning process. And we believe extracting strategy from business operations will help us identifying a whole set of strategic agenda from deliberate to emergent ones.

In conclusion, when managers perform strategic planning, we strongly believe we need focus to certain dimensions, which will capture and correspond to the exact business situation of the firm and unintended strategy for the next strategy planning process. To guide the strategic planning, we would like to establish the process and tool, which includes core parts and optional parts, that manager can select depending on her or his challenges. The core parts will provide the holistic view of key basic perspectives from three areas: microeconomics and marketing, organization, and human resource. Also, execution of strategy should include three key operation execution areas to measure and iterate the strategy plan and encourage learning process. The three areas are customer targeting, operation effectiveness, and innovation and this notion is shared by both the Delta Model and Balanced Scorecard. We believe that the proposed business strategy process in [14] Chapter 3-8 combined with our proposed focus in two critical dimensions will be ideal to start our examination because this process unifies the important frameworks of strategy as described in [15] chapter 12.

Chapter 4

Research Methodologies and Analysis

To identify the effectiveness of proposed critical dimensions of strategy, we need to use these dimensions to analyze real business cases. We have chosen two specific business cases: (1) competitive analysis framework for Fuji Xerox extensible color copier and (2) comparative automotive business strategy study for General Motors (GM) and Toyota. For each case, we will apply “Industry Scope Shift” and “Reverse Strategy Trace” dimension respectively. We will show how we actually apply these two dimensions along with the actual cases.

Then, we will analyze the case with a focus of proposed two critical dimensions and draw conclusions including the effectiveness and applicability of these dimensions. We will mainly use the basic business framework proposed in [15] because the Delta Model will give us a holistic view to analyze business strategy. We will also use additional frameworks to explain the detailed analysis necessary for the certain areas. All the frameworks we will use in this research are described in previous chapter. Now, we will describe how we have selected the real business case to effectively pursue our research objectives.

4.1 Case selections

4.1.1 Fuji Xerox case – Industry Scope Shift

We have selected Fuji Xerox case for our research for the following three reasons: (1) it is very good way to prove that we need a different perspective to analyze business and perform strategic planning in a different situation, (2) the case will reveal the relationship between underlying technology and business extensibility, and (3) it will enable us to compare the traditional competitive analysis frameworks and more recent comprehensive system frameworks. We will use “Industry Scope Shift” to analyze this business case.

4.1.2 GM and Toyota case – Reverse Strategy Trace

As for the second business case, we have selected the automotive industry because automotive industry includes major global operations. It is a very unique industry that both incremental and radical innovations such as Hybrid and Fuel Cell Car are coming from these big players. Recent news says that Toyota’s world wide car sales finally exceeded Ford. And GM is in stagnation even though it is still the No.1. We believe that it would be a very critical dimension for strategy, if we can clearly showed the strategy differences between GM and Toyota to explain Toyota’s faster growth and larger profit in recent years. We will focus on “Reverse Strategy Trace” dimension in this case.

4.2 Fuji Xerox case analysis

4.2.1 Introduction

When we examine business strategy, we will look at industry structure and competitive advantages. The analysis is based on the clear definition of the industry scope. Basically, competitive advantages are relative measure compared to other players in that scope. The different definition of the industry scope will bring the different competitors. Should we always use the more extensive list of competitive players or should we stick with the primary industry scope, which we believe is the strategically most important industry scope? We would like to propose the new practical way called “Industry Scope Shift” to analyze business strategy. By this dimension, we will define and change the industry scopes in holistic manner and only use most relevant definition in each business phase. We will provide a real business case analysis and show the applicability and effectiveness of the dimension for the business strategy analysis. We will use the existing frameworks: Porter’s Five Forces, Porter’s Value Chain, Resource-Based View and Delta model to analyze the business cases and we also would like to propose possible unification of these model in line with the proposed “Industry Scope Shift” dimension.

In the rest of this case, we will examine the Fuji Xerox DocuColor 1250 MP, an extensible color copier installed in all the stores in Seven Eleven Japan. First, we will provide the background information about these two firms. Second, we will apply business strategy frameworks to analyze industry structure and competitive advantages by using defined industry scopes. Finally, we will examine appropriate use of each framework and consider possible unification to examine business strategy and summarize usefulness of

proposed dimension, “Industry Scope Shift,” to analyze business strategy over the course of project progress.

4.2.2 Background information

Let us take a step back and examine the background information for both Fuji Xerox and Seven Eleven Japan, as we will examine the business started between these two firms.

Fuji Xerox

Fuji Xerox Co., Ltd. is a very successful joint 50-50 venture of Fuji Photo Film (FPF), Japan and Rank Xerox (now it is called Xerox Limited and 100% owned by Xerox Corporation, USA). Fuji Xerox is established in 1962. Its Capital is 20 billion yen or \$167 million. Currently, 75% of its shares are owned by FPF and the rest, 25% of them, are owned by Xerox Limited. Therefore, Fuji Xerox financial performance is reported as a part of FPF’s consolidated financial report. The parent company, FPF, has three major business areas: (1) Imaging Solutions, (2) Information Solutions, and (3) Document Solutions.

Imaging Solutions is the photo related business including traditional color film, conventional cameras, digital camera, lab equipment, color paper, chemicals and services for photofinishing. Information Solutions include other non-photo businesses such as systems devices for graphic arts, medical imaging, and information systems, liquid crystal display materials, recording media. Document Solutions area is the one Fuji Xerox and its subsidiaries are in business.

Fuji Xerox offers office equipments such as copiers, printers, and multifunction (copier, facsimile, printer, and scanner). Recently, Fuji Xerox is also offering software products which connect these office equipments with PC network in work place. Our current main offering is the multifunction machines which use laser printing technology.

Fuji Xerox's marketing territory consists of countries and regions of Asia Pacific area including Japan, Korea, China, Singapore, Thai, Australia, New Zealand and some other countries. The rest of the world market is governed by Xerox Corporation. Both Xerox and Fuji Xerox are providing their products each other and Fuji Xerox has more focus in the low-mid range office equipments and Xerox is focusing on high-end publishing system. For example, Fuji Xerox provides DocuCentre Color 240 CP to the world-wide market and Xerox provides DocuPrint 180 EPS in turn.

DocuCentre Color 240 CP

An advanced color digital multifunction device, the DocuCentre Color 240 CP achieves print speeds of up to 13 pages per minute (ppm) in color and 24 ppm in black and white, both in A4 long-edge feed. The use of Emulsion Aggregation (EA) toner ensures oil-less silky finish that can be easily annotated with a pen or self-adhesive notes, while also producing sharp black text and natural-looking photos by increasing the clarity of fine lines and reducing glossiness.

DocuPrint 180 EPS

These cut-sheet laser printers for mission-critical operations as well as open network environments can print in 180 ppm.

Seven-Eleven Japan

Seven-Eleven Japan Co., Ltd. is the leader in the convenience store sector and outperforms other competitors by a big margin. In fact, Seven-Eleven Japan is the leader of the whole retail industry in Japan. Seven-Eleven Japan was established in 1973. Ito-Yokado directly owned about 416 million shares of the common stock of the Company, which represented 50.7% of the total outstanding shares. Accordingly, the Company is a majority-owned subsidiary of Ito-Yokado.

