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Constructed Advantage:
The Next Paradigm After Competitive Advantage?

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“We make a living by what we get, we make a life by what we give.”

Sir Winston Churchill (1874 - 1965)
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ABSTRACT

Recent literature on economic geography suggests the emergence of a new theory of advantage for the 21st Century – constructed advantage – following absolute, comparative and competitive advantage theories in the previous three centuries. However, current definitions and descriptions of this construct suffer from conceptual ambiguity and unclear distinction from former theories, in particular competitive advantage. This study attempts to clarify current knowledge of the concept of constructed advantage at the regional level and extend it to the organizational level.

The main questions addressed by the present study are: 1) What is ‘Constructed Advantage’? and 2) What are the differences between constructed advantage and competitive advantage? These research questions are ‘what-type’ questions, reflecting the exploratory nature of this study.

The present study is grounded in a chronological review of the four referred theories of advantage, drawing from different bodies of literature – international economics, industrial economics, industrial marketing and purchasing, and economic geography. For that purpose, the bibliography was carefully selected and analyzed, without directly referring to data collection and analysis. Thus, this research is exclusively theoretical.

A structured view of the theories of advantage is proposed. These theories are arranged according to an integrative matrix model with two dimensions, relating four centuries of advantage theories. Industrial marketing and purchasing proponents see business relationships as a network of suppliers and customers, thus suggesting a distinction between supply and demand, the two dimensions of the matrix. Economic geographers and strategists argue in favor of a more dynamic approach to the ‘construction’ of advantage, which suggests the existence of a static-dynamic dichotomy. Given this model, we then redefine constructed advantage.

This study concludes with a discussion of implications for research and practice, namely at the regional- and organizational level. Suggestions for future research include the development of constructed advantage strategies and measures.

Keywords: constructed advantage, competitive advantage, regional advantage, strategic management, strategy dynamics, economic geography
ACKNOWLEDGMENTS

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1 INTRODUCTION

1.1 Background

The concept of advantage has received considerable attention in a wide variety of literature. Gaining and sustaining advantage is indeed a central preoccupation for an individual, an organization, a region or even a whole nation. The word ‘advantage’ can be traced back to the old French ‘avantage’, based on the late Latin ‘abante’ meaning ‘in front’. It is defined as a condition giving a greater chance of success. It implies a superiority of overall condition in one or more given parameters. Although such a condition may be desirable, according to Sun-Tzu (~400 BC), “nothing is more difficult than the art of maneuvering for advantageous positions”. This simultaneous desirability and difficulty justifies the fact that for centuries, advantage has been a key concept in the terminology of strategists.

The earliest use of ‘advantage’ with a more formal meaning occurred in the 18th Century, when Adam Smith coined the term ‘absolute advantage’, probably inspired by European absolutist monarchs. According to Smith, a nation should produce and trade products in which it had an ‘absolute advantage’ over another nation. Having an ‘absolute advantage’ in a particular good meant producing that good using fewer resources than another country. Smith concluded that trade permits specialization, which allows resources to be used more productively. This statement is true to nations, but also to regions, cities, organizations or individuals. The conclusion that, if each country specializes in the production of goods in which they have an absolute advantage (Chacholiades, 1978), it is possible to increase total world production, which in turn emphasizes the importance of specialization when conceiving a strategy for success.

One century later, David Ricardo coined ‘comparative advantage’ as an extended view of absolute advantage. In his Principles of Political Economy (1817), David Ricardo argued that absolute advantages are not a necessary condition for two countries to benefit from trade with each other. Trade will benefit both nations (Ingram, 1983) provided only that their comparative costs, that is, the ratios of their real costs, are different for two or more commodities. And one nation can profitably trade with another even though its real costs are higher (or lower) in every
commodity. Later, the law of comparative advantage was redefined in terms of opportunity cost (Chacholiades, 1978). According to this new definition, one country should specialize in the production of the commodity in which the country’s opportunity cost is lower than the second country’s opportunity cost for the same commodity.

In the 20th Century, strategic management was embraced as a legitimate academic discipline and the term ‘competitive advantage’ was disseminated (Porter, 1980, 1985). Two schools emerged in the debate discussing the drivers of competitive advantage (Dyer and Singh, 1998). The industrial organization school, associated with Porter (1980), concerned specifically with industry structure and firms’ choices of strategic positions. The resource-based school, more focused on firms’ internal capabilities, argued that differential performance is fundamentally due to firm heterogeneity rather than industry structure (Barney, 1991; Wernerfelt, 1984). In his book entitled *The Competitive Advantage of Nations*, Porter (1990) uses the concepts and theories drawn from strategic management to extend and reformulate the theories of international trade, investment and economic development of nations.

More recently and already in the 21st Century, a new term is being introduced in the literature of economic geography – ‘Constructed Advantage’ – discussing how to elevate regional economic performance. This new construct was introduced by Foray and Freeman (1993), and was later referred to by Best (2001) as the ‘new competitive advantage’, although they scarcely explored it. Greater attention was given to ‘Constructed Advantage’ by Mothe and Mallory (2003: 789), who defined it as “both a conceptual approach to the governance of economic growth and activity, and a strategic approach of utility to local businesses and policy makers”. Although Cooke and Leydesdorff (2006) attempted to further clarify this new emerging concept, Cooke *et al.* (2006) recognized that so far, there was no clear definition of constructed advantage and no coherent distinction from competitive advantage theory.
1.2 Research Gap

The debate concerning the emerging concept of constructed advantage is essentially conceptual. Recent literature on the subject is still in an exploratory phase. In fact, in a recent paper discussing the role of regional innovation systems in constructing advantage, Cooke (2007: 179) acknowledges that “Constructed advantage theory is about as far advanced as innovation theory was 20 years ago”. This statement is clear evidence of the early stage in which this construct is.

In a previous paper, Cooke and Leydesdorff (2006) addressed the same issue. The aim of their article was to clarify and strengthen the concept of constructed advantage. In fact, Cooke and Leydesdorff (2006: 1) refer to this objective in the abstract of their paper: “The concept of constructed advantage will be elaborated”. However, a simple, coherent, structured and solid definition is still missing. If one cannot define clearly the meaning of constructed advantage, then it is even more difficult to distinguish it from other types of advantage. The distinction between former theories of advantage, especially competitive advantage, still remains vague.

The ambiguity regarding the distinction between constructed advantage and past theories is also openly acknowledged by Cooke et al. (2006: 71) in a European Commission report concerning the topic of ‘Constructing Regional Advantage’:

‘Constructed advantage’ has lately turned up in the literature discussing how to achieve and promote regional competitiveness. So far, this discussion has not clearly and convincingly been able to explain in what ways ‘constructed advantage’ differ from ‘competitive advantage’.

The report attempts to contribute to the clarification of this ambiguity, but both the concept and the distinction remain somewhat unclear.

Ketels (2006), a follower of Porter’s strategy school, also addresses issues of conceptual nature. Specifically, in a recent paper, he refers to the ambiguity of the concept of competitiveness. In Ketels (2006: 133) own words:

Competitiveness is a key issue for policy makers in many countries and regions. […] There is a significant amount of debate surrounding the concept of competitiveness, often leaving policy makers without clear guidance on how to address the challenges they face.
Furthermore, he stresses that it is necessary to evolve from the concept of competitiveness to a concept of competitiveness policy: “Economic concepts start out describing and analyzing economic reality. It then takes an additional step to turn their implications and findings into policy.” (Ketels, 2006: 130).

Cooke et al. (2006) argue that besides this conceptual ambiguity, there is also a methodological gap. According to these authors, it is not possible to design ‘one size fits all’ regional policies. They thus address the difficulty in developing a framework of conceiving regional policies. But Cooke et al. (2006: 33) also admit that “some general perspectives do exist which should be taken into account as supporting substantiation of methodologies that policy makers can make use of to formulate and implement […] regional policies.” Cooke et al. (2006: 33) continues: “There is no widespread knowledge and absorption of such a general framework of perspectives and methodologies”. Although the Constructing Regional Advantage Report aims to “make a contribution […] by identifying and describing these ideas” (Cooke et al., 2006: 33), a clear methodology for policy makers is still missing.

The early state of regional development strategies in this new creative age is also addressed by Florida and Tignali (2004: 41), in Europe in the Creative Age Report. According to the authors, “countries are just beginning to develop the most rudimentary strategies to actually attract and retain talent, bolster their underlying creative capabilities and develop their people climates. Much more research is needed on the nature, extent and efficacy of these emerging efforts”.

According to these considerations, a research gap can, therefore, be identified: the need to clarify conceptually the emerging term of Constructed Advantage, and the need to develop generic strategies to ‘Construct Advantage’.

1.3 Purpose of the Study

The gaps mentioned in the previous section require intensive research. It is not possible to address both gaps in a single master thesis. Thus, as a matter of natural sequence, the development of Constructed Advantage methodologies is left for a subsequent research.
Thus, the general purpose of the study is to clarify the ambiguous concept of *Constructed Advantage*. This task is accomplished in two ways. First, recent literature related to this new concept, emerging from the economic geography school, is analyzed thoroughly. Although this school of thought is focused on regions, the aim of the study is to extend the concept to the organizational level. For that purpose, the paper also articulates recent concepts in the IMP (Industrial Marketing and Purchasing) literature, providing a clear and multi-level view of constructed advantage. Secondly, the study attempts to compare this new type of advantage with the existing concept of competitive advantage, aiming to provide a more explicit distinction between both.

In particular, the purpose of the present study may be synthesized in two basic research questions:

i) What is ‘Constructed Advantage’?

ii) What are the differences between Constructed Advantage and Competitive Advantage?

Both research questions are ‘what-type’ questions, reflecting the inevitable exploratory nature of this study.

1.4 Scope and Limitations

As mentioned in the previous section, the present study does not attempt to provide ‘constructed advantage methodologies’ immediately applicable to management practice, both at the regional or organizational level. The aim of the study is to clarify and sharpen the concept of the so-called Constructed Advantage and extend it to the organizational level. So far, existing publications have not clearly explained what constructed advantage is and in what ways it differs from other theories of advantage, in particular competitive advantage.

The paper aims to contribute to existing literature by providing answers to the two research questions posed. Such a contribution is grounded in a chronological
review of the four referred theories of advantage, drawing from different bodies of literature – international economics, industrial economics, industrial marketing and purchasing, and economic geography. It starts from existing literature in economic geography about ‘Constructed Advantage’, clarifies this concept and attempts to build a structured picture extendible to the organizational level.

The study does not attempt to collect any kind of primary or secondary data to infer new theoretical constructs or to validate existing theory. The present study aims to propose a structured view of existing literature by drawing solid conclusions on recent research. It is not an empirical thesis. It is a conceptual thesis that brings order and clarity to the latest contributions concerning the topic of Constructed Advantage.

1.5 Key Concepts

The multidisciplinary scope of the present study requires a brief introduction to its key concepts. As it can be inferred from the basic research questions (section 3.3), the core concept of the study is advantage. *Advantage* may be defined as “a thing that helps you to be better or more successful than other people”\(^1\). This definition is also appropriate if we consider other entities (e.g. firms, regions, nations) instead of individuals. Thus, advantage may be defined as ‘something’ that helps an entity (e.g. firm, region or nation) to be better or more successful than other comparable entities. We will also define *demand* as a set of customers willing to pay for a certain value proposition and *supply* as a set of suppliers willing to sell a certain value proposition.

In addition to these nuclear concepts, it is worth introducing related but secondary concepts, which include *industry, market, competitiveness, economic growth* and *economic development*. In the present study, *industry* is “a group of firms that sell a well-defined product or closely related set of products” (Lipsey and Chrystal, 2004: 673). Thus, industry is closely associated with the supply-side. According to Lipsey *et al.* (1987: 913), “market is a concept with many possible definitions”. However, from the point of view of a firm, *market* may be defined as

\(^1\) Oxford Business English Dictionary, 2005 (p. 11).
“the buyers to whom it can sell a well-defined product” (Lipsey et al., 1987: 913). Thus, the concept of market is more associated with the demand-side. Some authors relate competitiveness with higher productivity. But according to Francis (1992), competitiveness is a more generic concept and harder to define due to its relative quality. He describes competitiveness as follows:

Competitiveness implies the presence of a competition. It is a zero-sum game. Competitiveness can be defined as that quality of a competitor that determines its probability of winning the competition (Francis, 1992: 66).

Economic growth may be defined as the increase in value of the goods and services produced by an economy over a given period. Economic growth is conventionally measured as the percentage rate of increase in Gross Domestic Product (GDP), after adjustment for inflation (known as real GDP). On the other hand, the term economic development implies much more when used in relation to an economy. It typically refers to improvements in a variety of indicators, such as literacy rates and life expectancy, and it implies a reduction in poverty. There is no standard definition that encompasses all the aspects of economic development. The most comprehensive definition of economic development is perhaps the one given by Todaro (1985: 62):

Development is not purely an economic phenomenon. In an ultimate sense, it must encompass more than the material and financial side of people’s lives. Development should, therefore, be perceived as a multidimensional process involving the reorganization and reorientation of the entire economic and social systems. In addition to improvements in incomes and output, it typically involves radical changes in institutional, social and administrative structure as well as in popular attitudes and, in many cases, even customs and beliefs.

1.6 Structure of the Dissertation

In this first chapter of the dissertation, the object under study has been introduced in terms of theoretical background, objectives, scope and key concepts.

The second chapter reviews in further detail the theoretical context of the study, which is fundamentally based on the four theories of advantage. The corollary of such a review of literature is an a priori theoretical framework for analysis, drawn
from four nuclear research traditions: international economics, industrial economics, industrial marketing and purchasing, and economic geography.

The third chapter of the dissertation positions this study in philosophical and methodological terms. The philosophical stance of the study is discussed in terms of key ontological, epistemological and axiological assumptions. In addition, the adopted research strategy is discussed, emphasizing the theoretical nature of the study. This is followed by a discussion of the research design in terms of literature selection and analysis, which precedes an assessment of the general quality of the study.

The fourth chapter presents a structured analysis of recent criticisms regarding competitive advantage at the organizational- and regional level, providing alternative approaches to current practices. A matrix model is presented, which relates four centuries of advantage theories, and sheds light on the redefinition of constructed advantage. The final section attempts to draw a coherent comparison between constructed and competitive advantage.

The fifth and final chapter presents the conclusions of the study. Its academic implications are discussed in terms of the theoretical contribution to the research traditions. The managerial implications are also addressed, namely at the regional- and organizational levels. The final section provides some suggestions for further research, namely the development of constructed advantage strategies and measures.
2 LITERATURE REVIEW

2.1 Theoretical Context of the Study

The theoretical context of the present study consists of four concepts of advantage: 1) absolute advantage (e.g. Adam Smith, 1776); 2) comparative advantage (e.g. David Ricardo, 1817); 3) competitive advantage (e.g. Porter, 1980, 1990); and 4) constructed advantage (e.g. Mothe and Mallory, 2003). In addition, and preceding the concept of constructed advantage, the network view of competitive advantage (e.g. Hakansson and Snehota, 2006) is also reviewed. This view contributes to the conceptual frame of reference of competitive advantage by applying a network approach to business strategy. These concepts are drawn from four different disciplinary backgrounds: 1) international economics; 2) industrial economics; 3) industrial marketing and purchasing; and 4) economic geography. Figure 1 depicts an overview of the evolution of the concept of advantage.

 FIGURE 1 Advantage Timeline

The relationship between the four concepts of advantage and the four disciplinary backgrounds is depicted in Figure 2.
Figures 

Concepts of advantage and disciplinary backgrounds

<table>
<thead>
<tr>
<th>Concept</th>
<th>Disciplinary Background</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolute Advantage</td>
<td>International Economics</td>
</tr>
<tr>
<td>Comparative Advantage</td>
<td></td>
</tr>
<tr>
<td>Competitive Advantage</td>
<td>Industrial Economics</td>
</tr>
<tr>
<td>Network View of Competitive Advantage</td>
<td>Industrial Marketing and Purchasing</td>
</tr>
<tr>
<td>Constructed Advantage</td>
<td>Economic Geography</td>
</tr>
</tbody>
</table>

The four concepts of advantage can be systematically compared (see Table 1) in terms of: research goals, level of analysis, methodology and disciplinary background. While theories of absolute and comparative advantage where developed in the context of international economics, aiming to explain the trade patterns of a nation, the theory of competitive advantage was developed in an organizational context and later adapted to the national level of analysis. The new advantage theory – Constructed Advantage –, emerging in the new economic geography literature, has a regional or local focus and aims to describe and explain how to construct regional advantage.

Table 1

<table>
<thead>
<tr>
<th>Exemplary Works</th>
<th>Research Goals</th>
<th>Level of Analysis</th>
<th>Methodology</th>
<th>Disciplinary Background</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adam Smith 1776</td>
<td>Explain and predict patterns of trade</td>
<td>National</td>
<td>Smith’s model</td>
<td>International Economics</td>
</tr>
<tr>
<td>David Ricardo 1817; John Stuart Mill 1902</td>
<td>Explain and predict trade patterns and prices</td>
<td>National</td>
<td>Ricardian model</td>
<td>International Economics</td>
</tr>
<tr>
<td>Mothe &amp; Mallory 2003; Cooke &amp; Leydesdorff 2006</td>
<td>Describe and explain how to proactively construct regional advantage</td>
<td>Regional / Local</td>
<td>Triple Helix model</td>
<td>Economic Geography</td>
</tr>
</tbody>
</table>

As already mentioned in the previous chapter, the main goal of the present study is to explore and clarify the concept of constructed advantage, and to build a
more coherent comparison with the former theory of competitive advantage. For that purpose, the study takes international economics as its theoretical point of departure, reviewing the theories of absolute and comparative advantage in the two following sections. The subsequent sections examine the concept of competitive advantage, drawing on literature on industrial economics and industrial marketing and purchasing, discussing the recent contributions of the network approach to strategy and acknowledging its criticisms of competitive advantage. Finally, constructed advantage is examined, drawing on literature on economic geography.

