

Efficiency and Flexibility in Small Firms: The Impact of Industry Structure

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Efficiency and flexibility may be a classification of small firms' competitive strategies (Ebben & Johnson, 2005). Which strategy, efficiency or flexibility, is more effective? How do small firms implement the two strategies? This study examines the two questions in different industry contexts. I argue that both industry concentration and dynamism can affect the relative effectiveness of efficiency and flexibility. To implement the two strategies, small firms may focus on the product side or the process side of their operation, depending on the industry environment. I demonstrate that competition and demand are two mechanisms through which the industry environment affects small firms' competitiveness.

INTRODUCTION

Small firms play an active role in economic activities. They are constrained by financial resources and managerial capacity (Mascarenhas, 1989) and face greater pressure to survive than their big rivals in the marketplace (Aldrich & Auster, 1986). They are advised to avoid direct competition with large firms (Kao, 1981). However, small firms also possess their own advantages. They are often owner-managed, so they enjoy substantial managerial discretion (Mascarenhas, 1989). They are agile and flexible (Dean et al, 1998). Some scholars argued that small firms can challenge their large competitors (Cooper et al, 1986; Fiegenbaum & Karnani, 1991; Woo & Cooper, 1981). Their success is determined mainly by how they compete (Chen & Hambrick, 1995). Among the ways they use to compete, efficiency and flexibility are two strategies that have received much research attention. Ebben and Johnson (2005) noted that "efficiency and flexibility may be appropriate classifications of small-firm strategy".

Small firms tend to operate in a cost effective way. They adopt a "shoe-string" (Weinrauch et al, 1991) approach. "Parsimony", a term coined by Carney (2005) to describe operational efficiency in family-controlled firms, is a common practice. Given their limited resources, they may have to operate this way. Small firms are flexible due to their structural simplicity and streamlined operations (Chen & Hambrick, 1995). Owner-managers' high discretion in decision making facilitates quick response and adaptation. Based on two samples of 200 and 144 privately-held small firms, Ebben and Johnson (2005) found that small firms could compete either on efficiency or on flexibility, but not on both. Their explanation is that the skills for achieving efficiency and flexibility are different. Achieving both at the same time can be too demanding and complex for small firms to handle due to their limited managerial capacity. Ebben and Johnson also found that neither efficiency firms nor flexibility firms could outperform the other, implying that efficiency and flexibility strategies may be equally effective.

This study is motivated by Ebben and Johnson's (2005) research. Their empirical analysis was based on some selected industries. They controlled for industry-related effects, but did not establish links

between efficiency/flexibility strategies and the industry environment. It can be argued that the effectiveness of efficiency and flexibility strategies may be different across different industry contexts. For example, it is not very likely that stable and dynamic industries affect efficiency or flexibility strategies in the same way. Therefore, it is meaningful to explore how to use the two strategies in different industry contexts. This study attempts to extend Ebben and Johnson's research and explore the following two questions.

The first question is: which strategy, efficiency or flexibility, is more effective in different industries? I focus on four industry contexts on the basis of two variables: industry concentration and dynamism. Existing studies on small firms' competitiveness have largely focused on comparisons between small and large firms, but have neglected a phenomenon that small firms actually compete in different industry environments. Some industries are dominated by a few large players, while others are populated by many small firms. Industry concentration can be used to reflect a wider context in which small firms compete. Industry dynamism is another contextual variable affecting small firms' competitive behavior. Scholars have argued that small firms should compete in industries in which their strengths can be rewarded (Dean et al, 1998), so dynamic industries may be more appropriate for small firms due to their flexibility. However, not all studies support this argument. Woo and Cooper (1981) found that successful low share businesses competed in stable environments in which small and large competitors coexisted. Mata (1991) found that industry growth rates did not have effects on the entry of small firms, so he contended that the result of his empirical study challenges "the conventional view of small business flexibility and their superior ability to succeed in environments where large firms fail".

The second question this study attempts to answer is: how do small firms implement the efficiency and flexibility strategies? I address this question from a product/process lens. Strategy implementation is an operational issue. Broadly, any firm's operation can be described as the transformation of materials into products that satisfy customer needs. Thus, implementing any strategy will finally go to the product and process sides. According to Utterback and Abernathy (1975), products have a customer focus, while processes have an internal focus. Though products and processes are inseparable in all businesses, it is likely that firms emphasize the product side or the process side when implementing a strategic initiative such as innovation (Damanpour & Gopalakrishnan, 2001). In this study, I demonstrate that successful implementation of efficiency or flexibility strategies can be based on the product side or the process side, depending on the industry contexts.

Table 1 displays the research model: how the two research questions are examined in the four industry contexts.

