



Environmental Strategies and Competitive Advantage: A Theoretical model based on consumer value.

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Abstract

The focus of environmental strategy research has mainly been to create competitive advantage. The research on this topic, however, has not clearly provide the answers on how environmental strategies can turn firms more competitive. This paper provides a theoretical framework that links environmental strategies to competitive advantage through added value on the consumer side (willingness to pay). This proposition escapes from the common method bias that most research falls on, and provides the means to study environmental strategies on two levels (organization and consumers). Another contribution is the addition of environmental behavior as a moderating variable, which allows us to better predict which strategies can provide superior results.

Key Words: Environmental Strategies, Competitive Advantage, Value Chain, Environmental Behavior.

1. INTRODUCTION

There is no denial that environmental concerns are a reality now. All organizations, regardless of size or business, have to consider how they affect the environment. The literature on the relationship between organizations and the environment is constantly growing, and this is driven by many reasons.

Esty and Winston (2006, p.15-18) discusses some of the forces driving what they call “The Green Wave”. For the authors, elements like globalization (more environmental concern for big companies), insecurity (need for new alternative energy sources), business role on society (companies being asked to do more voluntarily), rise of middle class (higher consumption), and transparency and accountability (easier access to information) will drive organizations into caring more with the environment.

If caring for the environment is inevitable, can the organizations gain some benefit from acting environmental friendly? In other words, can organizations use environmental practices to increase its

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competitive advantage? This research for competitive advantage through environmental practices has led to a stream of research calling for specific strategies based on the environment.

Sharma (2000) defines environmental strategy as “a pattern in action over time intended to manage the interface between business and the natural environment”. This definition, however, does not consider if such strategies are the result of existing regulations or are spontaneously taken by the organization. To address this, Aragon-Correa and Rubio-Lopez (2007) proposed the concept of proactive environmental strategies (PES) that refer to “systematic patterns of voluntary practices that go beyond regulatory requirements”.

Regarding the link between PES and competitive advantage, the results found so far are not conclusive. Although some studies found empirical evidence that PES can increase firm performance (CLAVER et al, 2007), others could were not able to establish such connection (CHRISTMANN, 2000). The more accepted view, however, is that certain circumstances are necessary in order to gain competitive benefits from PES (AMBEC; LANOIE, 2008).

We believe that the current research on environmental strategies and competitive advantage can be improved in two key ways. First, the majority of research linking PES to competitive advantage only focus on data obtained on the firm level. The same respondents that provide information on what environmental practices are used, also state how competitive their firms are. This approach clearly limits the results due to common method bias (SIEMSEN; ROTH; OLIVEIRA, 2010). The current study proposed here will use a different, and more appropriate, method to relate PES and competitive advantage.

According to Brito and Brito (2012), the best approach to measure competitive advantage is through the creation of value. Any specific action taken with the objective of increasing competitive advantage must add value to the value chain. These added value can be measured through the willingness to pay (WTP) of actual buyers. By using WTP as value added to measure competitive advantage we improve the environmental strategy research in two ways. First, we do not need to rely on profit data to determine competitive advantage, which is a hard to obtain information. Second, we eliminate the common method bias by studying environmental practices on the firm side and value, through WTP, on the buyer side.

The second way in which this research can improve the literature on environmental strategies is by adding consumer preferences to the equation. So far, the literature on PES used only firm variables to examine the relationship between PES and competitive advantage. We acknowledge that elements like firm size (Aragon-Correa, 1998), organizational learning (FRAJ; MATUTE;

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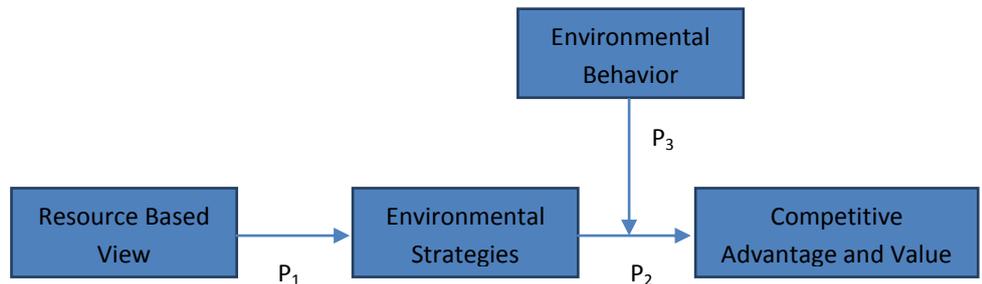
MELETERO, 2015) and complementary assets (CHRISTMANN, 2000) play a role on this relationship, but there is more to it. We believe that a strong component on the PES/competitive advantage relationship is the consumer. The need to add the consumer to this equation was suggested before (RUSSO; FOUTS, 1997). At the end of the day, the consumer is responsible for choosing the product/service it prefers. Any environmental practice adopted by the organization can only result in better performance if it is perceived by the consumer to be valuable. We propose, then, that in order to gain competitive benefits from PES, the organization must focus on clients that are equally concern with the environment.