2.2 Absolute Advantage

2.2.1 Introduction

Nations trade with each other because they can gain from it. There may be other motives, but the most prominent motivation for international trade is the benefit to the trading nations. This benefit happens “because specialization enables resources to be allocated to their most productive uses in each trading nation” (Ingram, 1983: 226). The benefits of specialization in the case of individuals in a town, or between regions of a country, is widely recognized, but it is seems more difficult to perceive those benefits in the context of different nations. The aim of the present subsection is to explain and illustrate this basic truth, showing how the views from the early economists evolved.

The Theory of Mercantilism, which prevailed in Europe during the seventeenth and eighteenth century (Rugman, 1985), is recognized as the first Theory of Trade. Proponents of this theory argued that the power and strength of a nation increase as the nation’s wealth increases. And the wealth of a nation increases as the amount of gold it possesses also increases. Exports increase a nation’s gold stock as they generate inflows of gold, while imports reduce the gold stock as they generate gold outflows (see Figure 3). In order to generate positive gold flows to the country, Mercantilists concluded that exports are “good” and should be promoted while imports are “bad” and should be impeded.
Support for the mercantilist policy was not difficult to find. Gold was needed to pay expenses and to defend/extend national interests. There was also a positive impact on domestic production and employment: exports increased production and provided jobs for domestic workers, while imports replaced domestic production and led workers out of jobs. Mercantilist principles still persist today, but in a smoother fashion. Countries that import more than they export, therefore consuming their “reserves of gold”, find themselves in weaker positions.

Later on, early economists Adam Smith and David Ricardo presented arguments against mercantilistic theory. Two fallacies lie at the core of this theory (Rugman, 1985). First, gold *per se* doesn’t have any intrinsic value. It is valuable only when traded for other consumption or production goods. If a nation accumulates gold indefinitely, it is exchanging its potential productive capacity for an idle resource, which cannot be consumed or used in production. Second, mercantilistic theory fails to recognize the potential gains in efficiency that arise from specialization. Even if the nation’s objective is to maximize its gold stock, mercantilism is still the wrong prescription. If a nation prohibits imports, there will be some goods that are essential and have to be produced internally. And in some cases, producing certain goods may be more expensive than simply importing them. Resources are limited, and if a nation allocates them inefficiently, its economic well-being is less than optimal since resources are diverted from more efficient to less efficient uses.

Smith (1776) disagreed with the mercantilists, presenting in a systematic way the argument that the wealth of a nation would expand most rapidly if government abandoned mercantilistic controls over economic activities and permitted greater freedom to producers and consumers (Adams, 1979). This revolution in economic thought happened while the American colonies were struggling against English intervention in their economic and political affairs. In the late 1700s, the British economy was advancing into the Industrial Revolution, outrunning its rivals such as...
France and Spain. English merchants wanted freer world trade to obtain raw materials for their activities and bigger markets for their products. Rich and poor were abandoning rural areas to enroll in the excitement and opportunities of the cities. The absolutism, characterized by special privileges and monopolies granted to the King’s favorites had resulted in inefficiency and waste. Faced by the increasing political and economic power of the new commercial classes, Parliament gradually reduced government control over the economy. Both the European nations and colonies where throwing off trade restrictions of mercantilism and allowing businessmen to pursue profits at home and abroad more freely. The world was entering a new age: the age of domestic *laissez-faire* and free international trade.

Smith not only founded the discipline of economics, but also developed a new nonmercantilist policy for government intervention at home and abroad. He recommended less government interference both inside and outside the country:

- **Domestically**, he advocated *laissez-faire*, i.e. minimum government intervention in the economy, confining its role to the maintenance of law and order, defense, and some public services (Adams, 1979). He argued that as each consumer selfishly sought to gain the greatest satisfaction from consumption, and as each producer tried to earn the highest profit from his company, the wealth of a nation would rise toward a maximum.

- **Internationally**, Smith (1776) maintained that free trade was the best policy, because each country would eventually specialize in the goods it was most suited to produce because of a natural or acquired advantage it possessed.

### 2.2.2 Definition and Assumptions

In his classic *The Wealth of Nations*, Adam Smith (1776: 424) states that “it is the maxim of every prudent master of a family, never to attempt to make at home what it will cost him more to make than to buy”. The author presents a simple example to illustrate his statement (Smith, 1776: 424):
The taylor does not attempt to make his own shoes, but buys them of the shoemaker. The shoemaker does not attempt to make his own clothes, but employs a taylor. The farmer attempts to make neither the one nor the other, but employs those different artificers. All of them find it for their interest to employ their whole industry in a way in which they have some advantage over their neighbors, and to purchase with a part of its produce…whatever else they have occasion for.

Smith (1776: 425) builds an analogy between the behavior of a private family and a country, and treats the conclusion as self-evident:

What is prudence in the conduct of every private family, can scarce be folly in that of a great kingdom. If a foreign country can supply us with a commodity cheaper than we ourselves can make it, better buy it of them with some part of the produce of our own industry, employed in a way in which we have some advantage.

This explanation accounts for much of the international trade phenomenon. But it can best be understood by providing a sharp definition of absolute advantage and explaining the basic assumptions supporting this theory.

A country has an absolute advantage in the production of a good relative to another country if it can produce that good with higher productivity (or at lower cost). Assuming two countries and two commodities (Kindleberger, 1958), if one country has an absolute advantage in producing one good and an absolute disadvantage in producing the other good, it follows then that trade is profitable between them.

The classical economists assumed that labor is the only factor of production and that the prices of all commodities are determined by their labor input (Chacholiades, 1978). And since our interest lies mainly in relative prices, considering these assumptions, goods are ultimately exchanged according to the relative amounts of labor consumed. Assuming two commodities, X and Y, where \( a_x \) (or \( a_y \)) denotes the amount of labor required to produce one unit of X (or Y), and \( w \) represents the money wage rate, the average cost of production (or the long-run equilibrium prices) of X and Y is given by:

\[
p_x = w.a_x, \text{ and}
\]
\[ p_y = w \cdot a_y. \]

The wage rate is the same because we are assuming mobility of labor between the two industries. The coefficients \( a_x \) and \( a_y \) are assumed to be constant, i.e. independent of the level of output of each industry, in the sense that they remain the same whether we produce 1 or 10 units of \( X \) (or \( Y \)).

The relative prices (\( p \)) are completely determined by relative labor requirements, that is:

\[ p = p_x/p_y = a_x/a_y. \]

The labor theory of value is an oversimplification of reality. It is valid under the assumptions that labor is the only factor input, that it is homogeneous (all labor is of the same quality), that every occupation is open to all, and that competition is perfect (Chacholiades, 1978). Despite the shortcomings of this theory, we shall adopt it because it will enable us, with relatively little effort, to understand the concept of absolute (and latter, comparative) advantage.

### 2.2.3 Example and Implications

To clarify the concept of absolute advantage, we will provide a two-country two-commodity example and follow a framework very similar to the one supplied by Chacholiades (1978). Portugal exports high volumes of footwear to the United Kingdom and imports a great amount of pharmaceuticals from Britain. Thus, we will consider these two countries, Portugal and the United Kingdom, endowed only with labor and producing two commodities, pharmaceuticals (\( X \)) and footwear (\( Y \)).

<table>
<thead>
<tr>
<th>Country</th>
<th>Portugal</th>
<th>United Kingdom</th>
</tr>
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<tbody>
<tr>
<td>Labor requirements per unit of output of:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmaceuticals (( X ))</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Footwear (( Y ))</td>
<td>2</td>
<td>4</td>
</tr>
</tbody>
</table>
Portugal can produce a unit of X with 4 units of labor and a unit of Y with 2 units of labor, and the UK can produce a unit of X with 2 units of labor and a unit of Y with 4 units of labor (see Table 2). Thus, Portugal is more productive in footwear than the UK, and the UK is more productive in pharmaceuticals than Portugal. This is usually expressed by saying that Portugal has an absolute advantage in the production of footwear, because Portugal does it at lower cost, that is, higher productivity. And the UK has an absolute advantage in the production of pharmaceuticals, because to produce 1 unit of pharmaceuticals the UK requires less units of labor. Assuming that labor is immobile between the two countries, Adam Smith would conclude that trade is profitable between the two countries.

Smith also advocated that it would be advantageous to both countries if Portugal specialized in the production of footwear and the UK in the production of pharmaceuticals. It can be shown that the specialization postulated by Adam Smith will increase the total world output of every commodity.

To illustrate this statement, we will consider that these two countries have been isolated by prohibitive trade barriers. In their equilibrium state, they have been producing the following quantities of footwear (F) and pharmaceuticals (P), per unit of time:

Portugal: $F_{PT}, P_{PT}$, and

The United Kingdom: $F_{UK}, P_{UK}$.

In the timeframe considered, the total world production of footwear and pharmaceuticals has been:

\[ F_W = F_{PT} + F_{UK}, \text{ and} \]
\[ P_W = P_{PT} + P_{UK}. \]

Now, we will suppose that Portugal transfers 4 units of labor from the production of pharmaceuticals to footwear (in which it has an absolute advantage), and the United Kingdom transfers 4 units of labor from footwear to pharmaceuticals.
Ceteris paribus, the outputs of footwear and pharmaceuticals for Portugal and the United Kingdom, will change as follows:

**Portugal**: $\Delta F_{PT} = +2$, $\Delta P_{PT} = -1$.

**The United Kingdom**: $\Delta F_{UK} = -1$, $\Delta P_{UK} = +2$.

In a world constituted by these two countries (although it can be easily extended to more countries and commodities), the output as a whole will be:

$\Delta F_W = \Delta F_{PT} + \Delta F_{UK} = +2 - 1 = +1$.

$\Delta P_W = \Delta P_{PT} + \Delta P_{UK} = -1 + 2 = +1$.

Thus, by only transferring 4 units of labor to the “specialty” of each country, there is an increase of 1 unit of each commodity for the whole world (see Figure 4). For the same amount of factor inputs, it was possible to achieve more output units. By transferring factor input units to produce the commodities where the country is more efficient, it is possible to increase national productivity. And if one increases productivity for each nation, the total world productivity will naturally augment, meaning that with the same inputs more output is generated.
2.2.4 Discussion and Conclusions

The conclusion that if each country specializes in the production of goods in which they have absolute advantage (Chacholiades, 1978), that is it is possible to increase total world production, emphasizes the importance of specialization when devising a strategy for success.

Despite the strength of this conclusion, the preceding analysis was elaborated within a framework of highly restrictive assumptions (Ingram, 1983). Although the theory of absolute advantage rests on several assumptions, only the ones which have impact on this research will be analyzed in detail. Thus, of the eleven assumptions that are presented, the last three are perhaps the most important and critical limitations of this framework, and also the ones which have greater implications for the present study (see Table 3).

<table>
<thead>
<tr>
<th>Assumptions</th>
</tr>
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<tbody>
<tr>
<td>1. Two-countries, two-commodities</td>
</tr>
<tr>
<td>2. Labor theory of value</td>
</tr>
<tr>
<td>3. Constant costs of production</td>
</tr>
<tr>
<td>4. Transportation costs are zero</td>
</tr>
<tr>
<td>5. Factors of production are mobile internally and immobile internationally</td>
</tr>
<tr>
<td>6. Perfect competition prevails in all factor and product markets</td>
</tr>
<tr>
<td>7. Distribution of income does not change</td>
</tr>
<tr>
<td>8. Trade is carried on only by barter</td>
</tr>
<tr>
<td>9. Factor supplies (input) remain constant</td>
</tr>
<tr>
<td>10. No new products (output)</td>
</tr>
<tr>
<td>11. No technological improvement (process)</td>
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</tbody>
</table>

The first restriction concerns the fact that conclusions were drawn from an example based on two countries and two commodities. This is not a serious limitation (Adams, 1979), because it is possible to expand the number of countries and goods indefinitely and still obtain similar results. Another limitation is concerned with the labor theory of value: it is assumed that the value of a good depends only on the amount of labor that it incorporates. A further presumption was also made, regarding costs of production: these were considered to be constant, no matter the output. Additionally, transportation charges were considered to be zero. But trade
volume decreases with increasing transportation costs, ultimately reaching zero with infinite transportation costs. A fifth restriction is the assumption that factors of production are perfectly mobile internally and completely immobile internationally. It is also considered that perfect competition prevails in all factor and product markets. The seventh limitation of the model is the supposition that the distribution of income does not change, i.e. free trade does not affect the relative income positions of a nation’s citizens. The gains from trade are distributed in such a way that leaves the distribution of income undisturbed, resulting in a gain for the world as a whole. The last non-critical limitation is that trade is carried on only by barter, i.e. there is an absence of a system of international finance and an internationally acceptable means of settling trade debts among nations.

The three most critical assumptions concerning Smith’s model are: a) factor supplies remain constant, b) there are no new products and c) technology doesn’t improve.

It was assumed, in particular, that in both countries the quantities of labor, capital, land, and other factors were fixed. However, in reality, the world is constantly changing. Considering a given endowment of factor supplies and a given technology, a country’s production-possibility curve depicts its capacity to produce various combinations of goods. If its factor supplies are growing over time (e.g. labor force is increasing, or physical capital is being augmented), then the production-possibility curve is shifting to the right, indicating that the capacity to produce is expanding. Growth can occur in many different patterns, “depending on the rates at which different factors of production are growing” (Ingram, 1983: 287). What seems important to notice is that Smith’s model views supply as static, although, in reality, supply is dynamic.

Similarly, in Smith’s conception of the world, no inventor ever discovers a new product (Adams, 1979), which would violate the two-commodity assumption. Portugal will continue to produce footwear, and the United Kingdom pharmaceuticals, until the end of time. The nation’s product portfolio remains unchanged.

Innovation (Kindelberger, 1958) or an improvement in technology (Ingram, 1983) means that a larger output can be produced with given inputs of factor
supplies, that is, higher productivity. Such a technological change means also that the production-possibility curve is shifting outward to the right. Smith’s abstraction does not consider the dynamics in supply introduced by innovation and technology.

These three critical assumptions are closely related, because they refer to the three main parts of the production system: 1) input, 2) output and 3) process (see Figure 5). Basically, a firm purchases necessary inputs and then transforms them into products (outputs) that it wishes to sell. Smith is assuming that factor supplies remain constant, i.e. there is no input variation through time. Similarly, he supposes that there are no inventions, i.e. no new products are created, meaning that outputs do not change over time. How well a firm undertakes the transformation process from inputs to outputs is usually known as productive efficiency. To succeed in highly competitive environments, a firm will want to be as efficient as possible, that is, using the minimum number of inputs as possible to achieve a set amount of output, in order to reduce the production cost and allow the firm to sell at lower prices. Smith considers that technology remains constant, implying that the production process does not also improve over time. Therefore productive efficiency is viewed as stagnant.

![Figure 5 Smith's abstraction of the production system](image)

Of all the limitations of the Smith model, this triple-static view is perhaps the greatest. All the goods produced as consequence of this system shape the supply-side of an economy. Smith considers that inputs, outputs and production process – and thus supply – are stationary, which constitutes a limited vision of reality. Absolute advantage theory was thus built on static assumptions, like fixed resources, products...
and technology, thus suggesting a static view of supply. At this time, demand-side considerations were still missing, implying also a static vision of demand. These considerations where introduced in the theory of comparative advantage, which is reviewed in further detail in the following section.

2.3 Comparative Advantage

2.3.1 Introduction

David Ricardo is perhaps, after Adam Smith, the second great classical economist. Born in London (1772), he was the descendent of a Jewish family from Portugal that had emigrated from the Netherlands to Great Britain prior to his birth. Besides being a political economist, he was also a businessman, financier and speculator, and amassed a considerable fortune. Judging by his life’s path and achievements, he seemed to have precociously found the way to gain superb advantage.

His ideas are set out in his *Principles of Political Economy* (1817). In an attempt to reason with greater precision, Ricardo discovered a flaw in Smith’s work. Adam Smith considered that a natural or technical advantage would exist to provide each nation with at least one low-cost product it could trade internationally (Adams, 1979). But Ricardo went beyond this, and asked the following questions: What would happen if a country didn’t have a cost advantage in producing even one product? Could that country still gain from trade? Was free trade still the best policy for nations to pursue? Adam Smith had only discussed the case where different countries had absolute advantages in producing different products. But Ricardo continued further and introduced the concept of comparative advantage, wherein one country was more inefficient than the other in the production of all goods and had no low-cost product to export.

According to Ricardo (1817), absolute cost advantages are not a necessary condition for two nations to benefit from trade with each other. Instead, trade will benefit both countries if their relative costs, that is, the ratios of their real costs, are different for two or more products. Basically, trade depends on differences in
comparative cost, and one nation can profitably trade with the other even though its real costs are higher (or lower) in every product.

The difference between absolute and comparative advantage may seem, at first glance, relatively small to be worth such respect, but it proved to have many applications in economics and also other fields of study. For example, when determining the appropriate allocation of certain tasks for individuals, the principle of comparative advantage is invoked naturally – like common sense – and people in their daily routines live and act according to it, even without knowing its name. Ricardo (in Ingram, 1983: 231) described a commonsensical application of this principle in another of his empirical examples:

Two men can make both shoes and hats, and one is superior to the other in both employments, but in making hats he can only exceed his competitor by one-fifth or 20 per cent, and in making shoes he can excel him by one-third or 33 per cent; - will it not be for the interest of both that the superior man should employ himself exclusively in making shoes, and the inferior man in making hats?