**TABLE 1
RESEARCH MODEL**

Industry Dynamism	Industry Concentration	
	High	Low
High	<i>Strategy: efficiency or flexibility?</i> <i>Implementation: product focus or process focus?</i>	<i>Strategy: efficiency or flexibility?</i> <i>Implementation: product focus or process focus?</i>
Low	<i>Strategy: efficiency or flexibility?</i> <i>Implementation: product focus or process focus?</i>	<i>Strategy: efficiency or flexibility?</i> <i>Implementation: product focus or process focus?</i>

By investigating the two questions, this study makes two contributions. First, it integrates both internal and external perspectives on competitive strategies in small firms. Internal perspective is

resource-based, focusing on firms' strengths and weaknesses, while external perspective is largely industry-based, focusing on opportunities and threats (Barney, 1991). Existing studies on small firms' competitiveness have to a large degree focused on their internal strengths and weaknesses such as behavioral advantages (e.g., agility and flexibility) and resource constraints. It is likely that those strengths and weaknesses have varied impacts on small firms' competitiveness in different industry contexts. A fit between the internal and external environments is more likely to lead to success.

Second, this study complements the traditional competition-based approach to business strategy with a demand-based view. Efficiency and flexibility are two sources of competitive advantage. How do they help small firms succeed in a competitive environment? A traditional view is to win competition. That is, small firms use efficiency and flexibility strategies to deal with competition. Scholars have recently shifted attention from competition to value creation, which is a demand-based view of competitive advantage (Adner & Zemsky, 2006; Kim & Mauborgne, 2004). Small firms are resource constrained, but resource constraints have not prevented them from actively participating in economic activities. One reasonable explanation is that they are able to create value for customers. A key argument of this study is that if small firms cannot win competition by doing better than competitors, they can choose to turn attention to customers. If firms can offer something customers value, competition would be "irrelevant" (Kim & Mauborgne, 2004).

The rest of the paper is organized as follows. First, I review the literature on efficiency and flexibility as two basic sources of competitive advantage in small firms. Second, I put efficiency and flexibility strategies in the four industry contexts, comparing their relative effectiveness. Third, I discuss how to implement efficiency and flexibility strategies from a product/process perspective. Finally, I discuss implications of this study.

LITERATURE REVIEW

Both efficiency and flexibility are multidimensional concepts. Efficiency can mean many things, while flexibility can be addressed from different points of view. In this study, I focus on the product and process dimensions of efficiency and flexibility. A product is a good or service offered to the customer and a process is the way of producing and delivering the good or service (Barras, 1986). Products are oriented toward customer needs, while processes are based on firms' internal capabilities. In this section, I review the literature on efficiency and flexibility related to products and processes. Table 2 presents a summary of the literature review.

Efficiency

At the firm level, efficiency refers to the extent to which a firm uses its resources in a cost effective way, measured by the ratio of output to input (Ostroff & Schmitt, 1993). Though efficiency often means low cost, efficiency firms can implement both cost leadership and differentiation strategies (Ebben & Johnson, 2005). For example, standard products produced by efficiency firms may be differentiated in the marketplace through marketing. Therefore, efficiency strategy is different from Porter's (1980) low cost strategy.

Firm efficiency can be achieved through many ways, including focusing on the product side or the process side of firm operation. The literature has emphasized the process side. It has been accepted that the reconfiguration of the production and delivery processes such as outsourcing and direct sales can help improve efficiency. In the field of strategic management, scholars have placed importance on economies of scale, economies of scope, and experience or learning curve effects when addressing firm efficiency (Fiegenbaum & Karnani, 1991). Efficiency can also be achieved through focusing on the product side. Product design such as attribute selection and component configuration can affect production costs, as well as price premiums the firm can extract (Desai et al, 2001). Bare bones/no frills are an example of improving efficiency on the product side of firm operation (Porter, 1980). Standard products are another example (Ebben & Johnson, 2005). The product-side efficiency results from the market because product development is "the transformation of a market opportunity" (Krishnan & Ulrich, 2001). If firms develop

products based on customer needs, they are likely to avoid unnecessary attributes, thus reducing costs. In Kim and Mauborgne's (2004) blue ocean strategy, for example, firms can reduce some product features well below the industry standard or eliminate some features the industry has taken for granted.