At the end of FY2003, which ended February 2003, Seven-Eleven Japan has 9,743 stores with the net annual increase of 627 stores from previous year. Seven-Eleven Japan's ROE is 13.4%, and it ranks among the top tier of Japan's listed corporations. Shareholder dividends are raised 2.0 yen, or \$0.017 per share, to 35.0 yen, or \$0.297, marking the 23rd consecutive year of dividend growth since company has gone public.

In spite of the Japan's deflationary environment and stagnant personal consumption in recent years, Seven-Eleven Japan has been performing really well. Their state of art information technology infrastructure, which include POS system, the aggressive store expansion, and customer focused merchandize and services development among other notable business strategies. Seven-Eleven Japan's original fast food are the main product offering and occupies the large portion of shelf space in every stores. Seven-Eleven Japan has high-tech temperature-controlled, fully-online supply management system enables make-to-order original fast food products and there is no excess production, large inventory, or use of preservation.

Over the steady increase of stores, the number of customers patronizing its stores has shown marked growth. Total annual customer visits to Seven-Eleven Japan stores numbered 3.3 billion, which is about 26 times the population of Japan for the fiscal year ended February 2003.

Seven-Eleven Japan plays a central role in Seven-Eleven's network of 24,677 stores¹ in 19 countries and territories. Together with Ito-Yokado Co., Ltd., Seven-Eleven Japan has taken a capital position in 7-Eleven, Inc., the largest convenience store operator in the U.S. Seven-Eleven Japan and Ito-Yokado now hold approximately 70% of shares issued and outstanding in 7-Eleven, Inc.

4.2.3 Business Strategy Analysis

Fuji Xerox has been one of major player in multi-function machines in office markets among other strong competitors like Canon and Ricoh. However, Fuji Xerox has not entered the convenience store market and this is the first time to consider the entrance. To examine business strategy, we need to define the industry scope. We have identified following five industry scopes to analyze business strategies.

1) “Copier in convenience stores”

To enter the convenience store market, Fuji Xerox needs to compete with traditional copier makers such as Canon and Ricoh. In late 90's, almost all the profit from the copier in convenience store was photocopy service. Competitors did not provide any other services. Some convenience stores provide color copier in addition to the black and white

¹ As of December 31, 2002

copier. Therefore, our main focus to enter the market was to provide state of the art color and black & white copier. In this industry scope, customer is Seven-Eleven Japan.

2) “Service providers with strategic partners”

Once it entered the market, established Seven-Eleven-Fuji Xerox alliance business focus will shift to the shared profit among strategic partners. In this industry scope, competitors are other combined convenience store chain and copier companies such as Lawson-Canon alliance. Customers in this case are end-users who visit Seven-Eleven to make photocopiers or any other services.

3) “Copier in Seven-Eleven stores”

Seven-Eleven Japan has developed in-store multi-media terminal² to provide information and e-commerce services in Seven-Eleven stores. Seven-Eleven Japan has a clear measurement for the profit, “profit per square meter.” Our successful introduction of local map printing services convinced Seven-Eleven to eliminate money-losing in-store terminal and DocuColor 1250 MP has inherited some portion of services³. In this case, customer is Seven-Eleven Japan and competitor is NEC and other companies who have invested large amount of money to develop proprietary in-store terminal for exclusive use for Seven-Eleven stores.

4) “Service platform for inter-office environment”

Finally, another interesting business scope we identified is “service platform for inter-office environment.” Due to the recent development of mobile technologies, workers,

² <http://main.sej.co.jp/10/13/1301/1301link/017.html>

³ <http://main.sej.co.jp/10/13/1301/1301link/050.html>

whose primary place to spend their time outside of their office such as sales and service representative, have started spending more time outside. They are using networked mobile terminals such as Notebook-PC, PDA, and mobile phone. One of the issues they are having is getting paper documents. By providing network printing capabilities, people can use more than 10,000 stores as printing station nationwide. In this industry scope, potential competitors can be other store chain and copier companies and customers are office workers equipped with mobile terminals.

4.2.4 Industry Structure

Analysis by Porter's Five Forces

First, we will analyze the industry structure for the initial entrance to the market. The industry scope we are focusing in this analysis is (1) "copiers in convenience stores."

Barriers to entry (very high)

Both copier maker and convenience store chain has a strong partnership and make a relatively long-term agreement for copiers to install in stores. Also, the typical usage of copier in convenience store is totally different from the use in offices and Fuji Xerox need to provide very simple navigating user-interface like ATM. Therefore, it would require experience and learning effects to enter this industry.

Availability of substitute (very low)

All the major convenience store chains in Japan provide copier in store and they must provide copier service to customers and they need to choose major copier from the copier

industry. Also, essentially all the machines need to be replaced to switch from one make to another, switching cost is really high.

Bargaining Power of Suppliers (low)

The total numbers of copier compared with the office market is relatively low and Fuji Xerox does not need to require any special supplies for the copiers in convenience stores. Also, providing extensible services, it can use the PC platform and total industry cost contributed by suppliers are relatively low and easy to switch from one supplier to another.

Bargaining Power of Buyers (very high)

Buyers' profitability is very important because they have very strict measure, profit per square meter. Also there are few important buyers and major three chains, Seven-Eleven Japan, Lawson and FamilyMart has been holding about 65% of the convenience stores nation wide out of 10 recognized players in Japan.

Rivalry among Competitors (relatively high)

Product differentiation in long-term is very difficult and Fuji Xerox needs to invest large amount of money to be competitive. It needs to bear with large amount of fixed cost to maintain services in order. Also, entering the convenience store chain market provides great deal of visibility in general consumers and it has a great advertisement effect. Therefore, corporate strategic stakes are very high to acquire new agreement. However, industry itself is in very fast growth.

Summary from Porter's Five Force Analyses (relatively attractive)

In summary, it is very competitive industry and Fuji Xerox needs to invest large amount of money to enter the industry. However, it is one of the very few areas in the rapid growth in Japanese Economy and if Fuji Xerox gets a successful agreement with a chain, mid-to-long-term profit and cash-flows will be promised. Moreover, business itself is very attractive because if you get one deal, you will get the deal for the whole chain nationwide. In this case, Seven-Eleven Japan has 10,299 stores as of March 31, 2004 nation wide and it means more than 10,299 color copier placements. Therefore, it is relatively attractive for Fuji Xerox to enter the market in recent economy struggle in Japan. In April 2002, Fuji Xerox has successfully launched the first basic model of DocuColor 1250 MP exclusively for Seven-Eleven Japan.

<u>Firm Infrastructure</u> Corporate strategy to identify new and changing customer requirements Strong IT infrastructure to connect the entire SEJ stores with Services				
Human Resource Management				
<u>Technology Development</u> Proven reprographic technology combined with IT and software capabilities				
Procurement				
<u>Inbound Logistics</u>	<u>Operations</u> Central operation at Tokyo with nation wide operations	<u>Outbound Logistics</u> Established nation wide logistics network	Marketing and Sales	<u>Services</u> Proven expertise to address specific technical issues

Figure 8 Value Chain Analysis for Fuji Xerox

4.2.5 Competitive Advantages

After providing the basic copier to Seven-Eleven Japan stores with customized user-interface, Fuji Xerox has focused on enhancing services with the established partnership with Seven-Eleven Japan. To analyze competitive advantages, we will focus on industry scope of (2) “service providers with strategic partners.” First, we will use Porter’s Value Chain framework to examine competitive advantages.