The remainder of this paper will present our model and the theoretical discussion of our main concepts (resource based view, environmental strategy, competitive advantage and value, and environmental behavior). We finish presenting a conclusion of how our model can improve the research on environmental strategies and competitive advantage.

2. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

We present our theoretical model on Figure 1. We link four concepts (RBV, PES, Competitive advantage and Value, and Environmental Behavior) and provide three propositions on how these concepts can be linked to better approach environmental strategies and competitive advantage.

Figure 1: Proposed Model



We now move on to a brief discussion on each of the concepts and how their connections allows us to formulate 3 propositions.

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2.1 RESOURCE BASED VIEW

The view that a firm is "a collection of productive resources" was proposed by Penrose (1959 apud BOBBITT, 2004) and is seen as the basis of theory based on resources, one of the theories of the firm. Penrose's book is considered one of the most influential works of the second half of last century (KOR; MAHONEY, 2000). That is mainly because it bridged economics to management. However, it was Wernerfelt (1984) in his seminal work, who first used the concept of vision-based company resources.

Wernerfelt (1984) argues that the resources and the products are opposite sides of the same coin, as a product needs several resources to be made and a resource can be used on various products. Wernerfelt (1984) work comes from the understanding the formal economic models were not properly able to explain how firms operated. The classical view placed emphasis on the product markets, but considering that different products share similar resources, a resource based view can better explain where the profits really come from.

For Wernerfelt (1984) resource is "anything which could be thought as a strength or weakness of a given firm". The author goes beyond the classic the view on resources as only labor, capital and land to address other relevant elements like technological skills, machinery and trade contacts. This expands the understanding that a resource can be almost anything. More importantly, the author use resources as the basis to analyze the firm portfolio, not its products

The vision of the company by resource perspective helps to address questions about what resources should serve as a basis for the diversification of the company's products and what resources must be developed. The RBV, then, helps understand diversification strategies better than the usual product-focused view. Companies can enter different markets if the necessary resources are similar. Acquisitions should be made to acquire resources, not products.

Another important scholar on RBV is Jay Barney. Barney (1986a) started by discussing the cost of resources. Complementing Wernerfelt (1984) work, Barney acknowledged that resources should be the main point when drawing strategies. His argument is that strategies are only viable if the necessary resources to implement it are available. This need for specific resources would lead to companies pursuing mergers and acquisitions of firms that possess such resources. Barney (1986a) proposes, then, the concept of strategic factor markets where firms buy and sell the necessary resources to implement their strategies.

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In another work, Barney (1986b) relates resources to three common concepts of competition: Industrial Organization (IO) competition, Chamberlinian competition, and Schumpeterian competition. While IO focus on the environment to discuss competition, Chamberlinian competition is about firm heterogeneity, which is in accordance to RBV. Finally, Schumpeterian competition relates to the innovation process that recreates how firm competes when new markets are created with the technological advances. The use of Schumpeterian innovation to discuss resources added a new angle to RBV. While strategies are deliberated actions, it is nearly impossible to predict when and how a new revolution will reshape a market. In this scenario, knowing what resources to gather for the future becomes an exercise in luck (Barney, 1986b).

Barney (1991) divided the resources into three categories. The first is physical capital resources, including technology have physical, geographical location, equipment and access to raw materials. Bobbitt (2004) argues that these types of features do not lead to a sustainable competitive advantage, since they can be purchased by other companies. The second category is of capital resources, including training, experience, intelligence and relationships of managers and employees. The third category are the organizational capital resources, as the formal structure of the company, its formal and informal planning, coordination and control systems and informal relationships within and outside the company. Not all of these resources are strategically relevant to the company, only those who improve their effectiveness and efficiency.

Barney, together with Arian (2001) decides to revisit RBV and discuss its evolution. The authors argue that the three papers presented earlier, Wernerfelt (1984), Rumelt (1984) and Barney (1986a) outline the bases for the resource based view of the firms. Together, these earlier papers demonstrate that firm resources are capable of explaining differences in firm performance better than the previous economic based models.

After acquiring the necessary resources, firms must take the next step and formulate the strategies that will transform such resources on competitive advantage, and finally on improved performance. We move now to a brief discussion on the meaning of strategy, followed by presenting specific strategies about the environment.