TABLE 2
DESCRIPTIONS OF FIRM EFFICIENCY AND FLEXIBILITY

	Efficiency	Flexibility
Definition	Ratio of output to input (Ostroff & Schmitt, 1993)	Handling a range of possibilities within a given period of time (Gerwin, 1993)
Product Focus	Bare bones/no frills (Porter, 1980) Feature reduction or elimination (Kim & Mauborgne, 2004) Standard products (Ebben & Johnson, 2005)	Made-to-order products (Ebben & Johnson, 2005) Broad range of products (McDougall & Robinson, 1990)
Process Focus	Economies of scale, economies of scope, and experience or learning curve effects (Fiegenbaum & Karnani, 1991)	Input flexibility (Upton, 1994) Output flexibility in production (Fiegenbaum & Karnani, 1991) Quick response execution (Chen & Hambrick, 1995) Same process for different products (Jordan & Graves, 1995)

Flexibility

Flexibility is the ability to handle a range of possibilities within a given period of time (Gerwin, 1993). Firms use flexibility to cope with change and uncertainty. Flexibility can be related to both products and processes. In Ebben and Johnson's study (2005), flexibility was measured as made-to-order products, so it is a firm's response to individual customer needs by offering specific products. Flexibility can also be represented by a broad range of products firms possess to address market opportunities (McDougall & Robinson, 1990). Because products are customer-oriented, product flexibility is close to the concept of "external flexibility" (Upton, 1994). According to Upton, external flexibility is based on "what the customer sees". Customers are the sources of variability to which the firm should respond. Process flexibility can occur in different stages of the production and delivery processes. It can be a firm's ability to use different inputs (Upton, 1994), to "build different types of products in the same plant or production facility at the same time" (Jordan & Graves, 1995), to change production volume (Fiegenbaum & Karnani, 1991), or to "execute a response very rapidly" (Chen & Hambrick, 1995). Processes have an internal focus, so process flexibility is similar to Upton's (1994) "internal flexibility", which is based on "what we can do". Internal capabilities are the sources of variability the firm can initiate.

Because products and processes are inseparable, product flexibility requires process flexibility and vice versa. However, these two types of flexibility are not always consistent. For example, when customers have specific needs, the firm is supposed to respond with made-to-order products (product flexibility). If the firm has the ability to switch to the cheapest raw materials (process flexibility) at the same time, it may compete on low cost, rather than on dimensions customers would value (Upton, 1994). Thus, different focuses – product side or process side – may provide different implications for competitive strategies.

Efficiency and flexibility are two basic strategies small firms can employ (Ebben & Johnson, 2005). In Ebben and Johnson's study, both efficiency and flexibility were viewed from the product side, with the

former referring to standard products and the latter referring to made-to-order products. Based on the literature review, I extend their definition of efficiency and flexibility and add the process dimension. Flexibility may have negative impact on efficiency. For example, when flexibility is related to expanding activities, it will increase transaction and production costs (Jones & Butler, 1988). Therefore, a flexibility strategy is effective when it leads to “little penalty in time, effort, cost or performance” (Upton, 1994).

MODEL DEVELOPMENT

In this section, I develop a model regarding how to use the efficiency and flexibility strategies in small firms, as shown in Table 3. The model answers two questions: a) the relative effectiveness of efficiency and flexibility strategies and b) the implementation of the two strategies. The two questions are addressed in the four industry contexts.

TABLE 3
EFFICIENCY AND FLEXIBILITY STRATEGIES IN SMALL FIRMS

Industry Dynamism	Industry Concentration	
	High	Low
High	<i>Example:</i> computer industry in the early stage (Hamermesh et al, 1978) <i>Strategy:</i> flexibility more effective <i>Implementation:</i> process focus	<i>Example:</i> car industry in the early stage (Geroski, 2003) <i>Strategy:</i> efficiency or flexibility <i>Implementation:</i> product or process focus
Low	<i>Example:</i> soft drink industry (Beverage-Digest Report, 2011) <i>Strategy:</i> flexibility more effective <i>Implementation:</i> product focus	<i>Example:</i> adhesive and sealant industry (Helms et al, 1997) <i>Strategy:</i> efficiency more effective <i>Implementation:</i> product focus

The Impact of Industry Environments

Industries are populated by a variety of competitors. Industry concentration is the degree to which production in an industry is dominated by a few large firms. When concentration is low, any competitor does not have significant market shares and cannot strongly influence the industry outcome (Porter, 1980). Firms are typically small, competitively weak, and subject to fierce rivalry (Dess, 1987; Porter, 1980). According to Porter (1980), fragmented industries generally have structural features such as low entry barriers, diseconomies of scale, no advantages of size in dealing with suppliers or buyers, abnormal sales fluctuations, high transportation costs, etc. These features are likely to cause low profitability at the industry level. Porter recommended two competitive strategies for firms in fragmented industries: consolidation used to overcome fragmentation and specialization if fragmentation cannot be overcome. Both strategies have efficiency implications: consolidation is aimed to achieve scale economy, while specialization leads to efficiency and quality. Woo and Cooper’s (1981) research suggests that offering quality products in an efficient way is important for small firms.