Value Chain Analysis

Large portion of value chain is common with the copier for the office market. Therefore, we will examine how our partnership has created the competitive advantages by focusing on the five underlined activities described in Figure 8. Out of these five activities, we have further focused our analysis into two singular activities: technology development and service because we have identified these two activities are the main source of competitive advantage.

Technology development activities

Even though, Fuji Xerox has essentially launched only photocopy services at the first stage, both Seven-Eleven Japan and Fuji Xerox saw the strong potential to make the copier to the service platform to respond to future needs of customers who visit stores. Fuji Xerox has carefully selected the technology so that we can add and extend the basic software architecture. At first, Fuji Xerox has focused on the Seven-Eleven Japan requirements. As we mentioned before, profit is the very visible manner and Fuji Xerox has provided the sales transaction record subsystem just like scanning bar code in counter.

When customer makes copies, the copier will automatically record the detailed contents of the job such as number of copies made, size of paper, etc.

Service activities

Another concern is providing high service availability, it is impossible to make profit if the machine is not in the operating condition. They have connected Seven-Eleven and Fuji Xerox IT infrastructure and Fuji Xerox's service maintenance division can watch the all status of 9,743 machines and can dispatch the technical representative to fix the problem or place orders for consumables.

Summary for the Porter's Value Chain Analysis

Above two activities were not raising the customers' willingness to pay more and just provide the way to reduce the cost indirectly by reducing the total business operation cost. These activities were carefully integrated with the other activities with office copy market, highly profitable value chain, and cost saving effect was enormous. However, the machines were running on 24/7 and this has created the increase in service operating cost. We would like to examine how Fuji Xerox has addressed this issue by using Resource-Based View framework.

Analysis by Resource-Based View

Next, we will perform Competitive Advantage analysis by using Resource-Based Theory.

Identification of resources

We have closely looked at the resources available both Seven-Eleven Japan and Fuji Xerox to reduce the operating cost of 24/7 running copiers. We have identified two major resources: (1) Seven Eleven Japan's high speed IT network infrastructure by satellite broadcast system, and (2) Extensible software architecture of DocuColor 1250 MP.

Identification of capability

Fuji Xerox has strong capabilities in both IT and software based on the extensible software architecture implemented in the product and great in-house software talents.

Competitive Advantage

One of the major problems for Fuji Xerox is to cost to install new version of software to 9,743 machines. If the upgrade process is fully automated, it will be great competitive advantages in terms of cost savings against the current operation, which its technical representative will visit each store by bringing a new version of CD-ROM and update the software at the store. Fuji Xerox's extensive software architecture and the strong IT and Software capability enable Fuji Xerox to respond the basic requirements, and cost savings, \$333 thousand per upgrade, justified the size of investment to make to accomplish automated upgrade.

Selection of strategy

Both Seven-Eleven and Fuji Xerox has agreed on the strategy and formed a task force to address specific requirements. In spite of the difficulties to reach to the reasonable

quality, we have successfully launched the first satellite broadcast software upgrade function for copier.

Summary for the Resource-Based View analysis

The resulting operating cost saving is 40 million yen, or \$333 thousand per upgrade. Furthermore, we can schedule the upgrade at 3 a.m. Essentially, no one in store is operating copier at that time, and we can prevent the possible revenue loss from this automated maintenance. The generated value is sustainable and far offset the cost as we only had little marginal cost for the operation to implement the strategy. Also, the implementation of this strategy brought us another capability, low-cost upgrade capability, which enabled and encouraged both Seven-Eleven Japan and Fuji Xerox to add more services to customers and became the source of further generations of values and competitive advantages in the scope of (2) “service providers with strategic partners.”

Analysis by the Delta Model

Next, let us focus on new services. As these are the value creation to outside of the established Seven-Eleven Japan and Fuji Xerox extended enterprise, we will use the Delta Model to analyze business strategy and competitive advantages.

Start from Best Product and move toward Total Customer Solutions

When Fuji Xerox first entered the market, our industry focus was 1) "copier in convenience stores." At that time, color copier and black & white copier were the separate products and Fuji Xerox was the first player to integrate these two machines. This “differentiation” has appealed strongly to Seven-Eleven Japan to switch to Fuji Xerox as

they are strongly believed that “profit per square meter” is very important. Once Fuji Xerox has gained exclusive contract, it tried “Customer Integration” through providing services they desired such as “the sales transaction record” and “automated software upgrade through satellite broadcast.” Then, Fuji Xerox has realized that real target customers are not Seven-Eleven Japan and consumers who visit Seven-Eleven Japan stores, and Fuji Xerox has made an “Industry Scope Shift” to (2) "service providers with strategic partners."

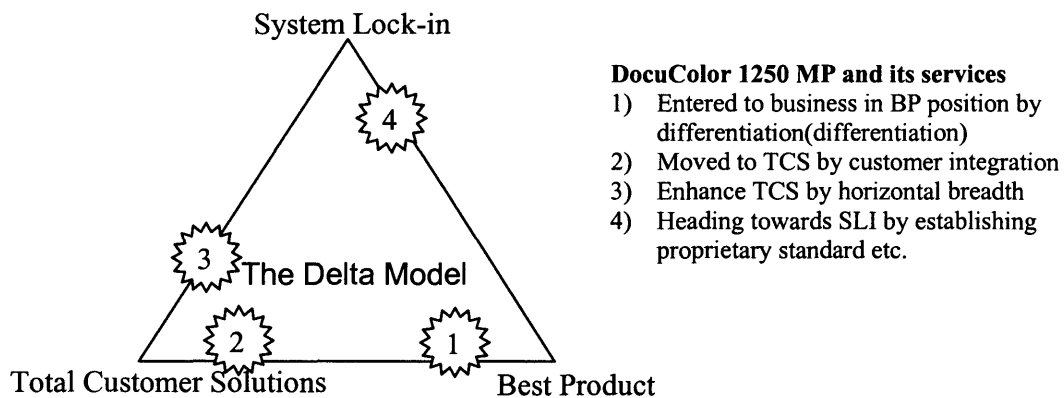


Figure 9 Strategic Options for DocuColor 1250 MP

Enhanced Total Customer Solutions by Horizontal Breadth

With the agreement with Seven-Eleven Japan, Fuji Xerox has started adding new services. The first service, it has added is traditional “fax transmission.” Even though, this is not new kind of services, Fuji Xerox can collect the actual usage and can easily show how this added function increased the profit by established IT infrastructure. This capability along with target configuration information of satellite upgrade enabled Fuji Xerox to test only in Tokyo Metropolitan stores and to expand the service in nation wide later. Fuji Xerox has introduced many services through this model such as “local map printing,” “network printing.” Through, network print service, people can use Seven-

Eleven machine as your printer through the Internet. Once Fuji Xerox gained this “printing service platform,” it can extend the services to corporations and consumers. For the small number of corporations, Fuji Xerox has developed the special printing services for their sales and service people from those corporations. People can just drop by one of Seven-Eleven stores and can access documents stored in the office through internet and can print those at the stores. For the consumer market, Fuji Xerox has made a partnership with one of the mobile phone company to provide the same service.