2.2 PROACTIVE ENVIRONMENTAL STRATEGY

For Mintzberg, Alhlstrand and Lampel (2000) there is no one way to define strategy. The best format of discussing strategy is through what he called the 5p's. First, strategy is a *plan*, a guide do

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provide direction for the future. To be considered a plan, it must possess two elements: must be made in advance of the actions and are developed consciously and purposefully. Second, strategy is a *pattern*, a consistent behavior through the time. A pattern may not be planned, but reflects what the organization really practices. If the plan looks for the future, the pattern represents the past. Thirdly, strategy can be a *ploy*, a maneuver to intended to deceive a competitor. The fourth way of viewing strategy is called *position*. By position, the authors mean a way of differentiating the organization from its competitor by matching its products to its markets. Finally, strategy can be about *perspective*. Strategy as perspective relates to the fundamental way an organization do things, its mission and vision. It must be shared by all on the organization.

When it comes to environmental strategy, Esty and Green (2006, p. 10) state three basic reasons for adding what they call “environmental lens” to the organization strategy:

- The Upside Benefits: The traditional sources of competitive advantage like access to cheaper material and lower cost of capital have been commoditized. Going green offers a new source of competitive advantage by allowing for a different path to innovation.
- The Downside Risks: Organizations that ignore the environment will face more and more resistance from stakeholders like regulators, politicians, NGO’s and local communities. Mismanaging environmental problems can create unexpected challenges that can result in heavy losses, like the public disaster of the *Exxon Valdez*.
- The Right Thing to Do: Independent of the cost and the uncertainty of the returns, caring for the environment is the right thing to do. This concern is not only a moral value, it can help mold the organization. “Doing the right thing attracts the best people, enhances brand value, and builds trust with costumers and other stakeholders” (ESTY; GREEN, 2006, p. 14)

This need to add the environment to the research of strategy is mainly attributed to the work of Hart (1995) (FRAJ; MATUTE; MELERERO, 2015). Hart (1995) used the resource-based view as the framework to propose how to incorporate the environment as part of the organizational strategy. Hart’s (1995) conceptual framework is composed by three interconnected strategies: pollution prevention, product stewardship, and sustainable development.

Sharma and Vredenburg (1998) took a step further tested Hart (1995) theoretical model. The authors suggested that environmental actions are only a viable strategy if taken in a proactive form. In other words, environmental strategies will only improve competitiveness if they go beyond what is required by regulations. For Sharma and Vredenburg (1998), firms that invest in proactive

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environmental strategies (PES) will develop certain capabilities that will improve de firm performance. First, PES leads to the capability of stakeholder integration, which “involves the ability to establish trust-based collaborative relationships with a wide variety of stakeholders” (SHARMA; VREDENBURG, 1998). Second, we have the capability for high-order learning. This capability relates to being able to deal with the fast changes taking place in the environment. Finally, PES will lead to a capability for continuous innovation, which in turn will help the organization to remain a step ahead of its competition.

Aragón-Correa (1998) also found empirical evidence for the existence of PES. The authors also used their results to suggest that two views of environmental strategies exists. For some organizations, the environment issues are a problem and strategies are only targeted to minimize damage. For a second group, however, environmental issues are perceived as opportunities to improve. This second group are the ones to adopted PES as a way to become more competitive.

Russo and Fouts (1997) provide two reasons why RBV is strongly linked to corporate responsibility, which in turn includes de concern with the environment. First, RBV has a strong focus on performance, which in turn is also a goal of environmental strategies. Second, RBV and environmental strategies both recognizes the importance of intangible assets like knowledge and reputation.

The connection between RBV and PES follows the same logic between RBV and organizational strategy. The firms gather the proper resources to formulate a strategy that can provide performance improvements. The existence of PES, then, depend on the availability of the necessary resources for such strategies to emerge (ARAGON-CORREA et al, 2008). As such, we make our first proposition:

P₁: The development of environmental strategies depends on the possession of the proper resources by the organization

2.3 COMPETITIVE ADVANTAGE

It is hard to discuss strategy and not discuss competitive advantage, considering that strategy focus on improving performance and competitive advantage is considered the best explanation for superior firm results (BRITO; BRITO, 2012). It is not surprising, then, that “understanding sources of

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sustained competitive advantage for firms has become a major area of research in the field of strategic management” (BARNEY, 1991).

The term "competitive advantage" became popular in the strategy literature after the publication of the book *Competitive Advantage* of Michael Porter (1985), although discussions on how to obtain advantages regarding the competition already existed long before (ROSSI; SILVA, 2009) .