Ingram (1983: 231) supplies similar real life examples:

The engineer who is a better draftsman than anyone he can hire, but who nevertheless finds it to his economic advantage to specialize in engineering and hire a draftsman; the surgeon who is also an expert auto mechanic but who maximizes his income by specializing in surgery, hiring a less skilled mechanic when he needs one; the farmer who has two fields, one of which is more productive in both soybeans and wheat than the other, but the first field yields three times as much soybeans per acre as the second, and only twice as much wheat. Therefore, the first field is planted in soybeans, the second in wheat.

It is the principle of comparative advantage that causes us to specialize in those set of activities in which we have a relative advantage, depending on others to supply us with other goods and services we need.

2.3.2 Example, Definition and Implications

To illustrate the principle of comparative advantage, we will consider again the same two countries, Portugal and the United Kingdom, two products, footwear and pharmaceuticals, and a single factor of production, labor. As before, we consider that to produce footwear and pharmaceuticals in Portugal it will require 2 and 4 units of
labor, respectively. But now, we assume that the UK’s labor requirements in the production of footwear and pharmaceuticals are 12 and 6 units, respectively. They are exactly three times as much as those considered in the example for absolute advantage (see Table 4).

<table>
<thead>
<tr>
<th>TABLE 4 Comparative advantage example</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td><strong>Country</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Labor requirements per unit of output of:</strong></td>
</tr>
<tr>
<td><strong>Footwear</strong></td>
</tr>
<tr>
<td><strong>Pharmaceuticals</strong></td>
</tr>
<tr>
<td><strong>Relative price (or cost) of F. in terms of P.</strong></td>
</tr>
<tr>
<td><strong>Relative price (or cost) of P. in terms of F.</strong></td>
</tr>
</tbody>
</table>

In the example above, one of the two countries (in this case, Portugal) can produce both goods with higher productivity (or lower labor cost) than the other. If Portugal and the UK were regions of the same country, or labor was perfectly mobile among them, all products would end up being produced in the region (or country) where costs are lower in an absolute sense. But if labor is immobile among countries, the scenario will be different.

Portugal has an absolute advantage in the production of both footwear and pharmaceuticals, because 2 < 12 and 4 < 6, respectively. However, its advantage is greater in the production of footwear because 2/12 < 4/6. Portugal requires 2 and the UK requires 12 units of labor for the production of one unit of footwear. Or Portugal requires 2/12 (approximately 17 percent) of the amount of labor that the UK requires for the production of the same amount of output of footwear. Analyzing the other product, Portugal requires 4/6, or approximately 67 percent, of the amount of labor that the UK requires for the production of the same amount of pharmaceuticals. Thus, Portugal’s advantage is greater in the production of footwear than in pharmaceuticals. This is usually stated by saying that Portugal has a comparative advantage in the production of footwear and a comparative disadvantage in the production of pharmaceuticals, in spite of an absolute advantage.

In a similar fashion, the UK has an absolute disadvantage in the production of both footwear and pharmaceuticals. However, its disadvantage is smaller in the
production of pharmaceuticals than in footwear, since $6/4 < 12/2$. This is usually expressed by saying that the UK has a comparative advantage in the production of pharmaceuticals and necessarily a comparative disadvantage in the production of footwear.

Comparative advantage, in opposition to absolute advantage, is a relative term. In a two-country, two-commodity model like the one presented above, once it is determined that Portugal has a comparative advantage in footwear, the rest follows automatically, i.e. that Portugal has a comparative disadvantage in pharmaceuticals and that the UK has a comparative advantage in pharmaceuticals and a comparative disadvantage in footwear.

Now that comparative advantage has been defined, a new question arises: will it still be advantageous to trade even when one country has an absolute advantage in the production of every good? The answer is affirmative, because once again, specialization increases total world output of every commodity. The truth of this statement can be easily demonstrated by exploring further the previous example.

Starting from the isolated general-equilibrium states of the two countries, Portugal will transfer 4 units of labor from the production of pharmaceuticals to the production of footwear (see Figure 6). The UK will transfer 12 units of labor from footwear to pharmaceuticals. The resulting changes in the world outputs of both products will again be given – as before – by the following equations:
Portugal: \( \Delta F_{PT} = +2, \Delta P_{PT} = -1 \).

The United Kingdom: \( \Delta F_{UK} = -1, \Delta P_{UK} = +2 \).

\[ \Delta F_W = \Delta F_{PT} + \Delta F_{UK} = +2 - 1 = +1 \]

\[ \Delta P_W = \Delta P_{PT} + \Delta P_{UK} = -1 + 2 = +1 \]

Chacholiades (1978: 21) concludes his demonstration by arguing that:

If each country specializes in the production of that commodity in which it has a comparative advantage, the total world output of every commodity necessarily increases potentially (the law of comparative advantage).

However, specialization according to the principle of comparative advantage will not generate the maximum output as it would if all labor could freely migrate to the most efficient country. Nevertheless, free trade will enable the world to produce more of everything, compared to the case where each country is economically closed and performing no international trade. But profitability from international trade will only happen if there is a difference in the relative labor requirements between countries. In other words, if Portugal is more efficient than the UK in the production of every good, but the degree of superiority is the same for every commodity, then there is no motivation for trade.

### 2.3.3 Definition in Terms of Opportunity Cost

The analysis presented above is grounded in the restrictive assumption of the labor theory of value. This theory is not usually accepted because labor is neither homogeneous nor the only factor of production (Kindleberger, 1958; Chacholiades, 1978), i.e. labor consists of many qualitatively different “non-substitutable” subgroups and goods are usually produced by different combinations of land, labor and capital. In an attempt to save the important classical principle of comparative advantage and free it from the restrictive assumption of the labor theory of value, Haberler (1936 in Chacholiades, 1978) developed the theory of opportunity costs.

In the previous example, when defining comparative advantage, the inequality \( 2/12 < 4/6 \) was used. But this inequality can also be expressed in a different way: \( 2/4 \)
According to Chacholiades (1978), these two inequalities are equivalent, but the later reveals a much more profound and useful interpretation.

To advance in the interpretation on this new expression, one has to understand the meaning of the ratio $2/4$. Considering only Portugal, this ratio is the minimum amount of pharmaceuticals which Portugal has to give up in order to produce an additional unit of footwear, i.e. this ratio is called the opportunity cost of footwear in terms of pharmaceuticals in Portugal (Chacholiades, 1978). A similar line of thought could be applied for the ratio $12/6$, which shows UK’s opportunity cost of pharmaceuticals in terms of footwear. Thus, the inequality $2/4 < 12/6$ means that the opportunity cost of footwear in terms of pharmaceuticals in Portugal is lower than in the UK.

A new definition of comparative advantage can thus be given, in terms of opportunity costs (Chacholiades, 1978): considering two countries (A and B) and two products (X and Y), it can be said that A has a comparative advantage in the production of Y, if and only if, the opportunity cost of Y in terms of X is lower in A than in B. Returning again to our example (see figure X), Portugal’s opportunity cost of footwear in terms of pharmaceuticals is 0.5 (which is lower than 2), meaning that Portugal has a comparative advantage in the production of footwear. A similar reasoning allows us to say that the UK has a comparative advantage in the production of pharmaceuticals.

Chacholiades (1978: 23) synthesizes the usefulness of opportunity costs in the theory of comparative advantage in a simple but fundamental statement:

Where two countries are producing two different commodities, one country should specialize in the production of that commodity in which the country’s opportunity cost is lower than the second country’s opportunity cost of the same commodity.

And this pattern of specialization just as before will allow an increase in the total world output of every commodity (Chacholiades, 1978).

The usefulness of this new interpretation is that, once defined comparative advantage in terms of opportunity costs, it makes no difference whether commodities are actually produced by labor alone (Chacholiades, 1978). The theory of opportunity costs accounts for all input factors involved in the production process as long as they
can be expressed in terms of costs. And once these opportunity costs are given, it is possible to immediately define the desirable pattern of specialization.

It is important to notice that these considerations were developed in the context of international trade. But this theory may be extended to different contexts (e.g. individual, company, city, region). The same reasoning may be applied to a company, when choosing business areas or even products in which it should focus/specialize. The principle of comparative advantage in terms of opportunity costs may also be applied to individuals’ lives, both in the professional activity as well as in inter- or intra-personal activity. Should someone dedicate his life to management consulting or to performing jazz piano concerts? Where is one’s lowest opportunity cost? In what activities does an individual have a comparative advantage over others? The answers can provide extraordinary insights to define both personal and professional path. This theory, just like absolute advantage, is powerful and useful due to its adaptability and generalization.

2.3.4 Introducing Demand

Even though comparative advantage explains why trade takes place, it cannot describe us in what terms (e.g. price). Ricardo (1821) advanced that the terms of trade would settle halfway between the comparative cost ratios, but he was not able to go any further. The third major figure in classical economics, John Stuart Mill, filled this gap (Ingram, 1983). He argued in his famed *Principles of Political Economy* (1848) that the “inclinations and circumstances of the consumers on both sides” would determine where between the two internal cost ratios the terms of trade will lie (Adams, 1979). This idea became known as the *law of reciprocal demand*. Clearly, Mill was the first to introduce demand considerations into the analysis. Mill noted that the amount of goods a country could export would depend also on the amount of imports it could obtain, i.e. it depends on the demand. In addition, he stated that trade must be in balance in the sense that the amount of exports offered by one country must equal the amount the other country is willing to purchase. Mill shifted the focus to the demand-side, and recognized its dynamic nature. Consumer “inclinations and circumstances” are never stagnant or static – humankind and its
tastes are inherently dynamic. And Mill took into account this dynamics of demand and conceptualized it in his theory.

Later, the theory behind Mill’s law of reciprocal demand was also portrayed graphically with the so-called indifference curves. The use of indifference curves to represent consumption preferences and demand is most appropriate when one is considering an individual consumer (Ingram, 1983). Ingram illustrates this statement by supposing, for example, that a certain person has an initial combination of two commodities (e.g. food and clothing). These commodities give a certain level of satisfaction or utility. Now suppose that one unit of food is taken away from the consumer, thus reducing the level of satisfaction or utility. There is an additional quantity of clothing that can be introduced in order to restore their level of satisfaction or utility. At that new point the person is as well satisfied as before, though with different quantities of both food and clothing. We can say that the person is \textit{indifferent} between these two commodity bundles, and these bundles are part of the same indifference curve.

If we assume that every individual has the same tastes and the same factor endowments, one can move from individual to \textit{community indifference curves} (Ingram, 1983), which represent the patterns of tastes and preferences of a group of individuals (e.g. a nation). Such aggregate curves are often used in international trade analysis, despite the fact that they require highly restrictive assumptions to preserve their validity.

\textbf{2.3.5 Discussion and Conclusions}

One of the most important conclusions of the theory of Comparative Advantage is that absolute advantages are not necessary for two nations to gain from trade with each other. Somehow, comparative advantage tells us that the conditions required to benefit from trade are less “demanding”, i.e. there is no need to satisfy the absolute advantage principle – comparative advantage is enough. This fundamental statement means that even in the case where one country has no absolute advantage over the other, specialization will still be the best choice, considering that it will result in increased total world production. Comparative Advantage theory implies a more “aggressive” specialization, because even in cases
where absolute advantage would conclude that specialization would not be profitable, comparative advantage argues that, in fact, it is.

Another relevant innovation concerns the introduction of the concept of opportunity cost. The restatement of the law of comparative advantage in terms of opportunity costs frees this theory of the restrictive limitations of the labor theory of value and provides us with new interpretations on the concept of advantage, as a state that somehow minimizes opportunity costs. This constitutes a new, improved and powerful way of analyzing international trade between countries, making it even more easily extendible to other contexts (e.g. regional, organizational, individual).

But perhaps the greatest contribution of comparative advantage is the introduction of demand considerations into the analysis of trade. Before demand-side had been neglected, but with Mill’s “law of reciprocal demand”, the “voice” of the consumer was starting to be listened to. Tastes of the consumer where represented via the concept of indifference curves, each indifference curve corresponding to a certain level of satisfaction (Chacholiades, 1978). And if these consumer preferences changed, new indifference curves could be drawn, ensuring that this natural consumer dynamics could be refreshed conceptually. This means that demand is changing, due to its human nature, and that the comparative advantage model conceptualizes this dynamic behavior, numerically or graphically, by means of indifference curves.

Although this theory was developed in the context of international trade, it appears appropriate to apply it to different levels of analysis. It seems that this theory is somehow context-free, i.e. it can be applied to distinctive contexts (e.g. individual, organizational, local, regional). As Chacholiades (1978) argues, the principle of comparative advantage has “general validity”, because it also applies to individual persons. Examples are not difficult to find. An individual, at some moment in his life, may wonder if he should focus on his engineering career or if he should specialize in playing jazz piano – it is usually not possible to be the best at both. We can furthermore shift from the individual to the organizational level. According to Rumelt (1982), diversified but relatively focused companies tend to outperform “unrelated business” diversified companies. Thus, companies must choose in what business areas/products they should focus on in order to obtain higher levels of
profitability. The principle of comparative advantage may provide useful insights to perform this task. This statement will still be true if we consider a local or regional level. It is this “general validity” that makes this theory so interesting and powerful no matter the level of analysis.

Despite this focus on demand and its inherent dynamics, supply was still viewed as stagnant. The previous restrictive assumptions of Smith’s absolute cost model regarding the supply-side remained unchanged in Ricardo’s comparative model, namely: a) constant factor supplies, b) no invention of new products and c) absence of technological improvement. Although the real nature of supply is obviously dynamic, both Smith’s and Ricardo’s model conceptualized supply as static. In fact, centuries ago, economic phenomena changed in a much slower fashion than nowadays. If a relative short time-frame was considered, it was possible to assume that some variables remained approximately constant (e.g. factor supplies, technology, products). In recent years, the speed at which innovations happen requires a more dynamic approach. It is no longer possible to assume that supplies, products or technology are stationary, even if the time-frame is relatively short.

To summarize, the theory of comparative advantage also “sees” supply as being static, just like Smith’s absolute cost model, with a new precious upgrade: demand is introduced in the analysis and is viewed as dynamic. The theory which would revolutionize the way supply is treated, by introducing a new dynamic of change and innovation, will be review in the following section.

2.4 Competitive Advantage

2.4.1 Introduction

Competitive advantage is a key concept in strategic management research (Wiggins and Ruefli, 2002). The fundamental reason is that the “consequence of its attainment is held to be superior economic performance” (Wiggins and Ruefli, 2002: 82). Thus, the birth and evolution of the concept of competitive advantage is tightly related with the birth and evolution of the discipline of strategic management. In order to contextualize the concept of competitive advantage, we will briefly review the most prominent strategic management concepts, milestones and individuals.
Strategic management, often called ‘policy’ or simply ‘strategy’, is concerned with the direction of business firms (Rumelt et al., 1991). One of the fundamental missions of strategic management research is to investigate and explain differences in performance between firms (Wiggins and Ruefli, 2002). It deals with subjects which are of great concern to senior management, or to whom the reasons for organizational failure or success may be of interest. Rumelt et al. (1991) argue that firms compete for: a) factor inputs, b) customers, and c) revenues. In order to survive, firms have strategic choices such as: a) selection of goals, b) choice of products and services to offer, c) its positioning to compete in product-markets, d) level of scope and diversity, and e) design of organization structure. This set of strategic choices – forming an integrated and reinforcing pattern between environment, strategy, and structure – is the core of firm strategy.

The discipline of strategic management is firmly grounded in practice and the reason for its existence is its inherent importance – the strategic direction of organizations “is at the heart of wealth creation in modern industrial society” (Rumelt et al., 1991: 6). While the origins of strategic management lie fundamentally in practice and codification, its advancement increasingly depends on theory building that helps explaining and predicting firm success or failure.

Strategic management is one of the least developed and least mature of all management disciplines (Barney, 2007). Finance and organizational behavior were already becoming rigorous disciplines by the 1950s. Marketing and accounting were following a similar path and reached this same status by the 1960s. However, only in the late 1970s and early 1980s did strategic management receive a more rigorous theoretical treatment. Before this period, strategic management was frequently taught by retired managers, focused primarily on describing the activities and decisions of general managers within their firms (Barney, 2007).

This delayed development of the discipline of strategic management is understandable – it is an inherently integrative activity in a firm. Managers have to bring skills and expertise of distinctive business functions together to construct a holistic view of the firm and conceive a strategy to implement. As a consequence of this ‘diversity’, research on strategic management is multidisciplinary. Thus, for strategic management to mature as an academic discipline, all other disciplines on
which it relies must mature. Therefore it is natural that the evolution of strategic management was delayed until other business fields matured from a preacademic state to more “discipline-based, research-oriented specialties” (Barney, 2007: xi).

The concept of competitive advantage, aiming to explain differential firm performance, appeared in the strategy literature in the early work of Ansoff (1965). He defined it as follows:

…(To) isolate characteristics of unique opportunities within the field defined by the product-market scope and the growth vector. This is the competitive advantage. It seeks to identify particular properties of individual product markets which will give the firm a strong competitive position.

Where the sixties gave birth to fundamental concepts, the seventies brought their development and application to practice (Rumelt et al., 1991). They were marked by the rapid expansion of strategy consulting firms, the establishment of professional societies, and the advent of journals publishing material on strategy. South (in Wiggins and Ruefli, 2002: 84), based on the work of the McKinsey consulting firm in the late 1970s, defined competitive advantage as the "philosophy of choosing only those competitive arenas where victories are clearly achievable."