We have made another Industry Scope Shift to 3) "copier in Seven-Eleven stores." Seven-Eleven Japan found that it can provide many of secure, reliable, add-value services on this “copier.” It is easy to implement and Seven-Eleven Japan decided to abandon their in-store information kiosk terminal and transplant the important services to the “copier.”⁴ The services include, ticket issuing for music concert, theater, sports events, movies, etc., ticket issuing for travel, application and issuing certification of payment for testing services such as TOEIC®⁵, Japanese KANJI character test, and payment for previously reserved airline ticket for frequent flyer program members. These services enabled both Fuji Xerox and Seven-Eleven Japan to attract the industry leading companies such as, ticket PIA (Ticket Issuing), JTB (Travel Agent), and JAL (Airline). Also, network printing service attracted many contents providers and Fuji Xerox has established a web-site for contents printing. For example, it provides photos of famous baseball players ready to print next day after the game for baseball fans⁶. Combined with the Seven-Eleven’s unbeatable

⁴ <http://main.sej.co.jp/10/13/1301/1301link/050.html>

⁵ TOEIC is a registered trademark of Educational Testing Service (ETS).

⁶ <http://www.printno.jp/tg/index.html>

leadership position in retail market⁷, Fuji Xerox has successfully established strong “total customer solutions” position through these horizontal breadth activities.

Toward the System Lock-In by Proprietary Standard or other ways

Fuji Xerox’s business success attracted the attentions from its corporate strategy division to establish new strategy and have contributed to establish new corporate vision called, “Open Office Frontier.” This vision provides a notion called “open the office,” which focused on inter-office activities for today’s complex business activities and extend the notion of office to communities including Seven-Eleven stores in towns.

Now, Fuji Xerox is thinking about future and made another Industry Scope Shift to 4) "service platform for inter-office environment." How it can position its business to be in the “System Lock-in” position. Possible strategy can be creating a “proprietary standard” for a new service, such as digital camera printing. Fuji Xerox needs to work on important strategic decisions for executing this strategy. For example, it needs to identify what types of memory cards it will support such as memory stick, compact flash, smart memory, etc. How it can extend the way to receive payment such as debit card, credit cards, smart money? Another strategic option can be extending to other retail chains such as Japan McDonald’s, Yoshinoya beef-bowl, Starbucks, Print shop chains, and Post Offices.

4.2.6 Conclusion

As shown above, we can define the industry scopes and analyze the business strategy in terms of respective scopes depending on the changing situation. One can argue that we

⁷ Current number of store is 10,299 as of March 31, 2004.

should expand the industry scope in a way to include all the industry scopes and define the strategy for that scope. Even though it is theoretically possible, it is quite difficult to define the whole industry scopes at once and doing so often lose the strategic focus for the business. Due to the recent advancement in information technologies, projects are becoming increasingly complex and especially the execution of strategy is becoming more difficult than ever. We often need to address incremental strategy changes over the course of project progress to keep up with the changing business situation and underlying technologies. This will enable us to keep the simplicity for the strategy and still make it effective.

As we have seen in the DocuColor 1250 MP business case, we need to address different focus of industry structure and competitive advantages over the project progress. We would like to propose the dimension to shift the industry perspective to examine business strategy. When we make a shift, we do not need to abandon the previous results of strategy analysis. It is even possible to reuse or align the previous results and redefine it.

When we examine the business strategy in each project phase, we also need to analyze the business strategy by using unified frameworks. Industry Scope Shift requires clear definition and multiple industry definitions over the course of project to apply Porter's Five Force framework. When we need perspective from firm's or combined firms' internal, we can use Porter's Value Chain and Resource-Based View frameworks. Value Chain gives us perspective in integrated activities and useful to generate innovative value and enable us to set premium price or great savings for products and services. Resource-Based View reminds our resource and capability and enables us to provide values from under-utilized resources or identified gaps. If we would like to focus on the perspective of extended

enterprise and / or strategy changes over the course of project, we can use the Delta Model. The analyzed and / or proposed strategies for execution is often the difficult part for any business, and careful integration of internal activities on Value-Chain framework, combined with rigorous performance measurements, can be very effective for the business.

Unified framework use is similar to using different analysis for corporate financing such as use of B/S and Cash Flow Statement. As shown in this section, we believe the proposed “Industry Scope Shift” dimension adds the different perspective and focus to analyze the business strategy. It also simplifies the strategy definition work and helps us keeping track on the focus in the strategy execution phase. As shown in this business case, we can conclude that the unified framework use based on the Industry Scope Shift is very effective and practical way for the strategic planning process.

4.3 GM and Toyota case

4.3.1 Introduction

GM and Toyota both are the truly large global firms. Toyota is gradually becoming larger and larger. From 1998 to 2002, GM's sales rose 4.4% to 8.50 million units, with a sharp rise in 1999 and an eroded over each of the following three years. Conversely, Toyota's global sales during the same period rose 16.8% to 6.17 million units, or about 4 times of GM's increase. If Toyota keeps the pace, it will replace GM as the No.1 within this decade. Industry analysts and business experts have been proclaiming why Toyota and other Japanese firms are able to sustain excellent growth. They often point out the difference of production system including supply chain management, design method,

quality standard, etc. However, it is not quite clear what kind of strategy enabled Toyota to acquire these excellences.

In this business case, we will focus on three issues: (1) business model differences, (2) differences in operation effectiveness, and (3) differences in speed for innovation. We would like to propose a dimension called “Reverse Strategy Trace” to analyze these issues. By focusing on this dimension, we will examine business’ internal operation activities and find out what firm is actually doing, and then analyze the firm’s intention for taking an execution alternative. We can identify the firm’s business strategy by adding consideration of external business environment.

4.3.2 Background Information

Let us step back for a moment and look at the general overview of both GM and Toyota because we will compare the business strategies of these two firms.

GM

GM's sales decreased 0.7% in 2003 to \$185.524 billion. However, its income has increased 120.2% from 2002 and improved to \$3,822 million.

General Motors (GM) is the No.1 maker of cars and trucks. GM has many brands including Buick, Cadillac, Chevrolet, GMC, Pontiac, Saab, and Saturn. Recently, GM is starting to regain its share of the US car market. In 2002, it has increased the in two consecutive years in row. This is the first time in 26 years and GM is hoping to maintain this by launching 30 new vehicles in 2003 to the global market.

The company currently has a strong focus in Asian market and has a goal that it will acquire 10% market share by year 2004. To accomplish this goal, GM has purchased 20% share of Fuji Heavy Industrial, known as Subaru brand, and Suzuki. Furthermore, GM has purchased 42% stake of Gm Daewoo. Two partners of GM, Suzuki and Shanghai Automotive Industry, purchased Daewoo's share by 15% and 10%. GM intends to use Daewoo as strategic market expansion in both relatively closed South Korea and fast growing China market.

With the world's largest pool of potential drivers, China's automotive market is experiencing explosive growth. The market expanded 40% in year 2003, and it is expected to grow another 40% by 2007. GM has established a joint venture with Shanghai Automotive Industry called Shanghai GM. It has been quickly acquired local engineering capability. In 2002, it redesigned the Buick Regal in China to respond China market needs.

Even though, it marks \$3,822 million income in 2003, large portion of this number came from a wholly owned financial subsidiary, GMAC (General Motors Acceptance Corporation), which have a record profit of \$2,793 million in 2003, which jumped from \$1,870 million in 2002 due to mortgage business boom in 2003 such as popularity of ditech.com.

Toyota

Toyota's sales increased 20% annually and reached \$128.965 billion in 2003. Its income growth was 49.6% and marked \$6,247 million.