When industry concentration is high, a few incumbents hold large market shares. They have big bargaining power over suppliers and buyers, enjoy economies of scale and scope, and benefit from experience curve effects. All these factors lead to cost efficiency. With limited resources and small operational scales, small firms seem to be disadvantaged when facing large competitors. According to Hosfer and Sandberg (1987), however, small firms may be more likely to succeed in concentrated industries than in fragmented industries. There are two reasons for this argument. First, large firms tend to

neglect small niches that are opportunities for small firms. Second, competition among small firms is often more fierce in fragmented industries due to low entry barriers.

Industries can also be viewed as existing along a continuum of dynamism, ranging from relatively stable and incremental evolution to dynamic and radical change (Eisenhardt & Martin, 2000). Dynamism refers to the degree of instability and unpredictability of the external environment (Dess & Beard, 1984). Industry dynamism has important impact on firm competitive behavior. In highly dynamic industries, uncertainty tends to be high. Firms can hardly predict the future. A common strategy is to respond to changes and adapt to new environmental situations quickly, so flexibility is undoubtedly important (Sanchez, 1995). Small firms are structurally simple, while large firms are subject to structural inertia (Hannan & Freeman, 1984). It appears that small firms have advantages in terms of quick response and adaptation. When industries are stable, products are more or less standardized, opportunities for differentiation are relatively few, and operational efficiency becomes important. These industries are typically in the mature stage of their life cycle. If economies of scale can be exploited, small firms are likely to be disadvantaged.

The comparison between small and large firms indicates that small firms have both strengths and weaknesses. They are competitively weak in industries where large scale production exists, but they can take advantage of their strengths in flexibility. It has been agreed that in a competitive environment, a firm needs to make use of its strengths and avoid its weaknesses. It seems that small firms may need to compete in dynamic industries and avoid stable ones where large firms dominate. However, small firms can also successfully compete in stable industries controlled by large firms (Woo & Cooper, 1981). From a competition perspective, it's hard to explain why "unfit" could also lead to success. In the following sections, I illustrate that in addition to competition, demand is also an important condition for small firms' success. The demand-based view helps explain why small firms could survive in environments where they do not seem to have competitive strengths.

Effectiveness of Efficiency and Flexibility Strategies

Firms use strategy to gain competitive advantage. Competitive advantage is a relative concept, so it has been traditionally addressed from a competition-based perspective: competitors focus on each other and try to defeat the other. A firm can beat the competition by establishing unique strategic positions in a marketplace (Porter, 1980) or possessing unique resources internally (Barney, 1991). Scholars have recently shifted attention from beating the competition to creating value for customers, a demand-based perspective (Adner & Zemsky, 2006; Kim & Mauborgne, 2004). Customer value is determined by the difference between product utility and price (Hill & Jones, 2008). Utility is perceived by customers, based on both tangible and intangible features, while price is affected by the cost of production. If a firm can offer something customers perceive to be valuable, competition may be "irrelevant" (Kim & Mauborgne, 2004). Though the competition and demand-based approaches address business success in different ways, they are linked. Any firm will have to deal with both competition and demand. In this study, I argue that if small firms cannot beat the competition directly, they could turn attention to customers.

High Concentration and High Dynamism

In dynamic and concentrated industries, a few dominating players coexist with small competitors. Customer needs are not stable and product life cycle is short. A typical example is the computer industry in its early phase of life cycle. IBM was the only firm dominating the industry, but some smaller firms also competed effectively (Hamermesh et al, 1978). Flexibility is critical for firm success in this type of industry. Efficiency is less likely to be a key success factor for two reasons. First, firms need to keep innovating to survive in dynamic environments, so they are less likely to compete on price. Second, customers' needs are subject to change. They would value the availability of new products. When they want to try a new product, they may care less about price. Compared with their large rivals, small firms are flexible and agile. It is reasonable to argue that they would compete on flexibility, i.e., their strength, in environments where flexibility is important. Thus, I propose that for small firms, flexibility is more effective than efficiency in dynamic and concentrated industries.

High Concentration and Low Dynamism

When an industry is highly concentrated and relatively stable, it's often in its mature stage. The soft drink industry is an example. Coke Cola and Pepsi have taken about 70 percent of market share (Beverage-Digest Report, 2011). Industry products are standardized to serve mainstream customers, so operational efficiency is necessary. Large firms benefit from their large scales. It's hard for small firms to compete on scale-based efficiency in the mass market. Because large competitors tend to target mainstream customers, small niches are often left unfilled. This creates opportunities for small firms in an otherwise unfavorable marketplace. Their success largely depends on their ability to segment the overall market and fill different niches. Niche customers often have specific needs, so product availability is important. They could be less sensitive to costs than the mainstream customers. Thus, I argue that when small firms compete in stable and concentrated industries, flexibility is a stronger source of competitive advantage than efficiency.