Boston Consulting Group pioneered in developing new analytical tools for strategy, creating the concept of the ‘experience curve’ and introducing the ‘growth-share matrix’.

The concept of competitive advantage, aiming to explain differential firm performance, appeared in the strategy literature in the early work of Ansoff (1965), but is probably most associated with the work of Michael Porter in the early 1980s (Porter, 1980). In the debate concerning the drivers of competitive advantage, two prominent schools have emerged (Dyer and Singh, 1998). The first, the Industrial Organization School, associated with Porter (1980), concerned with industry structure and firms’ choices of strategic positions. Consequently, the focus was on the industry as the relevant unit of analysis. The second, the Resource-Based School, argues that differential performance is fundamentally due to firm heterogeneity rather than industry structure (Barney, 1991; Wernerfelt, 1984). Firms that are able to accumulate resources and capabilities that are rare, valuable, non-substitutable, and difficult to imitate will achieve a competitive advantage over competing firms. Thus,
resource-based theory views the firm as the primary unit of analysis. These two views present strong contrasts, the former focused on firms’ external industry environment, and the latter focused on firms’ internal capabilities.

Subsequent work has focused on the concept of *sustained* competitive advantage, which is the idea that some forms of competitive advantage are very difficult to imitate and can therefore lead to persistently superior economic performance over time (Wiggins and Ruefli, 2002).

### 2.4.2 The Industrial Organization School

Through the 1960s and 1970s, the study of ‘strategy’ was somewhat the study of what general managers or ‘leaders’ should do. In fact, it was assumed that “firms with better leaders would make better choices and would ultimately do better than their competitors” (Cockburn *et al.*, 2000: 1126).

But in the early eighties, in his book entitled *Competitive Strategy*, Porter (1980) shifted the focus of strategy research towards the analysis of the firm’s external microeconomic environment. He conceived his ideas within the context of industrial economics (Gartner, 1985), presenting them without complex mathematical formulas, no supply and demand curves, but always providing compelling examples to support his views. He developed new ideas about industry structure and the nature of competition among firms. Porter (1980: 5) defines industry as “the group of firms producing products that are close substitutes for each other” and argues that its structure has a strong influence on the profitability of firms (Gartner, 1985). To understand exactly why some firms (and industries) are likely to be more profitable than others, Porter (1980) develops a framework of an industry structure comprised of five competitive forces: suppliers, buyers, substitutes, potential entrants, and industry rivals. He analyzes how the particular characteristics of these five forces influence industry attractiveness, which he defines as “the profitability of all firms competing in the industry” (Gartner, 1985: 873).

Porter identifies three generic strategies: a) cost leadership, b) differentiation, and c) focus. With these three generic strategies, firms in an industry may attempt to gain a competitive advantage over their rivals. Positions not consistent with the three
proposed options result in what Porter calls being ‘stuck in the middle’, preventing firms from gaining above-average returns.

Integrating his five-forces industry framework with the three generic strategies, Porter develops interesting ideas about what he refers to as “generic industry environments” (Gartner, 1985: 874): fragmented industries, emerging industries, mature industries, declining industries, and global industries. He goes further and proposes three important strategic choices for firms: vertical integration, capacity expansion, and entry into new businesses. His methods and frameworks provide powerful conceptual techniques that many businessmen have found very useful in practice.

In his following book entitled *Competitive Advantage*, Porter (1985) develops new ideas about how firms attain competitive advantages within an industry. He presents a new framework for analyzing a firm’s advantage labeled ‘the value chain’, which is comprised of the primary activities of: inbound logistics, operations, outbound logistics, marketing and sales, and service. He also adds the support activities: firm infrastructure, human resource management, technology management, and procurement, which lay across all of the five primary activities. With the value chain framework, Porter (1991: 102) explores how firms use the three generic strategies to create and sustain competitive advantage, arguing that:

…competitive advantage results from a firm’s ability to perform the required activities at a collectively lower cost than rivals, or perform some activities in unique ways that create buyer value and hence allow the firm to command a premium price.

Porter’s frameworks are powerful tools for understanding why a particular strategic action may be associated with supranormal returns, but they say little about the role of the firm’s internal capabilities in determining profitability. A simplistic interpretation of his work seems to imply that structural analysis could be used prospectively: that doing strategy is about “choosing good industries” or “rebuilding industry structure” (Cockburn et al., 2000: 1127). It seems that good strategy is somehow independent of human capabilities, like leadership, foresight or intuition. But it makes us believe that if we learn how to analyze industry structure, we will be much better positioned to attain above-average returns. Nevertheless, Cockburn *et al.* (2000: 1127) argue that there is “no broad-based statistical study showing that firms
in which senior management actively used analytical tools to understand industry structure outperformed those that did not.” It was against this background that the ‘resource-based view’ of the firm emerged (Wernerfelt, 1984; Barney, 1991).

In his book entitled *The Competitive Advantage of Nations*, Porter (1990) bridges the gap between strategic management and international economics, while contributing to both (Grant, 1991). With this work, he extends the scope of competitive advantage theory to the international level, shifting the focus from performance of the firm to the performance of the nation. Porter (1990: xi) addresses the same question that stimulated Adam Smith and David Ricardo: “Why do some social groups, economic institutions, and nations advance and prosper?” In his quest to answer this question, he uses the concepts and theories drawn from strategic management to extend and reformulate the theories of international trade, investment and economic development of nations. Porter’s primary mission is the development of a predictive and explanatory theory of the international pattern of competitive advantage, combining inductive and deductive analysis (Grant, 1991).

Although Porter’s objective is to explain why certain countries succeed in particular industries, he sees firms rather than nations as the principal actors. The role of the nation in the international competitive performance is the domestic context, or the ‘home base’ environment, which it provides for the firm. Porter (1990: 25) measures *international competitive advantage* by

…either the presence of substantial and sustained exports to a wide array of other nations and/or significant outbound foreign investment base on skills and assets created in the home country.

In the analysis of the characteristics of the national environment, Porter identifies four sets of variables which influence firms’ capacity to gain and sustain competitive advantage in international markets. These four interacting determinants that form what he refers to as the *national diamond* are: a) factor conditions, b) demand conditions, c) related and supporting industries, and d) firm strategy, structure, and rivalry. The sets operate interdependently rather than individually. For this diamond to establish competitive advantage it is usually required that all four sets of influences are present (Grant, 1991), although there are some exceptions (e.g.
Japanese firms own the world market for typewriters despite having no intense home demand).

In extending his theory of competitive advantage to explain economic development within nations, Porter argues that national prosperity is closely linked to the upgrading of competitive advantage. Sustaining this advantage depends on firms’ ability to upgrade permanently their advantages through innovation and investment in ‘advanced’ factors of production. The consequence is the enhancement of labor productivity and an increase in real income per head of population, changing simultaneously national composition of industries and activities.

Porter dispenses with the economist’s approach for trade between nations (‘assume two countries, two-commodities’) and explores a broad range of national-level influences upon firms’ competitive performance in world markets (Grant, 1991). But probably the greatest difference between Porter’s theory and former theories of international trade is “the emphasis which he places on dynamic aspects of competitive advantage” (Grant, 1991: 540). Internationally successful firms and industries are constantly upgrading and investing in new products, skills, processes and technology. This statement is precisely against Smith’s and Ricardo’s assumptions of ‘no new products, new technology or factor input variability’.

2.4.3 The Resource-Based View School

Rooted in the early contribution of Penrose (1959), untangling the role of resources in proper diversification, the Resource-Based View (RBV) has become one of the most influential frameworks in the strategic management literature. Where the Industrial Organization model describes analytically why a differentiated position within an industry can lead to profitability (Cockburn et al., 2000), the RBV adopts an “inward-looking view, conceptualizing firms as heterogeneous entities consisting of bundles of idiosyncratic resources” (Lavie, 2006: 640). This framework redirects attention towards the internal organization capabilities, such as “the ability to develop new products rapidly, to understand customer needs profoundly, or take advantage of new technologies cheaply” (Cockburn et al., 2000: 1127). Thus, proponents of the RBV suggest that investments directed towards these internal competencies might be of great importance in generating above-average returns.
According to Rumelt (1982) and Wernerfelt (1984) profitability is intimately related with the internal development of resources, the nature of those resources, and different methods of employing resources. Thus, organizations can work on isolating mechanisms or resource-position barriers to sustain their economic rents. A more dynamic perspective is provided by Dierickx and Cool (1989), arguing that it is not the flow, but the accumulated stock of resources that matters. And only those resources that are “nontradable, inimitable, and nonsubstitutable” (Lavie, 2006: 640) generate competitive advantage.

The Industrial Organization school, fundamentally materialized in Porter’s work, “placed little emphasis on the impact of idiosyncratic firm attributes on a firm’s competitive position” (Barney, 1991: 100), and adopted implicitly two simplifying assumptions. First, Porter assumed that firms within an industry control identical resources and pursue the same strategies. Second, he also assumed that resource heterogeneity in an industry is rapidly attenuated because “the resources that firms use to implement their strategies are highly mobile” (Barney, 1991: 100), i.e. one can always buy and sell them in factor markets.

The RBV is obviously not built on these same assumptions, because it is especially devoted to examine the link between a firm’s internal characteristics and performance. In fact, these assumptions eliminate the possibility of attaining competitive advantage based on firm resource heterogeneity and immobility. Rather, the RBV assumes that firms may be heterogeneous in the strategic resources they control and that this heterogeneity can be sustainable, because resources may not be perfectly mobile across firms.

To explain the relation between the nature of resources and competitive advantage, Barney (1991) identified four characteristics of resources essential for gaining sustainable competitive advantage, namely: value, rarity, imperfect imitability, and imperfect substitutability.

Although the RBV is often positioned as an ‘alternative’ to the IO model, they are complementary in many important aspects (Cockburn et al., 2000). Each proposes a model of why firms may sustain superior performance, the IO model focusing attention on external industry structure, and the RBV directed to the internal capabilities. Porter uses industrial economics to explain what kinds of strategic
positions are likely to be most profitable and the RBV tries to shed light on how to assume the internal capabilities to pursue that strategy.

2.4.4 The IMP Group: A Network View

The Industrial Marketing and Purchasing (IMP) Group was created in 1976 by researchers from five European countries (Ford et al., 1998). The group’s first work was an empirical study which demonstrated the existence of lasting relationships between customers and suppliers in industrial markets. Such buyer-seller relationships were characterized by the so-called interaction model (IMP Group, 1982) as encompassing not only economic exchanges, but also social aspects. Besides the referred economic and social transactions, business relationships also encompass unilateral or reciprocal adaptations by the parties.

The notion of an industrial network has been developed based on the concept of inter-firm relationships. Industrial markets can be described as networks of connected business relationships, in which actors, resources, and activities are interdependent. Such interdependence is justified with the assumption of heterogeneity in industrial markets. In fact, if we look closely at business markets, heterogeneity emerges immediately within several dimensions (Ford et al., 1998). First, the distinctive firms that act as suppliers or customers usually differ in history, size, technology, organization and culture. Second, different suppliers offer different combinations of products, services, production skills and technical knowledge, even if they try to emulate each other. Third, no two customers look for identical offerings from their suppliers, even when the products being bought appear to be the same. Fourth, different customers will certainly place a different volume of orders, and will not have the same skill in using the product or access to final customers. Finally, there are always differences in the performance offered by and required from a supplier.

The interaction approach to industrial markets was developed in reaction to traditional marketing literature, which disregarded certain features of industrial markets. These marketing theories tended to: a) analyze marketing and purchasing processes independently, b) concentrate on the purchasing process for a single purpose, and c) assume that buyers were individually insignificant, passive and part
of a relatively ‘homogeneous market’ (Ford, 1997). By contrast, the interaction approach argues that: a) both buyers and sellers are active, and b) they often relate over a long-term basis.

Industrial networks’ proponents argue that industrial markets are customized, i.e. a supplier in these markets is likely to face fewer customers than in a consumer market and they may vary dramatically in many aspects (e.g. size, requirements). Even in consumer markets the situation is similar. Most manufacturers of consumer goods sell their products to wholesalers and retailers, rather than directly to consumers. And these distributors may be few in number and different from each other. This school deals also with interaction, rather than simple action or reaction. Finally, it acknowledges that choices are made under complexity, i.e. the decisions to purchase (or to sell) in a business market are complex. They do not take place in isolation from each other, and rarely take place at a single point in time or in a standard way. As a consequence, this distinct view of reality shapes different approaches to business strategy.

The interaction approach emphasizes relational exchange instead of discrete transactions, the latter one implying limited communication and narrow content. On the contrary, relational exchange implies that each transaction is the result of a certain history and/or anticipated future based on expectations and trust – its perspective is somewhat evolutionary (Macneil, 1980). In addition to exchange, the interaction approach acknowledges the existence of inter-firm adaptations. These adaptations can be physical or process-oriented, but can also refer to human behavior. In fact, human adaptations are crucial to inter-firm relationship success. It is at the individual level that interactions take place between buyers and suppliers, and it is at this level that familiarity and trust between interacting parties are generated. This fact emphasizes the importance of the human dimension in building business relationships, implying a more anthropo-centric perspective of firm strategy.

The interaction approach is fundamentally focused on relationship as its unit of analysis, to explore and explain the processes of selling and purchasing in industrial markets. However, to understand an industrial firm it is necessary to examine also the network of relationships it possesses. This enhanced perspective inspired the emergence of the so-called “market-as-networks” approach. This view of industrial
markets is fundamentally based on the interdependence of actors, activities and resources. The power structure is equally emphasized, since relationships between actors are based on the control of resources. An industrial network also encompasses a knowledge repository and structure, once its activities and use of resources reflect the knowledge of present and earlier actors.

The “market-as-networks” approach assumes that markets are essentially heterogeneous in nature. In fact, these markets “are characterized by heterogeneous supply of multidimensional resources as well as by heterogeneous demand for goods and services (Alderson, 1965). In particular, one of the mentioned resources is human capital, which combined with other resources and dimensions’ complexity and uncertainty gives rise to heterogeneous firms and relationships in industrial markets. Such a network structure, based on long-lasting actor bonds, resource ties and activity links, is characterized by simultaneous stability and change. It is interesting to notice, in particular, the emphasis which network theory attributes to human interactions within firms. Industrial firms are therefore seen as idiosyncratic entities in regards to their “structure, employee preferences, history, resources, investments, skills, etc” (Easton, 1992: 17), implying a considerable degree of heterogeneity. Furthermore, “heterogeneity implies that the company will live in a world characterized by uncertainty” (Forsgren et al., 1995: 32).

Ford et al. (1998) argue that business companies are bound to a network of relationships to such an extent that it is not possible to avoid them if we are attempting to understand business markets or how to manage within them. It is our objective to show how the particular features of business markets affect the development of strategy. Strategy “is about survival and development, both of which depend on the economic and financial performance of a company over time” (Ford et al., 1998: 64). It is fundamentally what a company actually does in order to achieve its desired performance – not so much what the company says it is doing or what it plans to do. Companies always have some kind of strategy, explicit or implicit, effective or ineffective, planned or emergent.

When developing business strategies, traditional competitive models tend to disregard the existence of relationships in the market (Ford et al., 1998), implying a more transactional exchange and neglecting the complementary transformational
nature of relationships. The standard competitive advantage approach takes an overall view of the market, leading to strategy based on an oversimplified picture of reality that fails to take account of interdependencies between the firm and others. Strategy development must address the impact of relationships on the market and company. Strategy must be conceived for the relationships that a company has, and for the ones it seeks to develop. Therefore, the importance of relationships in business markets implies that firms relate their strategy development to three main issues: a) heterogeneity, b) co-evolution, and c) interdependence (Ford et al., 1998).

Co-evolution is concerned with the process of interaction and change between two parties, over time. These three characteristics of business markets challenge the conventional wisdom about business strategy and can be found in the stories of many successful companies, such as General Electric, ABB, Tetra-Pac, Caterpillar and others.

More recently, in an article entitled *No business is an island: The network concept of business strategy*, Hakansson and Snehota (2006) explore the contribution that can be made to the classical business strategy doctrine by considering the insights gained by adopting a network view of business organizations. They identified three areas in which the business strategy doctrine could be developed in the case of organizations operating under ‘network conditions’: a) organizational boundaries, b) organizational effectiveness assessment, and c) organizational effectiveness management. These authors argue that when a network view is adopted some changes are required in all these three areas with respect to the assumptions of the business strategy model.

According to them, the basic proposition of the network approach to business strategy is that “continuous interaction with other parties constituting the context with which the organization interacts, endows the organization with meaning and a role” (Hakansson and Snehota, 2006: 267). Thus, the adoption of a network view makes it meaningless and conceptually impossible to disconnect the organization from its context. Some of the resources and activities traditionally considered ‘internal’ may hardly be controlled and influenced by the organization, while some of the ‘external’ resources and activities may actually be controlled and influenced by the organization itself. Organizational boundaries become more blurred and
difficult to define. The effectiveness of an organization is also less dependent on the firm’s capability in “adapting” itself to the environment, but more dependent on the ability of “relating” to the context. While “adapting” is necessarily associated with the internal processes of the organization, the “relating” ability induces a shift in focus to its external context.

Such a networked view of business strategy has significant implications on the traditional framework of competitive advantage, particularly in respect to the role of the demand in the concept of differentiation. These implications are also discussed in the following subsection.