Toyota Motor Corporation (Toyota) is the Japan's largest and world's No.2 car maker by sales (after GM). Recently, it has been putting tremendous amount of investment to provide environmentally friendly cars. Toyota makes a hybrid-electric vehicle called Prius. Prius has been already marketed both in US and European market. Toyota owns large selection of car types including cars, pickup trucks, mini-vans, and SUVs including very popular model such as Camry, Celica, Corolla, 4Runner, Echo, Land Cruiser, Sienna and Tundra. Also in the luxury car segment, they have Lexus line.

Recently, Toyota is aggressively expanding global manufacturing capability. It opened new vehicle plants in India in 1999, France in 2001. Toyota also opened a new compact car plant in China in 2002 and has a plan to open a plant in Mexico in 2004 and Czech Republic in 2005. Also, it opened 10th US plant in Alabama last year to create engines and has a plan to open another US plant in San Antonio in 2006.

In addition to the hybrid-electric vehicle, Toyota has strong commitment to develop alternative-fuel vehicles, primary fuel cell car.

4.3.3 Business Model Analysis

Some industry experts proclaimed that the business model for the automobile industry is broken. If you look at the Figure 9 from [5], you can see the erosion of the profit margin for both automotive makers and parts makers.

However, if you carefully look at the profitability of global automotive firms, some firms are very successfully capturing the value that they create and others are not. According to McKinsey & Co., Operating profit growth (% CAGR) from 1994-2001 for

global automotive excluding BIG 3 is 30%, and -12.0% for BIG 3. More specifically, profit margin for GM is 0.3% in FY2001 and Toyota's profit margin is 5.1% for FY2001. We would like to examine what makes these differences and approach the fundamental strategy difference between GM and Toyota.

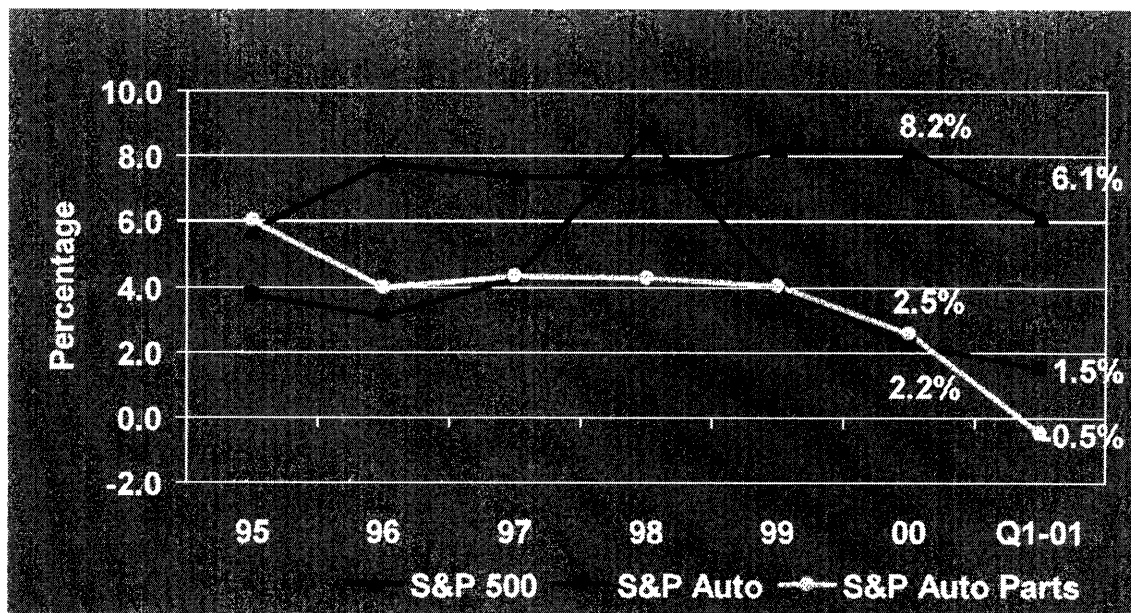


Figure 10 Profit Margin by Simple Average from 1995 to 2001 1Q

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GM has been losing market share in US for many years. It had control of prices, volumes, and dealers in the past. Today, Toyota and other foreign firms are competing on level terms with great products at competitive prices.

Traditional concentration gave the BIG 3 an 85% market share in the 1970s. However, the new globalization of the automotive industry has driven significant fragmentation. The result is an industry struggling with excess capacity, increased competition, and reduced margins.

Even though GM is making some profit in 2003, it is mainly due to the growth in China and the mortgage refinancing boom in the U.S. The current business model of GM is not working. GM is attempting to maintain market share through consumer incentives such as rebate and warranty. Currently, operating margin for GM is virtually non-existent. Suppliers to GM have operating margins of 3-5%. But, GM started using lowest price and annual price reduction is the primary tool for supplier selection from global suppliers.

Why GM is taking these actions? The main reason is that it has excess capacity and it needs to sell the inventories to recoup the high fixed cost. As makes and models of GM are not competitive in the market place, GM needs to provide additional incentives to consumer in the form of rebate and warranty. To just recover these costs, they need to reduce the cost allocated for the suppliers.

For example, in 2003 rebate is up to \$3,000 with 0% financing and \$0 down payments. Warranty cost for GM is around \$600-700 range and \$300-400 for Toyota. However, it only cost less than \$100 for Toyota as it is passing the responsibility for the rest of warranty costs on to suppliers. It is not the point for Toyota to pass the warranty cost, but

its focus is to share the information of quality and to collaborate towards the robust production.

It means GM is making cars cost more with lower quality. The question is what strategy differences created this situation? And more importantly, did GM recognize the correct situation and establish the right strategy to match Toyota?

If you look at automotive industry in extended enterprise scope in the Delta Model, you will be surprised with the fact that about 2/3 of capital investment occurs in suppliers. If you continue to perform supplier selections based on cost, it will erode the margin of suppliers and eventually hinder the suppliers' innovation. If this is happening, we can safely conclude that GM will be in big trouble in future.

Now, we will try identifying strategy by using "Reverse Strategy Trace" and examine business operation in Operation Effectiveness and Innovation activities.

4.3.4 Operation Effectiveness Analysis

In the previous section, we have identified the possible major operation effectiveness difference between GM and Toyota. In this section, we will focus on how Toyota is achieving the lower cost and higher quality integrated supply chain. The transaction cost economics is very useful to analyze the situation [21].

Traditionally, both GM and Ford had a more fully vertically integrated supply chain for the automotive industry. The objective of this extreme vertical integration is to economize on transaction cost. By the vertical integration, we can eliminate the holdups and other disruption of the production process, which can prevent the timely delivery of cars. And

they can have unified governance, centralized decision-making system. All the assets including both physical and intangible was controlled by the central authority and they have succeeded to lower the cost by avoiding many costly negotiations.

Toyota, on the other hand, used the opposite way. They used the relational contract to handle the transaction cost economics. In general, relational contract is not complete and it often needs transaction-specific asset investments in both parties. Also, it does not assure the transaction efficiency even if both parties have a very sophisticated agreement. No one can completely predict future and there always exists uncertainty and contingency. To keep transaction to be efficient, Toyota needs to assure the trust between both parties and used hierarchical relationship for the governance of supplier network.

Over time, GM has become less vertically integrated and been getting towards the Toyota model. However, we can see that GM's governance of suppliers is more towards the old unified governance model instead of Toyota's hierarchical relationship. For example, GM is trying to lower the cost of components by just selecting lowest available price in the market. Toyota, on the other hand, examines the suppliers' production system and co-improves to seek lower cost and higher quality components. Toyota still has a control over the production by hierarchical relationship.