Day and Wensley (1988) argue that there is no common meaning for competitive advantage and is sometimes used synonymously with "distinctive competence" with the meaning of superiority in skills and resources, or "superior position" to mean providing a greater customer value at a lower cost. The authors advocate a common vision, where competitive advantage generates a higher position as a result of superiority in the skills and resources used by the company.

For Esper, Fugate and Sramek (2007), the literature on competitive advantage is divided into two parts: one that comes from the external environment of the company and mainly uses the studies of Porter and his five forces, and another that competitive advantage is the result the internal environment, in other words, its resources.

For Porter (1985), competitive advantage is the result of a firm creating value for its buyers that exceed the costs related to the creation of this value. The author has identified several ways in which this value can be created, among them we have the production, marketing and distribution, provided the firm know which products, services, activities and processes that are valued by the client. The author argues further that cost leadership and differentiation are two possible strategies that result in competitive advantage.

Barney (1991) argues that a competitive advantage is achieved when a company implements a strategy that creates value and is not used by another competitor or potential competitor. The author adds that for this competitive advantage to be sustainable, beyond not being implemented by a competitor, it cannot be duplicated. Under this concept, competitive advantage is sustained not for long it last, but by the inability to be imitated by competitors. Even not being duplicated, a competitive advantage may no longer be sustainable when the market change, so what it was a competitive advantage is no longer of much importance.

There is no consensus in the literature on how to measure competitive advantage (BOBBITT 2004), but the work of Day and Wensley (1988) supports two methods in which competitive advantage can be evaluated: one based on the competitive position and the other with the focus on the client. Each has advantages and disadvantages. The view based on competitive position enables a more managerial and direct view of how the company compares to the competition, but otherwise ignores

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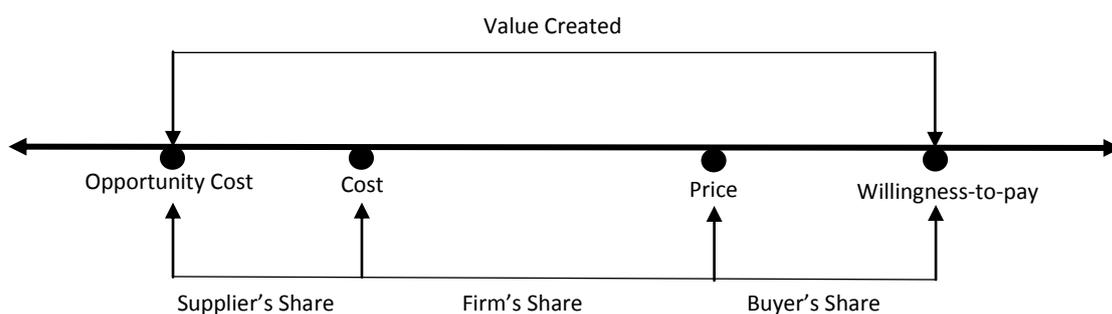
the client's vision. However, the method focused on the client recognizes what generates value to the consumer, but ignores the vision of the company's management and directly related to how it is compared to the competition.

For this work, we use Brito and Brito (2012) definition of competitive advantage, which is “the creation of value superior to the direct competitors”. This definition has the benefit of measuring competitive advantage in terms of value, and not firm performance. The first major contribution of this paper is to use value for the measurement of competitive advantage. We move now to discuss the concept of value chain and how to increase value.

2.4 VALUE CHAIN

Bradenburger and Stuart (1996) discuss the concept of value through the value chain, where suppliers, firms and consumers participate on the value creation. For the authors, the value created is the result of the willingness to pay of the consumer minus the opportunity cost of the supplier. Willingness to pay is related to the maximum amount the buyer will pay to acquire a product. On the other hand, opportunity cost relates to the minimum amount the supplier is willing to receive for the resources it will provide to the firm.

Figure 2: Value Chain



After presenting the value chain (Figure 2), Bradengurger and Stuart (1996) discuss the process of value appropriation. For the authors, how much of the value created will end up with each players depends on the bargaining between those players. The bargaining between the supplier and firm will determine the cost of the product, while the bargaining between the firm and its buyers determine the price.

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To discuss environmental strategies and value creation we need to shift our view from products do consumers. Vargo and Lusch (2004) provide an in-depth discussion on how the dominant logic for marketing changed from the focus on products to the focus on consumers. The authors argue that the focus on products comes from economics, where the models use products to predict market behaviors. This view was valid on the past, but the increase on consumer alternatives must shift the focus to what consumers really desire.