2.4.5 Discussion and Conclusions

Porter’s first contribution, in his *Competitive Strategy* (1980), discussed the impact of industry structure in competitive performance. In his second book entitled *Competitive Advantage* (1985), he uses the value chain as a tool for analyzing opportunities for competitive advantage and for designing a firm’s system of activities. When later Porter (1990) introduces the national diamond into the strategy framework, he attributes an increased emphasis on the impact of resources and capabilities as determinants of competitive advantage. Such a view, more resource- and capability-focused, bridges the gap between the IO model and the RBV to strategy analysis, represented by the work of Rumelt (1982), Wernerfelt (1984), and Barney (1991).

But the most significant of Porter’s contributions in *The Competitive Advantage of Nations* (1990) is, in fact, the notorious shift to a more dynamic view of competitive advantage. While former theories of international trade addressed cost differentials, Porter (1990) recognizes that advantage is also determined by technological sophistication, innovation, quality, design and product features. He addresses a dynamic approach to the analysis of competitive performance, considering the role of innovation in creating competitive advantage and the need to upgrade the sources of advantage in order for them to be sustained over time (Grant, 1991). Porter (1990: 617) argues that
…to achieve productivity growth, an economy must be continually upgrading. This requires relentless improvement and innovation in existing industries and the capacity to compete successfully in new industries.

He upgrades the concept of competition as a static variable “in favor of a Schumpeterian concept of competition where competition is a process of dynamic change” (Grant, 1991: 546). This change may be exogenous (e.g. emergence of new technologies, new industry segments or shifting input supply conditions), or it may be endogenous (e.g. through innovation by firms). Porter’s discussion of the process of upgrading competitive advantage by introducing innovation and the creation of more advanced factors of production is very similar to Prahalad and Hamel’s (1990) discussion on core competencies.

What is important to notice is that this dynamic view is fundamentally focused on new technologies, on new products or on new ‘advanced’ factors of production. Thus, this dynamic view is mainly concerned with the production-side, or similarly, the supply-side. In fact, little is said about the demand-side on Porter’s work. Demand is referred to in the diamond model, but only in the context of the home country, and not globally, while the RBV model deals essentially with the supply-side. Theories of absolute and comparative advantage where developed under static supply assumptions, and lack this dynamic view. Porter thus proposes a new model, where firms are continuously renewing their value offer and positioning differently from competitors. He acknowledges that the nature of supply is dynamic and embeds this assumption in his theory of national competitive advantage.

However, a network approach to the concept of business strategy appears to shift the focus of advantage to the demand-side. Developed in the context of industrial markets, this stream of thought emphasizes the relational-side of business interactions. Instead of viewing demand as an ‘homogeneous set of buyers’, it assumes that buyers are highly differentiated due to the natural heterogeneity of each buyer-seller relationship. Thus, Porter’s models implicitly assume homogeneity of business markets. Conversely, the IMP Group assumes its heterogeneity (Ford et al., 1998). Relationships between firms in business markets differ depending on their history, experiences and attitudes. According to Ford et al. (1998: 72), this heterogeneity in relationships means that the business strategist “must take a wider
view of differentiation than is usual (Porter, 1980). In fact, differentiation applies to firms when they operate as both seller and as buyer, and must be considered within two dimensions for companies in both situations (see Figure 7 below).

**FIGURE 7 Bidimensional differentiation**

Source: Adapted from Ford et al. (1998).

First, starting from the supply-side, supplier S1 can differentiate its offerings in the traditional way, i.e. comparing to the offerings of the competing supplier S2. However, the supplier may differentiate its offering on a second dimension, i.e. between different customers C1 and C2 (e.g. different prices, delivery times or other conditions for different customers, as consequence of their distinctive relationship).

Analogously, if we consider the demand-side, a customer C1 might differentiate from the other customers in the market (e.g. C2), by means of a different approach to its suppliers, such as offering assistance with product design or collaborating in another distinctive way – it will be “competing for suppliers”. Secondly, customer C1 may differentiate between its suppliers S1 and S2 by, for example, offering to adapt to S1’s requirements, but not S2’s.

In conclusion, the assumption of heterogeneity in business markets brings more complexity to the differentiation concept, which has to be viewed this way, if we want to build a more accurate representation of reality. According to Ford et al. (1998: 79), “most of the traditional recommendations about strategy development are valid and applicable when each company is independent and when relationships
don’t matter”. Assuming these conditions of independence, equilibrium and homogeneity, business strategy is more concerned with competing (e.g. ‘competitive advantage’), reflected on the ‘one against all’ (Porter, 1980, 1985) philosophy. Conversely, assuming interdependency, heterogeneity and co-evolution, autonomous action is more limited and this ‘competitive’ philosophy has to become more ‘collaborative’ and evolutionary, in the sense of progressively ‘constructing’ something together (e.g. ‘constructed advantage’).

In fact, heterogeneity in relationships may imply differentiated strategies for each relationship. However, for the sake of economy, a company should achieve some commonality in the ways of working between these different relationships. Furthermore, in a dynamic and evolutionary market, it is not possible to ignore or even absorb context changes, by sticking to a ‘long-term’, ‘sustainable’ strategy. Instead, companies need to search for and manage their strategies with adaptability that makes sense, in line with the strategies of their surrounding firms and other contextual variables. It is even possible that a firm may indeed change that context.

Snehota and Tunisini (2003) similarly emphasize the role of relationships, heterogeneity of business markets, and the need to extend the concept of differentiation. Their starting point is the widespread consensus that business performance depends on the “fit” or match between the firm and its environment. They adopt the network perspective in order to uncover the critical dimensions of that match, and how it can be best achieved. According to Snehota and Tunisini (2003: 3), the critical dimension “is the differential advantage of the firm and thus the uniqueness of the company’s relationships”. These authors argue that Porter’s view of differentiation is too narrowly focused on the supply-side (competitors), neglecting the ‘vertical’ dimension of strategic positioning, which limits the ‘construction’ of advantage. In fact, Snehota and Tunisini (2003) advocate that this differentiation has to be defined not only with respect to assumed competitors but also to actors using and holding complementary resources, that is, primarily suppliers and customers. Such a network approach to the differentiation concept clearly attributes a more pro-active, dynamic role to the demand-side. The following section reviews the emerging concept of constructed advantage, which has been attempting
to upgrade some limitations of the theory of competitive advantage at the regional level.

2.5 Constructed Advantage

2.5.1 Introduction

The concept of Constructed Advantage has recently turned up in the economic geography literature, reflecting a focus on how to achieve and promote regional competitiveness. In order to provide contextualization, a brief description of the field of economic geography is presented.

Economic geography is a sub-discipline of geography and a growing field of study in economics (Clarck et al., 2000), mainly concerned with the spatial configuration of firms, industries, and nations within the emerging global economy. Forty years ago the field was a quiet discipline in economics, dominated by the analytics of location rather than contemporary matters. More recently, the so-called ‘new economic geography’ has extended the scope of its attention to some of the most important issues in contemporary economic life including globalization, the growth and decline of regions, and innovation. It encompasses international economics, industry organization, business strategy and innovation (on one side), while being sensitive to the ways in which theoretical perspectives drawn from those traditions are affected by their particular geography (on the other side). “Difference, differentiation, and heterogeneity characterize the economic landscape” (Clarck et al., 2000: 4), and are part of the research agenda motivating the field of economic geography. This discipline has come to be seen both as a crucial area of innovation in the social sciences and an essential reference point in the debate about the processes of global economic change, innovation, finance, and the future of whole cities and regions in the 21st century.

Constructed Advantage is an emerging and unclear concept. Cooke (2007: 179) recently addressed this fact, stating that “Constructed advantage theory is about as far advanced as innovation theory was 20 years ago.” Some suggest that the concept of Constructed Advantage was already implicit in some of Adam Smith’s observations (Cooke and Leydesdorff, 2006), but it was recently re-introduced by Foray and
Freeman in 1993. Later, it was referred by Best (2001) as the ‘new competitive advantage’, although he scarcely explored it.

De la Mothe and Mallory (2003: 786) dedicated more attention to this concept. They begin by emphasizing that “today, in the quest for sustainable development and growth, the regional and local dimensions of innovation” are becoming crucial in the equation for economic development. Other authors also advocate that evidence suggests national borders constraining less the economies as they become more geographically specialized (Mothe and Mallory, 2003).

Mothe and Mallory (2003) also recognize the new dynamics of innovation and competition. In their words, “One possible way of exploring this dynamic is through the notion of constructed advantage” (Mothe and Mallory, 2003: 788). They argue that to embrace it one needs to reconsider and develop new industry-government engagements. A possible definition of Constructed Advantage is also provided:

‘Constructed Advantage’ is both a conceptual approach to the governance of economic growth and activity and a strategic approach of utility to local businesses and policy makers (Mothe and Mallory, 2003: 789).

A more detailed set of characteristics of constructed advantage is given, namely (Mothe and Mallory, 2003): a) recognition that economic growth and activity is local, b) emphasis on local industry and multi-level government relations, c) recognition of the importance of knowledge (research, development, innovation, intangible services), d) ‘construction’ of industry-government relationships in which cooperation, partnerships, collaboration, and networking create value, e) the role of national government as ‘backing local leaders’ instead of ‘top down picking winners’ (subsidies and protectionism), f) importance of local leadership, g) availability of both physical and ‘smart’ infrastructure, h) access to smart money (venture capital, inward foreign direct investment), and i) the presence of a full variety of skilled people. According to Mothe and Mallory (2003), this new approach has significant implications for the formulation of both public policy and firm strategy.
2.5.2 Knowledge-based Economy and the Triple-Helix

Recently, Cooke and Leydesdorff (2006) have been developing the concept ‘Constructed Advantage’. They differentiate between knowledge economy and ‘Knowledge-based Economy’. They emphasize once more the impact of regions on global economic development. Finally, they launch an attempt to clarify the term ‘Constructed Advantage’.

It was Schumpeter (1911) who first recognized the importance of knowledge in the economy, as a crucial source of innovation and entrepreneurship (Cooke and Leydesdorff, 2006). Marshal (1916) further recognized that capital also consisted of knowledge, but neoclassical economics was not able to consider what couldn’t be measured or quantified in terms of its economic contribution. Penrose (1959) was another proponent that knowledge is a most important economic resource. She argued that the growth rate of a firm could indeed be determined by the growth rate of knowledge within it, thus implying a dynamic view of knowledge resources.

The concept of knowledge economy emerged when discussing factor inputs in the production process. But the latter concept of Knowledge-based Economy finds its roots in recent discussions from a systems perspective. This systems perspective is generated by a recombination of the economic dynamics of the market, the dynamics of knowledge-based innovation and governance (Cooke and Leydesdorff, 2006). In addressing this discussion, Etzkowitz et al. (1997) proposed the Triple-Helix model – an innovation dynamic model based on university-industry-government relations. It consists on a spiral model of innovation that captures multiple reciprocal relationships at different points in the process of knowledge capitalization (Etzkowitz, 2002).

Productivity and competitiveness are fundamentally a function of knowledge generation and information processing. Cooke and Leydesdorff (2006: 5) state that “knowledge has become by far the most important factor determining standards of living – more important than land, capital, or labour”. Other authors (e.g. Dunning, 2000) advance that today’s most advanced economies are fundamentally knowledge-based. In a similar fashion, Paul Romer (1990) recognizes that technology (and the knowledge on which it is based) has to be seen as another input factor along with capital and land in leading economies.
Knowledge-intensity can lead to growing gaps between rich and poor nations and these gaps are accelerating under ‘knowledge capitalism’. Cooke and Leydesdorff (2006: 6) recognize that “knowledge-intensive dynamics of scale and scope induce mechanisms for the retention of wealth that are different from the dynamics of mass production”. Spatial analysis was done to map this new knowledge-based economy. The results show that core cities are highly privileged in most countries while the peripheries are generally becoming more impoverished. Population is moving out of peripheral areas to vibrant metropolitan centers, transforming peripheries into socially deserted economies, and aggravating inequality.

According to Cooke and Leydesdorff (2006: 7), comparative and competitive advantage perspectives, “do not embrace the new dynamics of innovation and the capacity to exploit them which are essential to growth”. They argue that the new emerging concept of Constructed Advantage is key to economic growth. Cooke and Leydesdorff (2006: 7) define Constructed Advantage as:

both a means of understanding the noted metamorphosis in economic growth activity and a strategic policy perspective of practical use to business firms, associations, academics, and policy makers.

This ‘Construction of Advantage’ requires interfacing developments in various directions, namely: a) Economy, b) Governance, c) Knowledge Infrastructure, and d) Community and Culture (see Table 5).

Regional innovation systems (RIS) and knowledge management systems (KMS) are important frameworks for constructing regional advantage. According to Cooke et al. (2006), social scientists and policy makers see regions as nuclear sites of innovation and competitiveness in the globalizing economy. Theoretical as well as empirical analyses of innovation show that innovation policies work better with a regional focus. This regionalization of innovation allows measures to be formulated, implemented and monitored in a more targeted way, and thus capable of addressing more precisely the particular regional firms’ needs.
In order to ‘Construct regional advantage’ it is necessary to identify the basic building blocks for developing this approach, by using the following dimensions: a) related variety, b) differentiated knowledge bases, c) distributed knowledge networks, and d) trans-sectorial platform policies (Cooke et al., 2006).

Diversity in urban or regional economies is one of the driving forces of economic growth (Cooke et al., 2006). It stimulates creativity, which is essential for the innovation process. However, a distinction can be made between related variety and unrelated variety. Paraphrasing Cooke et al. (2006), unrelated variety consists of a diversity of sectors in a region that do not complement each other. Related variety, by contrast, has a positive effect on regional development, because knowledge is likely to spill over between complementary sectors.

The innovation process of firms and industries is strongly shaped by their specific knowledge base. Cooke et al. (2006) distinguish between three types of knowledge base: ‘analytical’, ‘synthetic’ and ‘symbolic’. These distinctive knowledge bases “indicate different mixes of tacit and codified knowledge, codification possibilities and limits, qualifications and skills required by organizations and institutions involved, as well as specific innovation challenges and pressures” (Cooke et al., 2006: 15). In practice, most industries are comprised of all three types of knowledge creating activities, although with different ‘dominances’. Connecting adequately these differentiated knowledge bases improves considerably the knowledge creation process.
The transition from an internal knowledge base of firms to increasingly more open and globally ‘distributed knowledge networks’ represents another key aspect to construct advantage. Basically, a distributed knowledge network is a coherent set of knowledges, organized across an economically and/or socially integrated set of agents and institutions. For example, it can be part of a global value chain of a multinational company or a globally dispersed community of scientists.

To support related variety, differentiated knowledge bases and distributed knowledge networks policies, it is necessary to transcend the common and rigid sectoral approach to a new trans- or multi-sectoral approach, creating more scope and flexibility and leveraging the exploitation of multipurpose and generic technologies. This approach is more suitable for the new systemic and networked perspective. Such cross-sectoral approach is illustrated with industrial policies of developed countries such as Japan and the current emphasis on creative industries, that is, creativity across traditional sectors.

In order for these policies to be initiated, some conditions must exist. Cooke et al. (2006) enumerates these conditions as follows: a) SME (Small Medium Enterprise) and entrepreneurship policies, b) regional innovation systems, c) regional knowledge infrastructure, and d) business climate and people climate.

In respect to SME and entrepreneurship policies, Cooke et al. (2006) argue that a new type of Entrepreneurial Regional Innovation System (ERIS) is emerging in contrast to the old Institutional Regional Innovation Systems (IRIS). The new ERIS is much more demand-focused and venture capital driven. Regional innovation systems will continue to play a strategic role in promoting the innovativeness and competitiveness of regions. To achieve this, policy makers must direct their attention towards building and upgrading regionalized innovation systems, based on a more bottom-up approach. In addition to regional innovation systems, of great importance is also the region’s knowledge infrastructure. With the advent of the new knowledge-based economy, tertiary or post-secondary education becomes essential as it gives access to codified knowledge that is needed to obtain various skills to be competitive in domestic and international markets. Finally, Florida (2004) argues that it is not enough to attract firms: the ‘right’ people also need to be attracted. He suggests that policies should be complemented to address issues of people climate as well as of
business climate. His concept of ‘Creative Class’ will be reviewed in the following subsection.

2.5.3 The Creative Class

The term Creative Class was coined by Richard Florida, another economic geographer. In his book entitled *The Rise of the Creative Class* (2004) he emphasizes the role of creativity and human talent in modern economy. According to Florida (2004), we now live in an economy powered by human creativity. He uses the term Creative Economy, in opposition to the obsolete knowledge or information economy. Florida argues that the creative economy is the new economic paradigm, where the fact of having information or knowledge is no longer enough – one has to use it in a creative, innovative way.

Florida (2004) differentiates employers according to ‘classes’. He describes the Working Class as the ‘hard’ industrial workers, which are paid to operate, to execute according to plan. The working class peaked at roughly 40 percent of the U.S. workforce between 1920 and 1950 – today it represents approximately a quarter of the workforce. The Service Class contains the low-end, typically low-wage and low-autonomy occupations in the so-called “service sector” of the economy: food-service workers, secretaries, security guards, cleaning personnel, clerical workers and other service occupations. This class has doubled from roughly 16 to 30 percent of the workforce between 1900 to 1950, before climbing to more than 45 percent by 1980 (Florida, 2004). The Creative Class includes “people in science and engineering, architecture and design, education, arts, music and entertainment, whose economic function is to create new ideas, new technology and/or new creative content” (Florida, 2004: 8). Although the Creative Class remains smaller than the Service Class, it is certainly the most influential. Their norms are different: individuality, self-expression, openness to difference. In a simple statement, these individuals favor heterogeneity and non-conformity over homogeneity and conformity. The Creative Class is also dominant in terms of wealth and income, with its members earning nearly twice as much on average as members of the other two classes. Together they account for nearly half of all wage and salary income in the United States. In Europe,
the ranks of the Creative Class have reached 25 to 30 percent of the workers across the more advanced countries (e.g. Sweden, Finland, Denmark, the Netherlands).