Relational contract itself creates the high-powered market incentives in unified governance instead of the low-powered intra-organizational incentive. And you may think Toyota's closely integrated suppliers are just superior and capable to handle "zero defect" and "Kanban system, or Just-In-Time production system," which dramatically reduce the work-in-progress inventories. However, you need to closely watch detailed Toyota's

execution of relational contract, which will clarify the fundamental strategy difference between Toyota and GM.

Even though, Toyota’s suppliers are tied-up with Toyota and they do not have relationships with other auto makers, those suppliers transaction specific investment is not necessary higher. To control the transaction cost lower, Toyota has been doing following three strategic agenda towards the operation effectiveness:

1. Rank suppliers to motivate to achieve cost and quality achievement (Incentive)
2. Encourage information exchange between Toyota and suppliers (Trust)
3. Long term relationship (Trust and Investment Efficacy)

Based on these strategic agenda, Toyota has developed number of technical tools to enforce them. One example is that parallel sourcing to create strong incentive [35]. In sum, Toyota has succeeded to make positive relationship between suppliers and auto-makers.

Table 4 Performance comparison (1990-92)

	GM	Toyota
Quality (defects per 100 vehicles)	131.7	78.6
Supplier inventory / Sales	8.1%	2.3%
Cycle time (months)	86.5	50.0

Especially, data in Table 4 extracted from [8] suggests positive results for lower inventories inside the suppliers, higher quality, and shorter cycle time. These clear criteria are one of the shared information among the suppliers to ensure the strategy execution.

Toyota can verify the result of strategy execution, develop new technical tool if necessary, and has been improving operation effectiveness in a continuous manner.

4.3.5 Innovation Analysis

As we described in previous two sections, the automotive industry is under the fierce competition and only one of three, price increase, market share increase, or cost reduction contributes the increase of profit without any radical innovation. Especially in mature market, new technology can become the driving force to change the operation size. In this section, we will focus on a new emerging technology: hybrid-electric vehicles.

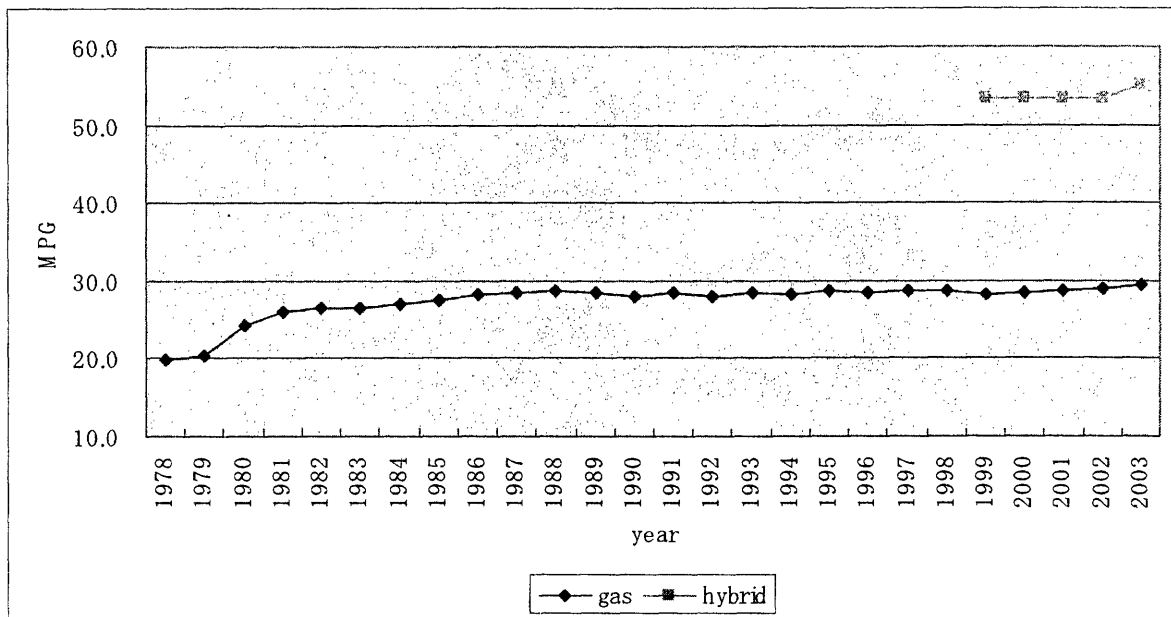


Figure 11 S-Curve for Gasoline and Hybrid engine performance

We will examine innovation operation and try identifying strategy by using the proposed “Reverse Strategy Trace” dimension.

In automotive industry, fuel economy or MPG (miles per gallon) is very important to measure performance of cars. Figure 10 is the S-Curve of car performance over the time

period for both gasoline and hybrid engine cars. As you can see, the MPG performance of new hybrid engine is superior than the traditional gasoline engine. To evaluate the possible future diffusion, we need to examine the price of the old and new cars.

Currently, we believe the hybrid electric vehicle (HEV) is still in the early adopter phase in the diffusion curve. HEVs represent 0.56%, or 44,000 units, of the car segment on a 12-month rolling average as of June, 2003 and we can safely conclude that it is still before the early majority phase. We strongly believe that HEV diffusion is about to come, however, there are two major reasons why HEV is still in the early adapter phase: (1) fuel economy advantage is not achieving 3 year payback yet, and (2) wide variety of car models is not available yet.

For example, if we compare the 2004 Toyota Prius, a state of art full hybrid, with Corolla and Camry, we can position Prius between Corolla and Camry in terms of features such as cargo volume, low-end torque, high-end horsepower. And the price is \$2,680 higher than Corolla and \$1,607 less than Camry. Even though it depends how consumers value the Prius' attributes, we should be able to estimate the payback of 2 to 11 years. Achieving 3 year payback is the one of most important determinants among those as consumers look for more tangible benefits than fuel economy.

Also, the limited variability in models of HEVs is an obstacle for their market success. According to the survey conducted in Spring of 2002 in the study from UC Berkeley [22], when people are asked to indicate which type of car they are interested in 25% checked SUVs, trucks, minivans, and sports cars and 51% chose sedans (they were asked to check all that apply).

Table 5. shows the currently available hybrid cars in the market and current plan from major auto makers to introduce the hybrid cars in future. Toyota is also in the lead compared to the GM here. GM is currently aggressively chasing Toyota's lead in hybrid cars.

Table 5 Current hybrid cars in market and plan

Manufacturer	Model	Model Year
Currently Available		
Toyota	Prius	2004
Honda	Civic Hybrid	2004
	Insight	2004
Plan		
Ford	Escape	2005
General Motors	Saturn VUE	2005
	Chevy Equinox	2006
	Chevy Malibu	2007
	GMC SUVs	2007
Daimler-Chrysler	Dodge Ram Pickup	2005
	Mercedes S-class	2006
Lexus	RX Hybrid SUV	2005
Toyota	Highlander	2005

Both GM and Toyota has been recognizing environmentally friendliness is the very important issue here and has been working on alternate fuel cars such as electric vehicles and hydrogen electric fuel cell vehicles. Question is that how Toyota can have a 6-7 years of lead in hybrid car area?