Low Concentration and High Dynamism

In dynamic and fragmented industries, there are numerous relatively small firms competing for customers located in a number of segments. Many industries in their early phases of development fall into this category. In the US, for example, the car industry had more than 250 competitors in the early 1900s; the beer industry was populated by over 25000 players just after the civil war (Geroski, 2003). In these industries, entry barriers are low and competition is fierce, so operational efficiency is important. On the other hand, products are short-lived. Customers often pursue new products and are less likely to remain loyal to a single supplier (Gatignon & Robertson, 1989). Therefore, Voss and Voss (2008) recommended a strategic shift from customer retention to customer acquisition. To acquire new customers, firms need to be flexible and adaptable. It seems that both efficiency and flexibility are necessary in this type of industry.

Organizations often face a trade-off between efficiency and flexibility, which is a "paradox of administration" (Thompson, 1967). Ebben and Johnson (2005) demonstrated that small firms cannot achieve both efficiency and flexibility at the same time. They lack the skills to handle the complexity of integrating both. Efficiency and flexibility help firms succeed in different ways in a competitive environment. The former is more often used to address competition, while the latter more often used to address opportunities. Firms survive if they can beat the competition or capture new opportunities. When the car industry was turbulent in early 1900s, the Model T gained popularity because of its low price (\$850 in 1908 and \$360 in 1916) and ruggedness (Geroski, 2003). The car industry was finally consolidated. If an industry is dynamic but hardly consolidated, flexibility is probably important. The clothing industry is an example. Most designs are short lived, which reflects changing customer needs. Competitors in this industry would need to keep up with changes to succeed. Therefore, I argue that firms can pursue either efficiency or flexibility strategies in dynamic and fragmented industries.

Low Concentration and Low Dynamism

When an industry is both stable and fragmented, entry barriers are low and customer needs are relatively stable. One example is the adhesive and sealant industry where significant growth by any single firm could be hard (Helms et al, 1997). Customers tend to have specialized needs, so industry consolidation, i.e., overcoming fragmentation, becomes difficult. Facing this situation, Porter (1980) recommended specialization. Specialization helps improve efficiency and quality. Helms and colleagues (1997) found that both low price and high quality were necessary in the adhesive and sealant industry. The importance of flexibility can be limited for three reasons. First, firms are likely to have stable relationships with their customers, so customer retention could be easier than customer acquisition. Second, stable markets are relatively predictable, so quick response is less essential. Third, flexibility can increase costs, particularly when customer needs are heterogeneous. Customers may not be willing to pay a higher price in this type of market. Therefore, I propose that efficiency is a stronger source of competitive advantage than flexibility.

Implementing Efficiency and Flexibility Strategies

In this section, I discuss how to implement broad efficiency and flexibility strategies. Implementation addresses operational issues. The operation of any business cannot be isolated from the product (satisfying customer needs) and the process (producing and delivering the product). Products and processes are inseparable, but firms may introduce a product first and then a process, or a process first and then a product. For example, firm innovation may display a product-process pattern (Damanpour & Gopalakrishnan, 2001) or a process-product pattern (Barras, 1986). In the product-process pattern, firms adopt a new product first on the basis of customer needs and then determine a process used to produce the product. In the process-product pattern, firms adopt a new process first and then determine which products to produce. For instance, if a firm can access cheapest inputs, it may focus on producing low cost products (Upton, 1994). When firms are not sure about the final products, they may use processes as experimentations (Barras, 1986).

Flexibility with Process Focus (Quadrant 1)

When implementing flexibility strategies in dynamic and concentrated industries, small firms may start with the product side. They could first identify specific customer needs and then design customized products. However, predicting customer needs is not easy in a dynamic environment characterized by uncertainty. Conventional wisdom suggests that innovation is important. Large firms often invest heavily in developing new technologies and products, which can be used as a hedge against future uncertainty. For example, 3M has a list of more than 3000 separate products (Grant, 2008). Small firms may not have the luxury of investing in a competitive portfolio of projects. They seldom win the R&D battles. In fact, they need to use R&D efficiently (Hamermesh et al, 1978), which is often a practice of successful small firms (Woo & Cooper, 1981). Probably, a better choice for them is to execute responses quickly: quick production and quick delivery based on how the future unfolds. That is to say, they can start from establishing flexible processes. If their internal processes can respond to external variability effectively, they are prepared for both unpredictability and change in the future. Small firms achieve flexibility by relying more on labor (Fiegenbaum & Karnani, 1991), which is more effective than non-human sources of flexibility such as technology (Whitney, 1986).