Economic growth is a complex process. Traditional models focused on location’s endowment of natural resources, or even companies, jobs and technology, to generate wealth. Florida (2004) proposes a new model for economic growth that he baptized the ‘3 Ts’. First of the ‘3 Ts’ needed for growth is Technology, measured by innovation and high-tech industry concentration. The second T is Talent – not just ‘human capital’, usually measured by numbers of people with higher education credentials, but ‘creative capital’ measured by the number of people actually in creative occupations. The third and last T is Tolerance. Places and people that are tolerant and open have an advantage in attracting different kinds of people and in generating new ideas.

In Florida’s (2004) perspective, a business climate is not enough to attract people and generate economic growth. It is also fundamental to develop a people or creative climate to complement that business climate. Tolerant, creative and talented people attract other tolerant, creative and talented people, thus reinforcing a creative driving force that generates new ideas and flourishing new businesses.

2.5.4 Discussion and Conclusions

After reviewing the existing literature on the so-called concept of Constructed Advantage, some noteworthy shifts emerge between the ‘era of competitive advantage era’ and the ‘new era of constructed advantage’. In an attempt to shed light on this metamorphosis, the major shifts in economic reality and approaches to policy making are presented in Table 6. A detailed discussion is then provided in the following paragraphs.
First, constructed advantage literature recognizes that economic growth and activity is regional or local (‘smart-cities’), not national (Cooke and Leydesdorff, 2006; Mothe and Mallory, 2003, 2006; Florida et al., 2007). There are no ‘one-size-fits-all’ solutions and government, industry, and research activities should be perfectly tailored to local assets, needs and objectives. Policy makers should develop their own regional (or local) solution, rather than just cloning successful examples or copying best practices. Even innovation and research must be regionalized and then distributed openly by means of a higher-level innovation system (e.g. national, supranational), reflecting a somehow bottom-up fashion.

Second, what was once a knowledge economy is now a knowledge-based (Cooke and Leydesdorff, 2006) or creative economy (Florida, 2002), concept introduced in more recent discussions from a systems perspective. This knowledge-based economy distinguishes between knowledge bases – analytical (science), synthetic (technical) or symbolic (creative) – and focuses on linking knowledge sub-systems together (Cooke and Leydesdorff, 2006). The creative sector (Florida, 2002) accounts for nearly half all wage and salary income in the United States, as much as the manufacturing and service sectors combined. Human intelligence, knowledge and creativity are the ultimate economic resources.

Third, there is a clear shift from an industry-/business-centric perspective to a more human-/anthropo-centric perspective, where human talent (Cooke and Leydesdorff, 2006; Florida, 2004) plays an important role. A strong business climate is not enough to promote economic development in a city or region. Rather, it is the presence of a vibrant people climate – talented and tolerant people, full of

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### TABLE 6 From competitive to constructed advantage: major shifts

<table>
<thead>
<tr>
<th></th>
<th>Competitive</th>
<th>Constructed</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geographic focus</td>
<td>National</td>
<td>Regional / Local</td>
<td>Mothe &amp; Mallory 2003</td>
</tr>
<tr>
<td>Economy</td>
<td>Knowledge</td>
<td>Knowledge-based / Creative</td>
<td>Cooke &amp; Leydesdorff 2006, Florida 2002</td>
</tr>
<tr>
<td>Perspective</td>
<td>Industry-, business-centric</td>
<td>Human-, anthropo-centric</td>
<td>Rindova &amp; Fombrun 1999, Barlett &amp; Ghoshal 2002</td>
</tr>
<tr>
<td>Paradigm</td>
<td>Mechanic</td>
<td>Systemic</td>
<td>Cooke &amp; Leydesdorff 2006</td>
</tr>
<tr>
<td>Innovation and Knowledge</td>
<td>Closed and concentrated</td>
<td>Open and distributed</td>
<td>Mothe &amp; Mallory 2006</td>
</tr>
<tr>
<td>Interaction</td>
<td>Competition</td>
<td>Co-operation</td>
<td>Cooke et al. 2006</td>
</tr>
</tbody>
</table>
stimulation and creativity interplay – that will drive regional economic growth (Florida, 2002). This more ‘humanized’ reality is perceived in accordance with the ongoing shift from economic to socio-cognitive factors (Rindova and Fombrun, 1999), from financial to human capital (Dean and Kretschmer, 2007; Collins and Clark, 2003; Pfeffer, 2005; Barlett and Ghoshal, 2002; Cooke et al., 2006), and from factual to relational (Dyer and Singh, 1998; Lavie, 2006). There is also an evident trend from a positivist paradigm towards a postpositivist philosophy (Madureira, 2008).

Fourth, what was once a rather firm-centric approach has undergone a transition to a more relationship-centered, network approach, which depends heavily on geography or at least on intellectual interactions beyond the confines of the firm, even the industry. An emphasis on markets and industries is now being substituted for a greater emphasis on university-industry-government relations, the so called triple-helix (Cooke and Leydesdorff, 2006; Cooke et al., 2006; Mothe and Mallory, 2006). The sectoral or cluster concept has been broadened to a cross- or trans-sectoral platform concept (Cooke et al., 2006; Mothe and Mallory, 2006), promoting multi-level interactions (national, regional, local) and leveraging knowledge generation and diffusion.

Fifth, constructed advantage embraces the new emerging shift from a mechanic perspective to a systemic approach. Procedural and pre-determined rules tend to be complemented with more holistic and interactive processes, thus evolving from a chain perspective (e.g. Porter, 1985) to a cycle perspective (e.g. Madureira, 2008).

Sixth, innovation and knowledge management is open and distributed, replacing a more closed and concentrated nature (Cooke et al., 2006; Mothe and Mallory, 2006). Traditional innovation systems, reflecting a top-down model, must evolve to a broader bottom-up, interactive and market-driven innovation model, where regional/local demand factors determine the rate and direction of innovation (Cooke et al., 2006). An ongoing trend from “entrepreneurial researchers” to “researching entrepreneurs” corroborates the stronger emphasis on the entrepreneur’s field experience (Madureira, 2008), allowing for a better consolidation between knowledge supply and demand requirements. The new Entrepreneurial regional
innovation systems, in contrast to the old Institutional RIS, are venture capital driven (rather than R&D driven) and more market-/demand-focused (Cooke et al., 2006).

Finally, the previous focus on competition is giving way to a greater focus on co-operation (Cooke et al., 2006). Collaboration between different actors – universities, public and private institutions— is of great strategic value. Reichert (2006: 23), for instance, suggests possible views on universities including a ‘sober view’ according to which universities exchange knowledge and experts with other institutions in the region. Even traditional customers are stepping out of their role of passive consumers to active players in co-creating value (Prahalad and Ramaswamy, 2000), reinforcing the role of demand in shaping the supply-side.

The newly constructed advantage theory also recognizes the dynamics of supply, just as competitive advantage theory did. Its strong focus on innovation and knowledge management systems reinforces this dynamic view. What is particularly different about constructed advantage is that it goes far beyond the acknowledgment that supply must be dynamic. First, Florida argues that the ‘creative class’ individuals are strongly heterogeneous and pro-active. This ‘class’ of individuals are also potential customers of all types of products and services. Together they form the demand-side of a consumer market (B2C). Thus, differentiated and dynamic consumers generate a whole demand which is also highly differentiated and dynamic. Secondly, constructed advantage argues in favor of a bottom-up approach to innovation systems, in which the demand factors determine the direction of innovation. This reflects a more demand-driven approach to innovation. Third, advocates of the new advantage argue that entrepreneurship must be more market-driven, which reinforces the focus on the demand-side. Finally, some creative and pro-active customers are even co-creating products with their suppliers, contributing with knowledge and innovation inputs to their suppliers’ production systems. This is the ultimate manifestation of a truly dynamic demand, whose interactions with supply must be adequately supported. However, competitive advantage theory did not address properly all these emerging patterns. Apparently, in an era where both business strategists and regional policy makers seek desperately to construct advantage, such a focus towards demand must not be discarded. The theory of constructed advantage attempts to provide some insights in this respect.
3 METHODOLOGY

3.1 Introduction

The present chapter describes the philosophical and methodological stance of this study, and establishes a comparison with alternative approaches to social science research in general and management studies in particular. A clear distinction between empirical and theoretical research is also presented, emphasizing the relevance and usefulness of the later. Finally, the last section discusses the research design in terms of the bibliography selection and analysis, and assesses the general quality of the study.

3.2 Philosophical Stance of the Study

The 1980s were marked by a stimulating critical reflection regarding meta-theoretical assumptions in social science research. Burrell and Morgan’s work, entitled *Sociological Paradigms and Organizational Analysis* (1979), catalyzed this important discussion. These authors conceptualize social science in terms of four sets of assumptions concerning ontology, epistemology, human nature and methodology (see Table 7 below).

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Subjectivist approach</th>
<th>Objectivist Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ontology</td>
<td>Nominalism</td>
<td>Realism</td>
</tr>
<tr>
<td>Epistemology</td>
<td>Anti-positivism</td>
<td>Positivism</td>
</tr>
<tr>
<td>Human nature</td>
<td>Voluntarism</td>
<td>Determinism</td>
</tr>
<tr>
<td>Methodology</td>
<td>Ideographic</td>
<td>Nomothetic</td>
</tr>
</tbody>
</table>

Source: Adapted from Burrell and Morgan (1979).

According to Burrell and Morgan (1979: 1), “all social scientists approach their subject via explicit or implicit assumptions about the nature of the social world and the way it may be investigated”. Assumptions of an ontological nature concern the essence of the ‘reality’ to be investigated: whether it is external or internal to the
individual, i.e. whether it is of an ‘objective nature’ or the product of one’s mind. In addition to the ontological issue, there is a second set of assumptions of an epistemological nature. These assumptions are related to the nature of knowledge: whether it is “hard, real and capable of being transmitted in tangible form or […] softer, more subjective, spiritual or even transcendental kind, based on experience and insight of a unique and essentially personal nature” (Burrell and Morgan, 1979: 1). Epistemological assumptions may determine extreme positions regarding knowledge generation or diffusion, i.e. whether it can be acquired or transmitted on one hand, or has to be personally experienced on the other. A third set of assumptions regards human nature and, in particular, the relationship between human beings and the environment. Some perspectives entail a view of human beings responding in a mechanistic or deterministic way to situations in the external world, i.e. humans are basically conditioned by their external circumstances. Other perspectives attribute to human beings a more creative role, proposing a ‘free will’ philosophy where humans create and control their surrounding environment. This extreme view of human-environment interaction identifies a great philosophical debate between proponents of determinism on the one hand and voluntarism on the other. The fourth and last set of assumptions concerns the methodological nature, and is tightly related to the other sets of assumptions. Different assumptions regarding ontology, epistemology and human nature will incline social scientists towards different research methodologies. Some methodologies treat the social world as being hard, real and external to the individual. In opposition, other methodologies view it in a more soft, personal and subjective perspective. The former kind of methodologies expresses itself in a search for universal laws that explain and govern the reality observed. The latter kind stresses the importance of the subjective experience and is fundamentally concerned with the way in which individuals create, modify and interpret the social world in which they live.

These four sets of assumptions, concerned about the nature of social science, form two broad and somewhat polarized perspectives. However, it is not required that researchers position themselves at either extreme. Some assumptions may be more firmly held and other assumptions may be more weakly held (Zaltman et al., 1982). The researcher can feel different intensities in his positioning regarding these meta-theoretical assumptions. And there is the possibility that a researcher changes
some assumptions over time, although not very often in practice. The philosophical
stance of the study is usually tightly related to the researcher. However, rather than
trying to characterize the philosophical stance of the researcher, I prefer to focus on
the nature of the study, as it is localized in time. Some researchers argue against this
‘contended pluralism’ (Willmott, 1993), advocating that such strict paradigmatic
boundaries may compromise rather than promote scientific progress (Weick, 1999),
and that this contention may be less useful than analyzing where and how these
paradigms overlap or converge, and where and how they are controversial or
divergent (Lincoln and Guba, 2000).

The dichotomy between the subjective and objective approach was further
elaborated by Morgan and Smircich (1980), building on the work of Burrell and
Morgan (1979). They subdivided the subjective-objective dimension into six
different positions (see Table 8 below). However, these authors advocate that the
transition from one position to the other is gradual, and frequently the proponents of
any given position may attempt to incorporate characteristics from the others.
Although Morgan and Smircich (1980: 493) acknowledge this soft and somewhat
borderless transition between philosophical positions, they argue that this “scheme
provides a useful way for thinking about the kind of assumptions that underlie the
social sciences”.

<table>
<thead>
<tr>
<th>Table 8: Assumptions: the subjective – objective debate within social sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Core Ontological Assumptions</strong></td>
</tr>
<tr>
<td>reality as a projection of human imagination</td>
</tr>
<tr>
<td><strong>Assumptions About Human Nature</strong></td>
</tr>
<tr>
<td><strong>Basic Epistemological Stance</strong></td>
</tr>
<tr>
<td><strong>Some Favour Metaphors</strong></td>
</tr>
<tr>
<td><strong>Research Methods</strong></td>
</tr>
</tbody>
</table>

Source: Adapted from Morgan and Smircich (1980).
The epistemology of extreme positivism sees reality as a concrete structure, “derived from a mechanical conception of the universe as a closed structure” (Morgan and Smircich, 1980: 493), reflecting a conception of the world as a machine or a closed system. As we proceed to the second position from right to left along the subjective-objective continuum illustrated in the table above, this extreme objective view gives way to an epistemology emphasizing the need to understand process and change, reflecting the conception of the world as an organism, as a system.

In terms of core ontological assumptions, the present study shares the view of reality as a contextual field of information. According to Morgan (1979 in Morgan and Smircich, 1980) this ontological position calls for epistemologies based on cybernetic metaphors, which emphasize the importance of understanding contexts. If reality is assumed to be a concrete process, and thus compared to the metaphor of organism, the theorist is encouraged to draw boundaries around the subject of study, and to focus on an arbitrary relationship between organization and environment, structuring the research process and knowledge thus generated around this conceptualization (Morgan and Smircich, 1980). A more context-oriented epistemology, such as the one described by the cybernetic metaphor, seeks to avoid the abstraction of ‘organization’ from ‘environment’, and search for what Bateson has described as ‘systemic wisdom’. The more ‘borderless’ approach of the cybernetic metaphor appears to be adequate to a networked view of business and social interactions. In fact, distributed networks are open systems without clearly defined boundaries in the double sense that: 1) one cannot clearly distinguish ‘organization’ from ‘environment’, and 2) the number of actors and thus the network itself may ‘grow’ indefinitely. Thus, as far as research in organization theory is concerned, a view of business reality as a contextual field of information would stress a need to understand how organizations and environment evolve together, rather than presuming that the adaptation of organization to environment is one way, as the organismic metaphor tends to presume. The contextual approach is not concerned with the notions of causality, which underlies positivist epistemology, because it becomes impossible to find a point at which causal forces begin (Morgan and Smircich, 1980: 496).
Guba and Lincoln (2000) provide a more recent taxonomy of social research paradigms, distinguishing between *positivism*, *postpositivism*, *critical theory* and *constructivism*, in terms of ontology, epistemology and methodology (see Table 9 below). Briefly, critical theory and constructivism acknowledge the existence of multiple social realities, based on particular belief systems, while positivism assumes a single apprehendable “real” reality. The former assume knowledge to be value-dependent, whereas the latter assumes value-free and independent researchers. Thus, critical theory and constructivism are both subjectivist, while positivism is extremely objectivist.

### TABLE 9 Social research paradigms

<table>
<thead>
<tr>
<th></th>
<th>Objectivist Approaches to Social Science</th>
<th>Subjectivist Approaches to Social Science</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ontology</strong></td>
<td>Naive realism - &quot;real&quot; reality but apprehendable</td>
<td>Historical realism - virtual reality</td>
</tr>
<tr>
<td></td>
<td>Critical realism - &quot;real&quot; reality but only imperfectly and probabilistically apprehendable</td>
<td>Relativism - local and specific constructed realities</td>
</tr>
<tr>
<td><strong>Epistemology</strong></td>
<td>Dualist/objectivist; findings true</td>
<td>Transactional/subjectivist; value-mediated findings</td>
</tr>
<tr>
<td></td>
<td>Modified dualist/objectivist;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>critical tradition/community;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>findings probably true</td>
<td></td>
</tr>
<tr>
<td><strong>Methodology</strong></td>
<td>Experimental/manipulative;</td>
<td>Dialogic/dialectical</td>
</tr>
<tr>
<td></td>
<td>verification of hypotheses;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>chiefly quantitative methods</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Modified experimental/manipulative;</td>
<td>Hermeneutical/dialectical</td>
</tr>
<tr>
<td></td>
<td>critical multiplicity; falsification of hypotheses; may include quantitative methods</td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Adapted from Lincoln and Guba (2000).

*Postpositivism*, in Lincoln and Guba’s words, is an intermediate philosophical stance which assumes simultaneously that scientific theories change over time, but the world they describe largely remains the same. In other words, the world exists independently of the observer’s knowledge of it, but knowledge is produced according with the available models and discourses. Thus, according to postpositivism, social science is neither searching for the invariant laws that govern the universe, a goal that is more common among natural sciences, nor merely documenting idiosyncrasies. The inquirer posture is that of a “transformative
intellectual” as advocate and activist, rather than the “disinterested scientist” of positivist paradigm.