Experts claims that Toyota has taken the hybrid car engine as serious as quality. That can be true in a sense as they have strong organizational capability to execute the strategy. However, if we closely looked at Toyota's strategy in hybrid car areas, you can see how Toyota is acquiring its capability towards new innovation.

One of the main challenges in hybrid car or any new innovative cars such as electric and hydrogen fuel cell vehicles is the radical innovation in battery. Toyota did not have a capability in this area and formed a joint venture called Panasonic EV Energy with Panasonic Battery, who has a complementary capability and the JV is now providing leading supplier of Nickel metal-hydrate rechargeable batteries for both Toyota and Honda. Toyota has also released the striking news that they will provide hybrid technology to Nissan. This means Toyota has opened up the components supply to other auto makers by using this new technology transition from gasoline to hybrid engine.

Traditionally, auto makers does not have a compatible standards for car components except a certain number of consumables such as tires. Opening supplier chain means it will create the standard for all the car manufacturers. This will inevitably enable the commoditization of large portion of car components and the key innovative components suppliers will have relatively strong power over time including Toyota.

Also, selection of the hybrid technology will be reused in next generation hydrogen fuel cell cars because it will be fuel cell / electric hybrid engine and technologies accumulated in the production of hybrid engines will be effective in both technology and cost (by going down the learning curve). Furthermore, opening up the supply chain will create the new force of tension to suppliers and create strong incentive towards high-powered market incentives.

4.3.6 Conclusion

Recently, Toyota has been outperformed GM in its core car manufacturing operation, especially in operation effectiveness and innovation activities based on superior business

strategy. Clearly, GM should redefine the strategy to create, trust, incentive to reconstruct superior relationships with its suppliers as well as continue to invest in new technologies. It is true that short-term operation recoup is still necessary to recover the current high fixed cost to sustain the car manufacturing operation and generating cash flow from non-core business might be necessary. However, top management should have clear strategic communication to redefine the supply chain to the next level in terms of cost and quality.

On the other hand, Toyota has opened the Pandora's Box by opening up supply chain. Toyota's suppliers also have started providing components to other auto-makers. High quality and low cost components are available to Toyota's competitors. Toyota will be tested in terms of capability of governance to its royal components suppliers. If they continue to have superior hierarchical governance, Toyota should be further enjoying the scale of economy from suppliers, as they produce more quantities to other auto-makers.

By looking at detailed execution including clear measurement tools to assure the strategy execution, we have clearly succeeded to identify the business strategy differences and its effectiveness for Toyota and possible necessary strategy changes for GM. In other words, we believe we can conclude that the "Reverse Strategy Trace" dimension is very effective focus to trace back the strategy from strategy execution results.

Chapter 5

Findings from Research

We have proposed the two critical dimensions for strategy by using two business cases. We will check the effectiveness of these dimensions by the reflections from these two business cases.

5.1 Industry Scope Shift

In this section, we will describe the important findings from the “Industry Scope Shift” dimension. In general, firms need to anticipate and analyze these changes and reflect the result into their business strategy. Therefore, business strategy should depend on situation including the changes in industry boundary.

5.1.1 Effectiveness of Industry Scope Shift

Through the Fuji Xerox business case, we can define the industry scopes and can perform the detailed business analysis, which corresponding to the each defined scope. How is this dimension different from traditional strategy framework application?

Porter’s industry structure analysis requires that the industry has a clearly defined boundary. He claims that technology revolutions such as Internet did not change the fundamentals of competition. This claim is still true as an analysis method, however, we believe the basic five force framework need to be extended in two important ways.

First, it needs to include the other players to complement the firm's business. Complementors have been playing very important roles. Progress in technology encouraged bringing the radical innovations and as we saw in Fuji Xerox case, information technology enabled Fuji Xerox to provide wide variety of new applications integrated as well as a traditional photocopy application. This technology change will often bring the changes in value chain and forward integration of value chain is becoming a great source of value creation and capturing. The integration of value chain can be interpreted as an establishment of one player to another as a complementor. Therefore, the five force framework should include complementors accounted into the analysis of industry structure.

Secondly, it is often difficult to define the boundary of the industry. Firms can have multiple core competencies that can be applied to multiple industries and the industry boundary definition can become ambiguous or be redefined by the industry convergences. For example, Fuji Xerox used to be in a photocopy industry and extended the boundary to software and service industries. Payment service for previously reserved airline ticket for frequent flyer program members was traditionally the service performed by Airline or Travel Agent. We need to redefine the scope of industry to responding to these changes.

Clearly, the "Industry Scope Shift" dimension is very effective way to capture these two improvements. Please note that complementor can have any role. It can be the partner to do the business together and can be a customer to expand your business.

Changing scope means that it implicitly selecting the growth strategic alternative. If we define clear scope by fast-paced internal and external business environment, firms are automatically identifying strategic alternative corresponding to those changes. This gives

speed to firms and firms often are able to gain competitive advantages of uniqueness given the speed of business operations out of this repeated strategy planning cycles.

5.2 Reverse Strategy Trace

In this section, we will describe the important findings from the “Reverse Strategy Trace” dimension.

5.2.1 Effectiveness of Reverse Strategy Trace

If you looked at the strategy description in GM’s 2002 annual report, strategy is described as follows:

Table 6 GM’s 4 strategies in 2002 Annual Report

- Introduce great cars and trucks
- Be aggressive in the marketplace
- Reduce costs and improve quality
- Generate cash

The description itself is too abstract and actually it can be a very good strategy. However, the quality of these statements is totally depending on the interpretation and if you execute these strategies, managers can have wide range of execution alternatives. For example, lowest price supplier selection can be “be aggressive,” “reduce costs,” and “generate cash.” However, it does not necessary assure the long-term automotive manufacturing operation profitability.

Fundamentally, strategy needs to identify what the firm will do and what it will not do. If you think in other way around by using "Reverse Strategy Trace," it is straight forward to identify the original strategic agenda from the real business operation execution. In GM and Toyota case, we have identified the differences for the cost and quality and it has been driven by fundamental difference in treating their suppliers. By benchmarking actual business operation in terms of cost and quality, we can conclude that superiority of Toyota's business strategy in the area of dealing with lowering transaction cost in the suppliers' network. They do have clear strategic agenda to further lower the cost by focusing on incentive, trust, and investment efficacy. This has in turn created strong reputation for Toyota and further contributed to establish the brand with high quality and green.

As we described, it is especially useful when we compare the two separate operations in the same industry scope. In this sense, the benchmark of firm operation should examine both the operation execution results by the evaluation tools and actual business strategy behind the execution.

5.2.2 Other findings from research

In this section, we will describe the four areas of finding from our research: (1) systematic method for strategy, (2) metrics for business operation, (3) strategy and operation integration, and (4) strategy communication.

Systematic method for strategy

In Fuji Xerox business case, we found that having “Industry Scope Shift” dimension for strategy planning process enabled us to zero in on the new strategic agenda.

Table 7 Definition of Product-Market Segments and Alternative for Growth Strategies

	EXISTING MARKET SCOPE	NEW MARKET SCOPE
EXISTING PRODUCT SCOPE	Market Penetration	Market Development
NEW PRODUCT SCOPE	Product Development	Diversification

As shown in Table 7 from [14], we should use different alternative when we change the scope in terms of market or product. In the Fuji Xerox case, it is the incremental scope changes at a very fast pace. Therefore, we believe it is very effective to have a focus to “Industry Scope Shift” dimension when we are in the rapid change in industry boundary or definition itself by stronger change like industry convergence. It will systematically lead us to the new and right strategic agenda according to the direction of scope change in each shift.