By using value as a way to measure competitive advantages, we improve on the current environmental strategies on at least 3 ways. First, as stated before, we solve the common method bias. Most research on PES collect both the strategy and competitive advantage data from the same source. This method brings strong limitations to the results. Second, data on competitive advantage on the firm level is hard to achieve, since many companies are unwilling to provide information regarding their financial performance. By collecting data with consumers, we solve both problems. A third contribution is that by collecting data from both the firms and consumers, scholars will be able to use multilevel analysis on their research. Multilevel analysis can help better understand how much of the variance in consumer value (WTP) is coming from the firm strategies an how much from consumer differences.

The creation of value for the consumers, then, becomes the main goal for companies that aim to gain competitive advantage. Considering the benefits of discussing environmental strategies and competitive advantage using the value chain and WTP, we make our second proposition.

P₂. Proactive environmental strategies are capable of improving competitive advantage by adding value to the value chain. This is occur by the increase of willingness to pay by the consumer.

2.5 ENVIRONMENTAL BEHAVIOR

The growing ecological concern has led to an increase in behaviors that attempt to mitigate the impact we cause on the environment. These ecological friendly behaviors are known as Pro-Environmental Behavior (PEB). Pro-environmental behavior (or green behavior, environmental friendly behavior) can be defined as “a helping behavior towards the environment (UNSWORTH; DMITRIEVA; ADRIASOLA, 2013). PEB refers to “behavior that consciously seeks to minimize the negative impact of one’s actions on the natural and built world” (KOLLMUSS, AGYEMAN, 2002). Stern (2000) is more specific by defining pro-environmental behavior as a “behavior that intentionally

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pursues reductions of the negative impact of people’s actions on the natural world”. Any person, or organization, can behave pro-environmentally by purchasing “green” products, recycling, not littering, among other behaviors.

Although it may seem simple to act more environmental friendly, not many people do as much as they could, and this prompted a large number of studies on finding how to motivate people to do so (OSBALDISTON & SCHOTT, 2011). The importance of understanding the human behavior towards the environment has led to the creation of specific areas of research, like *environmental psychology* (KOLLMUSS; AGYEMAN, 2002). Specific publications also specialize on the subject, like the journal *Environment and Behavior* and *Journal of Environmental Psychology*.

Bamber and Moser (2007) conducted a meta-analysis on the psychological constructs that are related to pro-environmental behavior and found support for eight: problem awareness, internal attribution, social norms, and feelings of guilt, perceived behavioral control, attitudes, moral norms, and intentions.

Russo and Fouts (1997) argue that showing environmental concern by the firms can increase sales among the consumers that are sensitive to this issue. The opposite, however, is also true. Consumers that do not care for the environment will not pay more for products or services that are environmental friendly. We can expect the WTP to increase for consumers that care for the environment, but not for the rest. This sensitiveness to environmental issue is, then, a strong moderating factor to the success or failure of environmental strategies. As such, we make our third proposition:

P₃. The increase on value by proactive environmental strategies will only occur when those strategies match the environmental behavior of consumers.

3. CONCLUSION

Many firms are still in need of some guidance to implement environmental approaches. (ARAGON-CORREA; RUBIO-LOPEZ, 2007). This theoretical essay aimed to provide a more inclusive model to study the impact of environmental strategies on competitive advantage. By using WTP as a way to measure added value, we are able to more effectively quantity the real impact of environmental strategies on competitive advantage, since the data to test the model will come from

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both the firms and the consumers. This model solve the problem of common method bias and provide more reliable results.

The second contribution of the presented model is the ability to add the consumer preferences when discussing environmental strategies. This can help explain the mixed results about the positive effect of environmental strategies. After spending time and resources to implement environmental management practices, many companies found out “that neither their environmental nor their financial improvement are as good as they expected” (ARAGON-CORREA; RUBIO-LOPEZ, 2007). These negative results may be explained by the lack of interaction between the implemented strategies and consumer preferences regarding environmental practices. By understanding what the consumer really value regarding the environment, companies will be able to implement strategies that are more effective and capable to really add value to the product or service.

Srivastava, Fahey and Christensen (2001) argue that both marketing and RBV scholars focus on the same question: how to create and sustain competitive advantage. The communality lies on the fact that both areas aim to study how to create more value for organization stakeholders, in particular the customers. The authors, however, indicate that not many studies attempt this goal of bringing marketing and RBV closer together.

The natural future steps are to conduct the empirical testing of the proposed model. Considering that the constructs presented possess a number of tested measurement scales, the application of this model is relatively simple. The only concern comes from adapting the model to any specificities of the chosen industry. Environmental strategies applied on the service or product industries may present variations.

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