Flexibility with Product Focus (Quadrant 2)

In stable industries, competitors' products are often similar, particularly in the mass market. Operational efficiency becomes important. Large firms have incentives to improve the production process in order to achieve economies of scale (Adner & Levinthal, 2001). Small firms are unlikely to invest heavily in production facilities. They might focus on customers neglected by large firms. Since customer needs are relatively predictable, small firms can start with product design, customize their products to meet specific customer needs, and then develop production processes. Offering custom products to satisfy individual customer needs can win customer loyalty, which is important in stable markets. A firm targeting individual customers is likely to handle a variety of products with different features, so it needs to establish flexible processes to support the production of different products.

Efficiency or Flexibility with Product or Process Focus (Quadrant 3)

When implementing efficiency or flexibility strategies in dynamic and fragmented industries, small firms may focus on the product or the process side. Environmental uncertainty has positive impact on product innovation in small firms (Freel, 2005). If they start from the product side, they may conduct product innovation and establish a portfolio of products (i.e., product flexibility). Product variety helps create options for the future in an unstable environment. The expansion of products seems to conflict with small firms' resource constraints, but it can be argued that resource constraints are a disadvantage when small firms compete with large firms. If they compete with each other, they are generally on an equal basis. Empirical studies suggest that small firms can use a broad range of products as a competitive weapon (Mcdougall & Robinson, 1990). To achieve efficiency, small firms may also focus on the product side like the Model T in the car industry in the early 1900s.

If small firms focus on the process side, it would be difficult for them to improve efficiency due to their small scales. They have limited power over both suppliers and buyers and they cannot benefit from scale and learning based effects. However, they can use processes to improve flexibility. Because of unpredictability in this type of industry, they may choose to wait till the future unfolds. In this case, they need to establish processes through which they can execute responses rapidly: producing fast and delivering fast in order to seize emerging opportunities.

Efficiency with Product Focus (Quadrant 4)

In stable markets populated by numerous competitors, efficiency is important. Firms operate on small scales, so they can hardly make a big difference from the process side. The product side is oriented toward customers. Though customer needs are relatively stable, they are unlikely to be homogeneous. This is particularly true in fragmented markets where customers tend to have specialized needs (Helms et al, 1997). Compared with a process focus, a product focus has several advantages. First, products can be viewed as a bundle of attributes customers value (Krishnan & Ulrich, 2001), so a product focus helps cultivate good relations with customers so as to retain them.

Second, a product focus may help firms reduce costs further when internal operations are already streamlined. For instance, if customers just want to satisfy their functional needs, firms can design no frill products, instead of using the established process to produce more standardized products. Porter (1980) recommended using “bare bones/no frills” to address the intensity of competition and low margins in fragmented industries. Kim and Mauborgne (2004) suggested product redesign through measures including reducing or eliminating product features. Third, when firms use processes to improve efficiency, they may ignore product quality. A product focus could avoid this omission because it is customer-based. In stable markets, customers are likely to demand increased quality over time, so products of both low cost and high quality may be needed (Helms et al, 1997).

DISCUSSION

Efficiency and flexibility may be a new classification of competitive strategies in a small business setting (Ebben & Johnson, 2005). They are relevant to small firms because flexibility is a behavioral advantage they possess, while efficiency is often the operational prerequisite because of their resource constraints. This study answers two questions. First, which is a stronger source of competitive advantage in small firms: efficiency or flexibility? To answer this question, I put both efficiency and flexibility in specific industry contexts and examine how the industry environment might affect the relative effectiveness of efficiency and flexibility. Strategy scholars have generally agreed that industry concentration and dynamism can affect firms’ competitive behavior, but our knowledge is limited about how these industry characteristics may influence small firms’ competitiveness. In this study, I establish this link.

Second, this study investigates how small firms implement efficiency and flexibility strategies. I address this question from a product/process perspective. A product focus is oriented toward customers and tends to be reactive. When customer needs are relatively clear and customer relations are important, small firms may use product design as a starting point. Small firms generally have a small customer base, which makes in-depth customer analysis possible so that they can develop custom products. A process focus is internally oriented. It is established to produce and deliver a product or a variety of products. If the end product is well-defined, efficiency is probably a main goal of production process. In contrast, if the end product is uncertain and subject to change, firms may need a process that is quick and flexible and allows for experiments. Such a kind of process is helpful in a dynamic environment.