Metrics for business operation

In the GM and Toyota case, quality and cost is very important measures to assure the strategy execution. Those measurements are directly connected with both operation effectiveness and bottom line of the supplier value chain. And you can easily check the

effectiveness of strategic agenda against the goal of business strategy. Therefore, metrics for business operation play crucial roles to assure the effectiveness of strategy execution.

In the process of forming emergent strategy, it is also the case we need to carefully extract the strategy by examining the actual business operation. To accomplish this task, we will need the tools to grasp the three main business operation, Customer Targeting, Operation Effectiveness, and Innovation as in [15]. And we do need to use metrics such as granularity metrics described in [15] or balanced scorecard in [18].

Strategy and operation integration

Traditional frameworks tend to encourage the distinctions between strategy and execution, and strategic planning process tends to be limited to deliberate process. It is true that we can make plan and select the execution alternatives if you know what you need to know in advance. However, it is often true that the original strategy does not cover the situation because of the uncertainty, hidden information, or contingencies.

It is true you can still operate business by just changing what you do in actual operation without changing strategy. But, if you select and discard the execution alternatives, you always have a priority for your selection criteria with metrics. It means you have a strategy to select the execution alternatives and this must be clearly become part of your business strategy reflecting your business environment and operation.

As we previously described, having a right set of measurements for the execution is very important because to assure the enforcement of strategy, you must monitor the whole business activities in marketing, supply chain, and R&D. Without having measurement

tools, it is very difficult to keep track of the whole business activities. Clearly, both strategy and execution should be tied up together to ensure strategy is effectively enforced to the execution.

This does not mean the same organization or individuals need to work on both strategy and organization. If we have a set of strategic agenda and a set of measurement tools to evaluate the effectiveness, strategy execution governance should be accounted.

Strategy Communication

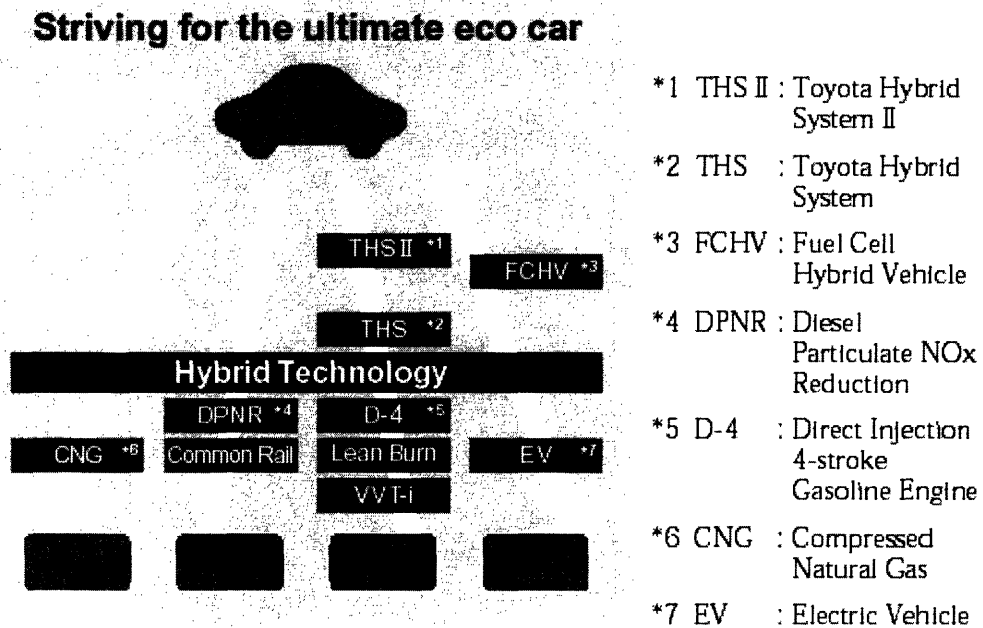


Figure 12 Hybrid technology positioning

Toyota has a clear strategy towards the “Green.” In their annual report, they clearly state that “Our strategy is to always be one step ahead in our pursuit of global motorization and environmental preservation.” In accordance with this central strategy, Toyota has clear positioning of the hybrid technology. Toyota positioned the hybrid technology as a

common denominator of the whole environment-related R&D projects as in Figure 12. By closely tying up strategy and execution together through the top management communication, they have succeeded to have a big lead in hybrid electric vehicles.

As you can imagine, Toyota has set a very high level of goal of performance for the hybrid engine: (1) vehicle safety, (2) fuel economy and emissions, and (3) cost of vehicles. The strategy tied strongly with its execution is the source of excellence in its innovation.

Chapter 6

Conclusions and Future Work

6.1 Conclusions

We have identified that “Industry Scope Shift” and “Reverse Strategy Trace” are the critical dimensions for strategy. In this section, we will summarize why and when these dimensions play critical roles in strategic planning process.

6.1.1 Industry Scope Shift

“Industry Scope Shift” gives us faster strategic planning cycle to zero in on the challenging strategic agenda. Faster strategy planning process enables firms to give a power to compete through product faster than other players, and it can become a strong source of uniqueness to differentiation. Also, “Industry Scope Shift” helps in identifying complementary assets, which firms can use. Shift in industry scope defines the roles of each player.

“Industry Scope Shift” is a very attractive focus of dimension, when firms need to deal with rapid and / or dramatic industry changes. In these situations, firms need to repeat the strategy planning again and again and speed will give us real advantage. Especially, business handling product or service with incremental version up will benefit. Even these scope changes are incremental, firms can keep clarifying strategy and can focus their resources more in actual business operations.

6.1.2 Reverse Strategy Trace

“Reverse Strategy Trace” is critical dimension when firms need to identify the actual strategy alternative in execution. It enables extracting strategy in an opposite way. “Reverse Strategy Trace” enabled us to identify firm’s strategy with limited information. Therefore, it is very effective when we will perform the strategy benchmark with other firms in the same industry as it is often the case that it is difficult to gain the internal information from competitors.

Also, this dimension is best combined with the strategy framework encouraging tight integration of strategy and business operation such as the Delta Model and Balanced Scorecard. The combination enables to identify both strategy and metrics to examine the performance of strategy execution, and firms should be able to establish the important way to formulate the emergent strategy.

6.2 Future Work

There are two interesting directions for the future work: (1) applying the these critical dimensions to more wide range of business cases and improve the way to analyze business and strategy by using these dimensions, and (2) developing software tool both to support the strategy planning and execution based on proposed two dimensions for strategy. We believe that two works will interact and improve the practicality of our approach.

By applying and modifying the strategy process to real cases and research from academics and industries, we are hoping that we can go towards the practical strategy framework and process in more systematic way. Firms are facing big challenges in needs

of both new technology adoptions and of sustaining profitable growth. Clearly, strategy planning is not a static task and we need to repeat the planning process again and again to responding to both internal and external environment changes. Supporting the strategy planning process by software can bring an order of magnitude improvement in speed of planning cycle. The software encourages the standard application of established frameworks and dimensions. The important know-how, or emergent strategy formulation process, will be accumulated in the firm. Please note that, when we identify any improvements in frameworks and / or dimensions, the software needs to support these changes and software should be based on extensible software framework just like evolutionary strategic planning process.

Chapter 7

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