This study shares the view of postpositivism: it is developed under the belief that social reality exists regardless of researchers’ acknowledgement of it, but it is concept-dependent. Although our knowledge of social phenomena is not absolute but probably true, i.e. it consists of “nonfalsified hypotheses that are probable facts or laws” (Lincoln and Guba, 2000: 171) and thus fallible, it may still be empirically checked and critically evaluated.

3.3 Types of Research

Most of the research in social sciences is empirical. In fact, when someone talks about research in social sciences in general or management studies in particular, the question of whether the research is qualitative or quantitative instantly arises – empiricism is usually implicit.

Empirical research continues to be the dominant research practice for management studies. Organizational science is built on the belief that organizations are hard, empirical things which may be studied using scientific techniques. Based on that fact, it is frequent to observe a great preoccupation with means in preference to ends, reflected in the obsession with calculation and measurement: the drive to classify, to label, to assess and number. This so-called instrumental rationality (McNiff and Whitehead, 2000) is more concerned with method and efficiency rather than purposes. It represents the divorce of fact from value, and the preference, in that divorce, for fact.

Empirical research bases its findings on direct or indirect observation of reality. In practice, it involves choosing adequate research strategies (e.g. case study, experiment, archival analysis). Yin (2003) relates the different research strategies with the research questions being posed (see Table 10 below).
A basic categorization of the types of questions is the common series: “who”, “what”, “where”, “how”, and “why”. The research questions, per se, determine the purpose or phase of the investigation: a) exploratory, b) descriptive, and c) explanatory. For example, “what” questions are usually exploratory, whereas “how” and “why” questions are likely to be more explanatory. Empirical research also requires planning research designs, relying on data-gathering techniques, and choosing methods for data analysis and validation.

In research, the most common types of reasoning are the deductive and inductive approaches. Deductive reasoning goes from the more general to the more specific, beginning with a broader theory and then narrowing down into specific hypotheses subjected to field test. Inductive reasoning works the other way, moving from specific observations and measures to broader generalizations and theories. These two reasoning approaches imply different mindsets. Inductive reasoning is naturally more open-ended and exploratory, whereas deductive reasoning is narrower and fundamentally concerned with testing or confirming hypotheses. Social researchers may use inductive and deductive reasoning processes in the same study. Another important distinction is concerned with the difference between qualitative and quantitative research. The former relies on a few cases and many variables, in contrast with the latter, concerning a few variables and many cases (Ragin, 1987).

Empirical research is fundamentally oriented towards outcomes rather than concepts, and is done to understand and cope with real-life problems (Lens, 1987). Thus, its premise is that of application and usefulness, which is crucial to the production and test of useful knowledge with immediate practical application. This action-orientation, very common among empirical researchers, is clearly reflected in Pire’s words: “Knowledge without action is cowardly” (in Lens, 1987: 460).

### TABLE 10 Relevant questions and different research strategies

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Experiment</th>
<th>Survey</th>
<th>Archival Analysis</th>
<th>History</th>
<th>Case Study</th>
</tr>
</thead>
</table>

Source: Adapted from Yin (2003).
But Dominique Pire (in Lens, 1987: 460) also argued that “Action without knowledge is imprudence”. And in fact, ‘there is nothing so practical as a good theory’. Theoretical research (also called fundamental, basic or conceptual research) allows the advancement of knowledge and the theoretical understanding of the relations among variables. This type of research is usually exploratory and often driven by the researcher’s intuition (or serendipity). It is developed without regard for the immediate applicability of the results to practical situations, although it may have unexpected and fundamental implications in practice. Through theory generation, conceptual research provides the foundation for further empirical research, in order to clarify, test and refine the theory. Thus, conceptual research usually precedes empirical research, by conceptualizing the phenomena under investigation in a more flexible fashion. Often, after conceptualization, researchers tend to qualify and then quantify. Along this continuum, the degree of freedom narrows, and data gets ‘harder’. Usually it starts with imaginary concepts such as abstract ideas or images, developing to harder data such as verbal descriptions in terms of words, and eventually to measures in form of numbers (see Figure 8 below). Kant (1781) also argued against extreme empiricism with his famous quote: “Perception without conception is blind; conception without perception is empty.” He showed that the bare sequence of sense-impressions can never yield the connections, necessities, unities, laws, which are required for science. The intellect must supply these itself.

**FIGURE 8 Different types of research**

<table>
<thead>
<tr>
<th>Theoretical Research</th>
<th>Empirical Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conceptualization</td>
<td>Qualification</td>
</tr>
<tr>
<td>(e.g. abstract ideas or images)</td>
<td>(e.g. words)</td>
</tr>
<tr>
<td>Quantification</td>
<td>(e.g. numbers)</td>
</tr>
</tbody>
</table>

Theorizing takes scientists on abstract journeys between the world of observed events, such as Newton’s falling apples, and the imagined worlds of hypothetical concepts, such as Einstein’s theory of relativity. Bridging gaps between concrete experience and abstract concepts presents a great challenge for researchers (Folger
and Turillo, 1999). Theorists have a greater degree of freedom in choosing the variables they want to study. This freedom of scope enables theoretical researchers to find unexpected lawful relations in the reality under investigation. In fact, according to Hers (1986: 17),

> the most exciting moments are, without any doubt, those when one finds something that one did not look for…only those progresses move the border between what is known and what is unknown, they give the researcher that unforgettable experience of being a finder or discoverer” (in Lens 1987: 454).

Mintzberg (1979) also argues that the field of organization theory has been obsessed with rigor in the choice of methodologies, resulting in numerous studies which were only significant in the statistical sense, whereas simpler and more direct methodologies would yield more useful results. He also states that induction, especially from small samples, is seen among some researchers not as a valid part of science. While deduction is certainly a part of science, in his opinion it is the less interesting and less challenging part. I share Mintzberg’s (1979) opinion that it is discovery that attracts me, not the checking out of what we think we already know.

According to Mintzberg (1979), every theory requires a kind of ‘creative leap’, however small, to break away from the expected to describe something new. Data does not generate theory - only researchers’ do that. And all theories are false, as they are all abstracted from reality and simplify the world they aim to describe. Mintzberg (1979: 584) addresses humorously the question of less ‘rigorous’ research practices:

> Call this research "exploratory" if you like, just so long as you do not use the term in a condescending sense: "OK, kid, we'll let you get away with it this time, but don't let us catch you doing it again."

Whether the field of investigation is new or more mature, the interesting investigation is also the one that explores. In fact, amongst the particular reality of organizations, it seems that the more deeply we analyze its dynamics, the more complex it seems – and the more we need to rely on the so-called exploratory research in order to advance.
As mentioned in section 3.3, the purpose of the present study is to clarify the ambiguous concept of *Constructed Advantage*. In particular, the study attempts to answer two basic research questions:

i. What is ‘Constructed Advantage’?

ii. What are the differences between Constructed Advantage and Competitive Advantage?

Both questions are of the “what” type. Such type of questions reveals the highly exploratory nature of the present study, requiring a purely conceptual or theoretical approach. There is neither quantitative nor qualitative data, primary or secondary. Thus, this thesis does not contain ‘soft’ or ‘hard’ data – it is not a product of empirical research. Rather, the present study attempts to be a conceptual and exploratory research study focused on answering clearly the proposed research questions.2

According to Locke *et al.* (2004), organizational research in the 21st Century is well populated with methodological resources. However, there remains an empty space in the methodological landscape with regards to discovery processes, involving imaginative theorizing. She highlights the concept of *abductive inference*, which she refers to as the first phase in the inquiry process and a form of reasoning distinct from both induction and deduction. The work of a theoretical researcher, through abductive reasoning, is compared to the process of interpreting a sculpture. First, the artist starts to observe its beauty and complexity; then he walks around the statue, appreciating it from different perspectives, and pausing as a specific aspect of it seems familiar and recognizable; in this process, the artist attempts to give significance to the artwork and tries to give names to the various senses; he moves on to other perspectives, and pauses again when he feels intrigued with another part of

2 The empirical research will follow this study in my doctoral work.
the statue, reexamining it in light of some later thoughts and observations; this process continues, until a fairly coherent significance emerges.

The present study is essentially abductive, as it adopts the same open and inquisitive stance of the artist that attempts to understand and give significance to the observed reality. It relies on multiple inspirational resources to generate ideas, articulating different perspectives from different branches of economic and management sciences. And it involves continuous interpretive micro-processes, expanding interpretive possibilities in various directions, thus reflecting an apparent ‘messiness’ that characterizes the imaginative analytical work.

### 3.4 Research Process

The point of departure of this research was, fundamentally, a paper that arose from a conference hosted in October 2003 by Memorial University, Newfoundland, Canada. In an article entitled *Regional Development in the Knowledge-Based Economy: The Construction of Advantage*, Cooke and Leydesdorff (2006: 1) state that “the concept of constructed advantage will be elaborated”.

After reading the paper, I felt the need to research every article concerning the topic of constructed advantage. The ambiguity of the concept naturally emerged from all the literature, immediately leading to the two research questions posed earlier in this chapter. Thus, to clarify the concept of constructed advantage, it was necessary to fully review the fundamental concept of advantage, and all the former theories addressing this topic.

Literature was searched based on the expression ‘constructed advantage’. Other similar and related expressions (e.g. ‘constructed regional advantage’, ‘constructing regional advantage’, ‘regional advantage’) were also utilized, in order to further expand the limited spectrum of literature available on the subject. As a consequence of this preliminary investigation, a broader ‘family’ of concepts and words naturally emerged, reflecting the evolution of the concept of advantage, namely: a) absolute advantage, b) comparative advantage, c) competitive advantage, and finally d) constructed advantage. This set of concepts clearly defines the fundamental theoretical branches involved in the research: the first two concepts are usually found
in international economics literature; the third is the crucial concern of all the strategy literature; and the final concept is present in latter economic geography discussions. Along this continuous process of investigation, additional branches of research arose, namely industrial networks. Occasionally, reference to other particular fields of research (e.g. complexity theory, Long Tail theory) is also presented, in order to enrich and strengthen our analysis.

For the present study, literature was carefully selected from distinct sources, depending on the field of research. Concern with credibility was assured by choosing from leading and highly cited publications. Literature related to international economics, in order to revisit the concepts of absolute and comparative advantage, was specifically chosen from standard course books on international trade theory. Literature regarding the concept of competitive advantage was mainly drawn from publications such as *Academy of Management Review, Academy of Management Journal, Strategic Management Journal, Harvard Business Review* and standard strategic management books. Economic geography sources were more diverse, due to the emerging nature of the concept of constructed advantage. Major publications, such as articles, books, reports and conference papers were analyzed in detail.

The referred publications were mostly collected via EBSCOhost and Emerald, two online research database services serving as gateways to several publications within management research. Books and additional publications were browsed at the library of University of Porto Business School (UPBS), and occasionally some were requested from other Portuguese universities. Some of the titles cited are works from the author’s own library.

Literature was analyzed in the sense of “bringing order, structure, and meaning” (Marshall and Rossman, 1995: 111), by means of a continuous process of examination and interpretation of relevant literature. Naturally, a more exploratory analysis will largely depend “on an investigator’s own style of rigorous thinking, along with the sufficient presentation of evidence and careful consideration of alternative interpretations” (Yin, 2003: 110). The analysis of data concluded with a discussion of the literature reviewed, and with a proposition of a new model, highlighting theoretical and practical contributions. This analysis was physically
supported with computer software, including MS Word, MS Excel, MS Project and MS Visio.

The quality of the present study may be assessed in terms of credibility, trustworthiness, and usefulness. Since the research is conceptual, no data was collected. Thus, only bibliography was gathered for literature review. Dissertation credibility was then assured by theoretical triangulation of:

a) different types of bibliography from different sources,

b) theoretical conclusions from different schools of thought, and

c) theoretical conclusions from different authors.

A tactic adopted in order to increase research trustworthiness was to choose amongst the most reliable bibliography sources, such as the publications already mentioned. To enhance the research usefulness, the seven world experts on constructed advantage were contacted by an informative and inquisitive e-mail, concerning the research objectives. This resulted in four almost immediate enthusiastic responses, two of the individuals asking if I already had a supervisor (see Appendix A).

The overall study has been chronologically documented over a period of nine months. Such process is briefly depicted in Figure 9 below, thus providing general guidance on the aspects of the research project.

![FIGURE 9 Research process](image-url)
4 DISCUSSION

4.1 Introduction

The previous chapters constituted fundamentally an exercise of analysis, in the sense that complex topics were broken into smaller parts to gain a better understanding of the problem. A process of synthesis, by contrast, aims to combine pre-existing parts to form something coherent and new. Such an approach will be the emphasis of the present chapter. It discusses relevant concepts and perspectives introduced in the previous chapters and furthers our understanding of the concept of constructed advantage, by presenting a matrix model. In particular, it starts by synthesizing recent criticisms concerning competitive advantage in the context of organizations. The third section takes the discussion to the regional level and examines economic geographers’ criticisms regarding competitive advantage. The forth section synthesizes the similarities between constructed advantage within the regional context and the network view of organizational strategy, thus providing a ‘common ground’ for a context-independent theory. Using these three sections as a point of departure, the fifth section proposes a new perspective for the concept of constructed advantage. Such a perspective permits the generalization of constructed advantage, allowing for its application to different levels of analysis. The ‘Constructed Advantage Matrix’ sheds light on this new concept and brings a clearer understanding of the differences between former theories of advantage, explaining coherently its evolution with a simple two-dimensional matrix structure. The sixth and last section provides a clear comparison between the theories of constructed and competitive advantage, grouping this distinction into five basic aspects.

4.2 Criticisms of Competitive Advantage: Organizational Level

4.2.1 The need for a more Dynamic Approach

Various criticisms continue to arise representing different perspectives in how to achieve competitive advantage. Even Porter (1991) recognizes that it is becoming increasingly clear that we need to develop more dynamic models of strategy. As Porter (1990) emphasizes, the evolution of industries is dynamic and path dependent,
as certain capabilities acquired from previous events may shape the context for future competitive episodes.

Given Porter’s great impact on the Industrial Organization school of thought, his models have been criticized. In particular, his five forces framework assumes a zero-sum game, in which competitors can only succeed at the expense of other players in the industry (Henry, 2008). However, there is evidence of collaborative relationships between organizations which benefit both parties. Henry (2008: 81) argues that this framework “is a static analysis which assumes relatively stable markets”. It does not address interactions between players and represents a traditional view of strategy based on rather stationary or slowly evolving industry environments. In fact, other authors such as Prahalad (2000 in Henry, 2008: 81), advocate that “strategy is not about positioning the company in a given industry space but about influencing, shaping, and actually creating industry space”. Thus, there is an increasing need for a more dynamic and proactive framework.

This need for a dynamic view of strategy has been addressed also by Markides (1999), in the sense that while taking advantage of its current position, a company must search continuously for new strategic positions, attempting to manage both simultaneously. A few other authors (D'Aveni, 1994; Hamel and Prahalad, 1994) proposed frameworks for the development of advantage within hyper-competitive industries that experience high levels of instability, but these frameworks ended up to be somewhat vague in their treatment of strategy.

Brown and Eisenhardt (1998) argue against ‘forcing’ for the optimum strategic fit between the characteristics of the environment, strategy, and organization. They suggest that such a push for this best fit tends to make firms more inflexible, and thus it would be harder for them to respond to changes. Instead, the authors propose a looser and broader combination of the key elements, resulting in some form of semi-coherent strategic direction for the firm. Companies should focus on the present as the link between the past and the future, trying to improve themselves by relying on their past strengths and simultaneously seeking ways to adapt these to deal more effectively with the future. Concerning the strategic development process, Brown and Eisenhardt (1998) emphasize the need to create momentum through regular, incremental moves. Thus, the formation of strategy tends to be the result of a process.
that is more emergent than intended (Mintzberg, 1978). This view reveals a somewhat evolutionary and systemic approach to the development of strategy.

Moncrieff (1999) advances a new model of strategy as a dynamic process, constituted of three sources of strategic outcome. He recognizes that strategy is partially planned, through ‘intended strategies’, and partially unplanned, through ‘emergent strategies’ and ‘strategies in action’. Emergent strategies are the responses to unplanned, emerging opportunities and threats: “They are the result of deliberate decisions to marshal and focus resources in order to pursue a new direction, modifying or replacing some aspects of earlier strategic intent” (Moncrieff, 1999: 273). The label ‘strategies in action’ represents the actions of many people throughout the organization, rather than the intentions of a few at the top. This continuous and interacting process generates what Moncrieff calls ‘strategic learning’. Again, this model is systemic and reflects an evolutionary perspective.

An important contribution to a dynamic view of strategy is the book entitled *Competitive Strategy Dynamics* from Warren (2002). A dynamic perspective deals with the evolution in time of a certain function, such as the firm’s strategy itself. Thus, future states are determined by past and present states. The fundamental acknowledgment here is that history matters. A systemic perspective is tightly connected to an evolutionary perspective. More precisely, Warren (2002) distinguishes between strategic asset *stocks* and *flows*. According to him, strategic asset stocks are accumulated by choosing appropriate flows over time, and while flows can be adjusted instantaneously, stocks cannot. Thus, a firm’s competitive position is determined by its level of strategic asset stocks, and its current strategy involves choosing the optimal time paths of flows, in order to increase its stocks. Then, this implies a consistent pattern of resource flows to accumulate a considerable change in strategic asset stocks. This dynamic perspective is based on the stream of literature dealing with the resource-based view of the firm, and thus more supply-centered.