This study integrates both internal and external perspectives on firms’ competitiveness. Efficiency is a necessary condition for small firms’ survival, but it does not necessarily convey competitive advantage. When an industry is populated by many small firms, efficiency may help some firms stand out from the pack. However, when the industry is dominated by a few large firms, small competitors are likely to be disadvantaged in operational efficiency. Flexibility is small firms’ strength, but it may benefit them more

in dynamic environments than in stable environments and benefit them more when they compete with large firms than with their counterparts. The integration of the internal and external environments can be particularly important for small firms. Given their limited resources, they are vulnerable in competitive industries (Aldrich & Auster, 1986). Whether they can take advantage of their strengths depends to a large degree on where they compete.

This study incorporates a demand-based view into the traditional competition-based approach to competitive advantage. Though a firm's competitive advantage is relative to its competitors, it ultimately comes from creating value for customers (Barney, 1991). Efficiency strategies create value for customers who are price sensitive. When efficiency is driven by customers, firms are likely to remove any unnecessary operations. Products with features below the industry standard can also lead to competitive advantage if they are valued by customers (Kim & Mauborgne, 2004). Flexibility strategies create value for customers through increasing product utility. Flexibility firms are able to fill market niches neglected by others and customize products to specific customer needs. These practices are particularly important for small firms. Compared with large competitors, small firms may be weak, but they are not weak from value creation perspective. That's why they have been actively participating in many economic activities. According to Adner and Zemsky (2006), "resources matter to the extent that they affect value creation". This argument provides a theoretical foundation for small firms to emphasize the demand side in a competitive environment.

CONCLUSION

In a competitive world, the best competitors, whether large or small, thrive and the weakest are absorbed or driven out of the market (Dollinger & Golden, 1992). To compete effectively, firms need to match their internal situations with the industry characteristics. This is particularly important for small firms because they usually do not have sufficient resources to buffer themselves against unexpected turbulences. Small firms are able to create value for customers. Value creation is a fundamental source of competitive advantage. From this point of view, small firms have ample opportunities to survive and grow in competitive markets.

REFERENCES

- Adner, R., & Levinthal, D. 2001. Demand heterogeneity and technology evolution: Implication for product and process innovation. *Management Science*, 47(5): 611-628.
- Adner, R., & Zemsky, P. 2006. A demand-based perspective on sustainable competitive advantage. *Strategic Management Journal*, 27(3): 215-239.
- Aldrich, H. E., & Auster, E. 1986. Even dwarfs started small: Liabilities of size and age and their strategic implications. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior*, vol. 8: 165-198. Greenwich, CT: JAI Press.
- Barney, J. B. 1991. Firm resources and sustained competitive advantage. *Journal of Management*, 17(1): 99-120.
- Barras, R. 1986. Towards a theory of innovation in services. *Research Policy*, 15, 161-73.
- Beverage-Digest Report. 2011. Special Issue: Top-10 CSD Results for 2010, *Beverage-Digest*, 59(5).
- Carney, M. 2005. Corporate governance and competitive advantage in family-controlled firms. *Entrepreneurship Theory and Practice*, 29(3): 249-265.

- Chen, M., & Hambrick, D. C. 1995. Speed, stealth and selective attack: How small firms differ from large firms in competitive behavior. *Academy of Management Journal*, 38(2): 453-482.
- Cooper, A. C., Willard, G. E., & Woo, C. Y. 1986. Strategies of high-performing new and small firms: A reexamination of the niche concept. *Journal of Business Venturing*, 1(3): 247-260.
- Damanpour, F., & Gopalakrishnan, S. 2001. The dynamics of the adoption of product and process innovations in organizations. *Journal of Management Studies*, 38(1): 45-65.
- Dean, T. J., Brown, R. L., & Bamford, C. E. 1998. Differences in Large and Small Firm Responses to Environmental Context: Strategic Implications from a Comparative Analysis of Business Formations. *Strategic Management Journal*, 19(8): 709-728.
- Desai, P., Kekre, S., Radhakrishnan, S., & Srinivasan, K. 2001. Product Differentiation and Commonality in Design: Balancing Revenue and Cost Drivers. *Management Science*, 47(1): 37-51.
- Dess, G. G. 1987. Consensus on Strategy Formulation and Organizational Performance: Competitors in a Fragmented Industry. *Strategic Management Journal*, 8(3): 259-277.
- Dess, G. G., & Beard, D.W. 1984. Dimensions of Organizational Task Environments. *Administrative Science Quarterly*, 29(1): 52-73.
- Dollinger, M. J., & Golden, P. A. 1992. Interorganizational and Collective Strategies in Small Firms: Environmental Effects and Performance. *Journal of Management*, 18(4): 695-715.
- Ebben, J. J., & Johnson, A. C. 2005. Efficiency, Flexibility, or Both? Evidence Linking Strategy to Performance in Small Firms. *Strategic Management Journal*, 26(13): 1249-1259.
- Eisenhardt, K. M., & Martin, J. A. 2000. Dynamic capabilities: what are they? *Strategic Management Journal*, 21(10/11): 105-121.
- Fiegenbaum, A., & Karnani, A. 1991. Output Flexibility-A Competitive Advantage for Small Firms. *Strategic Management Journal*, 12(2): 101-114.
- Freel, M. S. 2005. Perceived Environmental Uncertainty and Innovation in Small Firms. *Small Business Economics*, 25(1): 49-64.
- Gatignon, H., & Robertson, T. S. 1989. Technology Diffusion: An Empirical Test of Competitive Effects. *Journal of Marketing*, 53(1): 35-49.
- Geroski, P. A. 2003. *The Evolution of New Markets*. Oxford University Press.
- Grant, R. M. 2008. *Contemporary Strategy Analysis*. Blackwell Publishing.
- Hamermesh, R. G., Anderson Jr, M. J., & Harris, J. E. 1978. Strategies for low market share businesses. *Harvard Business Review*, 56(3): 95-102.
- Hannan, M. T., & Freeman, J. 1984. Structural inertia and organizational change. *American Sociological Review*, 49(2): 149-164.
- Helms, M. M., Dibrell, C., & Wright, P. 1997. Competitive strategies and business performance: evidence from the adhesives and sealants industry. *Management Decision*, 35(9): 698-703.

- Hill, C. W. L., & Jones, G. R. 2008. *Strategic Management: An Integrated Approach*. Houghton Mifflin Company.
- Hofer, C. W., & Sandberg, W. R. 1987. Improving New Venture Performance: Some Guidelines for Success. *American Journal of Small Business*, 12(1): 11-25.
- Jones, G. B., & Butler, J. E. 1988. Costs, Revenue, and Business-Level Strategy. *Academy of Management Review*, 13(2): 202-213.
- Jordan, W. C., & Graves, S. C. 1995. Principles on the benefits of manufacturing process flexibility. *Management Science*, 41(4): 577-594.
- Kao, R. W. Y., 1981, *Small Business Management: A Strategic Emphasis*, Toronto: Holt, Rinehart & Winston.
- Kim, W. C., & Mauborgne, R. 2004. Blue Ocean Strategy. *Harvard Business Review*, 82(10): 76-82.
- Krishnan, V., & Ulrich, K. T. 2001. Product Development Decisions: A Review of the Literature. *Management Science*, 47(1): 1-21.
- Mascarenhas, B. 1989. Domains of State-Owned, Privately Held, and Publicly Traded Firms in International Competition. *Administrative Science Quarterly*, 34(4): 582-597.
- Mata, J. 1991. Sunk costs and entry by small and large plants. In P. A. Geroski and J. Schwalbach (eds.), *Entry and Market Contestability: An International Comparison*. Basil Blackwell, Cambridge, MA, 49-62.
- McDougall, P., & Robinson Jr, R. B. 1990. New Venture Strategies: An Empirical Identification of Eight 'Archetypes' of Competitive Strategies for Entry. *Strategic Management Journal*, 11(6): 447-467.
- Ostroff, C., & Schmitt, N. 1993. Configurations of Organizational Effectiveness and Efficiency. *Academy of Management Journal*, 36(6): 1345-1361.
- Porter, M. E. 1980. *Competitive strategy*. New York: Free Press.
- Sanchez, R. 1995. Strategic Flexibility in Product Competition. *Strategic Management Journal*, 16(Summer): 135-159.
- Thompson, J. D. 1967. *Organizations in Action*. McGraw Hill, New York.
- Upton, D. M. 1994. The management of manufacturing flexibility. *California Management Review*, 36(2): 72-89.
- Utterback, J., & Abernathy, W. 1975. A dynamic model of process and product innovation. *Omega*, 3(6): 639-656.
- Voss, G. B., & Voss, Z. G. 2008. Competitive Density and the Customer Acquisition-Retention Trade-Off. *Journal of Marketing*, 72(6): 3-18.

Weinrauch, J. D., Mann, O. K., Robinson, P. A., & Pharr, J. 1991. Dealing with Limited Financial Resources: A Marketing Challenge for Small Business. *Journal of Small Business Management*, 29(4): 44-54.

Whitney, D. E. 1986. Real robots do need jigs. *Harvard Business Review*, 64(3): 110-116.

Woo, C. Y. Y., & Cooper, A. C. 1981. Strategies of Effective Low Share Businesses. *Strategic Management Journal*, 2(3): 301-318.