More recently, Yip and Johnson (2007: 14) summarize the fundamental crisis undergoing theories of strategy and strategic management practice: “The biggest criticism of the strategy prescriptions of the last 20 years is that most of them are static.” In fact, they go further: “strategies must be dynamic, not static” (Yip and
Johnson, 2007: 11). The need to change strategies over time is fundamental to strategic management practice. Present turbulent environments change rapidly and business models have a finite life, whereas they need to be strategically transformed from time to time.

Recent literature on complexity theory (MacIntosh et al., 2006) has made significant and helpful contributions to management studies. In particular, chaos theory has been providing a “useful theoretical framework for understanding the dynamic evolution of industries and the complex interactions among industry actors” (Levy, 1994 in MacIntosh et al., 2006: 9). According to Levy (1994), industries can be conceptualized and modeled as complex, dynamic and non-linear systems, as they exhibit both unpredictability and underlying order. He also recognizes interdependence among strategic interactions, in the sense that “decisions by one actor take into account anticipated reactions by others” (Levy, 1994 in MacIntosh et al., 2006: 13). Game theory (Camerer, 1991) has been used to model inter-firm behavior in economics and business strategy, but these models tend to presume the emergence of equilibrium, which does not adequately reflect real industry dynamics. An important managerial implication of chaos theory is that long-term forecasting is almost impossible, and that dramatic change can occur unexpectedly. Thus, flexibility and adaptability is crucial for organizations to survive. Nevertheless, short-term forecasting can still be undertaken – in fact, chaotic systems exhibit some underlying patterns with a certain degree of order.

The need for a dynamic approach seems to be consensual among recent literature. Complexity and non-linearity are acknowledged as implicit characteristics of strategic interactions. Therefore, strategy development must be increasingly systemic rather than mechanistic, where short-term interactions are emphasized over long-term formal planning. This reflects an evolutionary perspective, where future is shaped by and built on the past, step-by-step.

4.2.2 The need for a Demand-side Perspective

Although the physical reality reflects similar patterns and behaviors over long periods of time, modeled by reasonably accurate and universal laws (e.g. Newton’s classical mechanics, Einstein’s theory of relativity), it is hard to have the same
discourse about the economic nature of the world. The 20th Century was marked by increasing industrialization, with the systematization of industrial operations which allowed large scale production and as a consequence, availability and cost reduction. Inevitably, scale is obtained by introducing standardization and sacrificing customization. Thus, this industrial era was more characterized by homogeneity, reflected in the perspective of the supplier but also of the consumer. Demand was treated in an aggregated way, as a consequence of exhibiting similar patterns and behaviors. This demand homogeneity was a fundamental assumption behind industrial economists and Porter’s theories in particular.

We now live in the 21st Century and in a somewhat different world. Broadband internet access, powerful search technologies, digital distribution, reduced transportation costs and high speed of delivery, among many other features, have changed economic reality, both for suppliers and customers. In this new world, where everything is nearly available to everyone, consumers exhibit a consistent behavior: they look at almost everything. Chris Anderson (2006) addresses this trend with his ‘Long Tail’ theory. In the past, Paretto’s 80/20 rule applied to a large number of situations. In particular, for a certain company, it would be acceptable to say that approximately twenty percent of the products would account for eighty percent of the total annual revenues. But today, Paretto’s rule has been inverted. Apparently, it might be wiser to say that, for certain industries, the less ‘standardized’ products account for the eighty percent of the total sales. Curiously, this ‘inversion’ is not enough to describe today’s consumer reality. In fact, according to Anderson’s (2006) work concerning the digital entertainment industry, the new law is what he called the ’98 Percent Rule’: 98 percent of sales are niche products and only 2 percent are ‘hit’ products. In a world where choice is almost unlimited, niches are emerging as the big new market. This endless supply of a great variety of goods creates highly differentiated demand, in which the combined value of the millions of items that sell only in small quantities exceeds the combined value of the best sellers. Anderson (2006) recognizes that our culture and economy are increasingly shifting away from mass to niche markets, due to a dramatic cost reduction in reaching those niches. The new digital era facilitates the possibility of offering a massively expanded variety of products, turning unprofitable customers, products and markets into profitable ones. According to Anderson (2006: 61),
“demand must follow this new supply”. He argues that the true shape of demand is revealed only when consumers are offered infinite choice. And in fact, “that shape is far less hit-driven that we have been led to believe. Instead, it is as diverse as the population itself” (Anderson, 2006: 61). Consumers are more heterogeneous than ever and this fact requires a stronger emphasis on demand-side dynamics in order to devise effective strategies.

Adner and Zemsky (2006) also address the importance of demand-side factors for the sustainability of competitive advantage. They argue that both the Industrial Organization model and the Resource Based View school are primarily focused “on firms’ supply-side interactions and largely neglect the demand environment in which these interactions take place” (Adner and Zemsky, 2006: 215). According to the authors, increasing consumer heterogeneity across market segments affects the sustainability of advantage. Adner and Zemsky (2006) add a demand-based perspective on strategy development, by focusing on consumer utility and value creation, which complements the traditional focus in the strategy literature on competition and value capture.

Traditional competitive advantage literature scarcely refers to demand. In fact, Porter’s models are more focused on the industry- or supply-side. Even when demand is invoked, an aggregated and static view of it is implicit. In a fictitious world of perfect competition, markets are in equilibrium and tend to be seen as homogeneous and reactive. Producers or suppliers do not possess enough power to proactively influence market behavior, and so they can only react to it. In the US markets are more perfect than in Europe, which makes this assumption, at least, more acceptable.

Nevertheless, stationarity and equilibrium are far from reality. If we want to build better representations of demand and supply dynamics, we have to move from equilibrium models to ‘dynamic systems’ (see Figure 10). ‘System dynamics’ is still a simplification of reality, but it is bought at the expense of less restrictive assumptions, enabling a richer spectrum of possible behaviors, much like the ‘real world’ itself (Allen, 1998 in MacIntosh et al., 2006). Although demand is viewed as stationary and homogeneous by traditional models, we might see a different picture when looking closer. A more accurate model distinguishes different components of
the system (e.g. A, B, C, D, E) dynamically interacting between them, which, as a whole, will reflect some apparent stability. It follows that if we want to capture demand dynamics and proactively ‘construct advantage’, we need to further our understanding of its behavior by ‘disaggregating’ the ‘whole’ demand in smaller, interacting parts.

**FIGURE 10 Reality, dynamic systems and static systems**

Source: Adapted from MacIntosh et al. (2006).

These statements emphasize much of the need to shift the focus of advantage to a demand which is becoming increasingly heterogeneous and dynamic. The following section synthesizes recent criticisms of competitive advantage at the regional level.

### 4.3 Criticisms of Competitive Advantage: Regional Level

In a recent paper published in the European Planning Studies, addressing the question of constructing regional advantage, Cooke (2007: 179) states that “Constructed advantage theory is about as far advanced as innovation theory was 20 years ago”. Although even free-trade proponents such as Adam Smith recognized that a ‘public hand’ in critical sectors was necessary for constructing advantage in
competitive economies, according to Cooke (2007), little attention has been given to the idea until recently. In fact, Cooke et al. (2006: 12) argue that “the theory of competitive advantage is … considered too narrowly market focused”. The theory of constructed advantage provides more attention to the role of the public sector in the economy than theories of comparative and competitive advantage do. It also highlights policy support, preferably in public-private partnerships, aiming to reduce interaction or connectivity deficits which lie at the core of networked regional innovation systems (Cooke et al., 2006).

Literature on economic geography has been typically maintaining the idea that local interactions and collective learning processes within a region, often called ‘local buzz’, manages itself by just ‘being there’. However, ‘constructed advantage’ proponents argue against this idea of an almost automatic shaping of endogenous learning and innovation capacity by just being co-located in an agglomerated environment (Cooke et al., 2006). This was also the idea that lay behind Porter’s understanding of how regional competitive advantage is created.

In fact, emerging literature has demonstrated that there is a heterogeneous distribution of knowledge and innovation capacity of firms, which calls for a rethinking of regional public policy. According to Asheim et al. (2007), in the future it will be necessary to construct advantage more consciously and pro-actively, in a way that accounts for sectoral and regional idiosyncrasies. This requires a new and more dynamic role of the public sector (including universities) in cooperation with private sector partners. Constructed advantage theory emphasizes the need for a more systemic approach in developing the endogenous capacity of firms and regions to innovate, and in enhancing their abilities to access and capitalize on globally distributed knowledge networks (Asheim et al., 2007).

According to Asheim et al. (2007: 5), “human talent plays an important role in an increasingly more knowledge intensive, globalizing learning economy”. More than ever, it is of great strategic importance for regional innovativeness and competitiveness to produce, attract and retain talented human capital. In that sense, Florida (2004) emphasizes the importance of social place in an innovation-based and knowledge-driven economy. No less important than building the right ‘business climate’ is to construct highly educated and networked communities, by focusing on
“quality of life, as represented by bike paths, a clean and recreational environment, safety, orchestras, local cinemas and other cultural venues, including blues and jazz clubs, good schools, a vibrant downtown, and so on” (Mothe and Mallory, 2006: 24).

Furthermore, Mothe and Mallory (2006: 24) argue that

it is the creation of knowledge (from universities and colleges as well as multimedia labs), the rise of services (which in most OECD countries represents more than 70% of job growth) and the exchange of knowledge (through research flows between researchers, labs and firms) that is key. We call this ‘constructed advantage’ in which cities and their management are central and which lead to what we call ‘distributed innovation’.

According to these authors, this approach helps to explain the knowledge intensive sectors of smaller nations which, according to Ricardo and Porter, should not really exist.

Cooke et al. (2006: 72) reinforce the important role of socio-cultural factors, which indirectly affect the profits of firms. They emphasize in particular:

the mutual knowledge and trust that reduces transaction cost in the local production system; the industrial atmosphere which facilitates the generation and transfer of skills and qualifications of the workforce required by local industry; and the effect of both these aspects in promoting (incremental) innovations and innovation diffusion among small firms in industrial districts (Asheim 2000).

The emerging theory of constructed advantage emphasizes the role of relationships, due to its increased focus on socio-cultural factors and to its networked approach. It acknowledges the heterogeneity of regions and understands the need to apply a more systemic approach in order to develop a tailored regional strategy. Constructed advantage gives more attention to partnerships and collaboration, complementing the traditional focus on competition. Most importantly, the new 21st Century advantage concept stresses pro-activity over reactivity, voluntarism and ‘free-will’ versus determinism. ‘Upgrading’ competitive advantage with a more dynamic approach is crucial to addressing the challenges of the new millennium. The following section attempts to bring together the similarities between regional constructed advantage and the network concept of organizational strategy, aiming to provide a ‘common ground’ in order to develop a context-independent, generic perspective of constructed advantage.
4.4 Constructed Advantage and the Network concept

Constructed advantage is an emerging concept being developed by economic geographers, and thus on the one hand having regional focus. On the other hand, industrial marketing and purchasing stream of thought has been building theory in the context of organizations. Thus, the former is concerned with constructing advantage for regions or cities, and the later regards the construction of advantage for organizations. Both are preoccupied with conceiving successful and sustainable strategies for maximum advantage, though in different contexts.

What is impressive is the enormous similarity between both theories, which seems to be no coincidence. The most basic assumptions regarding constructed advantage and industrial markets theories are almost identical. This fact may allow for the establishment of a coherent common ground which might work as a fundamental point of departure to build a generic and unified theory of constructed advantage, adaptable to distinctive contextual levels.

First, one striking feature of business markets is their extreme heterogeneity in several dimensions, namely in regards to suppliers and customers’ characteristics such as history, size, technology, organization, culture, products, services, productions skills, technical knowledge, performance, production capacity, and others (Ford et al., 1998). This heterogeneity is also present in regions. Cooke et al. (2006: 13) advocate that in order to construct advantage, it is necessary to consider “specific economy conditions at the regional action level”, developing improved ‘on-the-ground’ policies to address regions’ idiosyncrasy. According to the authors, regional policy should be “formulated, implemented and monitored in a more targeted way, and thus be capable of addressing more precisely what are particular regional firms’ needs” (Cooke et al., 2006: 13). There are no ‘one-size-fits-all’ recipes. In fact, copying of best practices is almost impossible when dealing with very specific and intangible regional assets such as particular knowledge bases or institutional settings.

Secondly, another characteristic of business markets is co-evolution (Ford et al., 1998). Relationships between firms and the surrounding network are marked by simultaneous stability and change. In fact, if we look at the whole network of business relationships in an industry, we might see an overall stability. However, if
we explore this apparent stability and look closer, there are changes occurring as each of the companies act and react, requesting and proposing solutions to problems, with more or less conflict. They change with this interaction process and gain experience, building a past history that shapes the present and future. Thus, an effective strategy has to deal with this evolutionary change initiated by others and by itself: “strategy development is something of a game in which the outcome depends on a complex sequence of action and reaction by all of those involved” (Ford et al., 1998: 76). Again, regional constructed advantage proponents share this evolutionary view. According to Cooke et al. (2006: 42), “Regional development must be understood as an evolutionary process”, as it is based on path-dependent trajectories. In fact, the historical trajectory of a region sets serious limits on the windows of opportunity regarding strategic options as well as to cloning an external and successful model. Furthermore, this evolutionary perspective also implies that changes in industrial structure, innovativeness and competitiveness take time.

Third, the strong interdependence between companies in business markets is another important issue for strategy development (Ford et al., 1998). This interdependence implies that a company has to let go of some of its autonomy. A firm’s business strategy will also depend in part on the actions and wishes of a whole network of other companies, requiring a more systemic approach in order to construct advantage. This systems perspective is clearly put forward by Cooke et al. (2006: 16):

Of strategic importance in shaping the conditions for constructing regional advantage is precisely a need for a more conscious and thoroughly systemic approach to developing the endogenous capacity of firms and regions to innovate.

In an article entitled Constructing Advantage: Distributed Innovation and the Management of Local Economic Growth, Mothe and Mallory (2006) state that the governance of innovation and knowledge production is networked and distributed. Furthermore, “it is fundamentally about institutions (like labs), interdependencies (between researchers), linkages, networks, partnerships, co-evolution and mutual adjustment” (Mothe and Mallory, 2006: 23). This statement summarizes many of the similarities between network theories and constructed advantage.
Fourth, both the network concept of business strategy and regional constructed advantage emphasize the increasingly dynamic role of demand. In fact, as concluded in section 2.4.5, the application of a network approach to organizational strategy implies a wider view of the differentiation concept. In particular, such a differentiation perspective may also encompass demand, which is heterogeneous and has a pro-active, dynamic role in generating what Snehota and Tunisini (2003: 3) called “differential advantage”. In a similar fashion, we concluded in section 2.5.4 that regional constructed advantage argues in favor of bottom-up and demand-driven approaches to innovation and entrepreneurship, respectively. It also advocates the attraction of talented, creative people who are highly demanding and pro-actively co-create new products/services with their suppliers. Thus, both concepts acknowledge the existence of a more dynamic demand, which has to be properly considered in upcoming strategies to construct advantage.

Such a synthesis that brings together the commonalities between regional constructed advantage and the network concept of business strategy prepares the ‘ground’ to propose a model that sheds light on the ‘black box’ of advantage. Such model is the Constructed Advantage Matrix which is introduced in the following section.

4.5 The Constructed Advantage Matrix

As mentioned in section 2.2.4, the theory of absolute advantage views supply as static. In fact, Smith’s model assumes that suppliers’ factor inputs, products and technology are constant over time. In section 2.3.5, we concluded that the theory of comparative advantage, although maintaining the same static assumptions concerning supply, introduced the law of reciprocal demand and the concept of consumer indifference curves. Such an evolution clearly reflects a shift in focus to the demand-side. In opposition to Smith’s model, the theory of competitive advantage stresses the importance of investing in ‘advanced’ factors of production (e.g. knowledge) and in constantly renewing the supply through innovation and technology. As we concluded in section 2.4.5, Porter argues in favor of a more dynamic supply, but scarcely refers to demand. However, proponents of the network
view of competitive advantage emphasize the dynamic role of demand in creating a ‘differential advantage’ (see again section 2.4.5). The same focus on demand is advocated by proponents of the ‘constructed advantage’ theory (see section 2.5.4), though within a regional context. A synthesis of the network perspective of organizational advantage and of the concept of constructed (regional) advantage was provided in section 4.4. The result of such a synthesis provides the basis for a redefinition of ‘regional constructed advantage’.

The evolution of the concept of advantage, briefly synthesized in the previous paragraph, suggests the existence of two different dimensions: supply and demand. The same two dimensions were already invoked and discussed in earlier economic works. In fact, it is one of the basic pillars of economic science. Thus, for the purpose of this study, we will define demand as a set of customers willing to pay for a certain value proposition and supply as a set of suppliers willing to sell a certain value proposition. Additionally, such dimensions have been constantly classified by several authors, from different streams of research, with two different states: static and dynamic.

<table>
<thead>
<tr>
<th>View of Supply</th>
<th>View of Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolute Advantage</td>
<td>static</td>
</tr>
<tr>
<td>Comparative Advantage</td>
<td>static</td>
</tr>
<tr>
<td>Competitive Advantage</td>
<td>dynamic</td>
</tr>
<tr>
<td>Constructed Advantage</td>
<td>dynamic</td>
</tr>
</tbody>
</table>

We may now summarize and consolidate the evolution of the concept of advantage, briefly described above, according to these two dimensions (see Table 11). In fact, additional literature has also been arguing and proposing simultaneously a greater focus on the demand-side of advantage (e.g. Adner and Zemsky, 2006) and a more dynamic approach to both regional strategy (e.g. Cooke and Leydesdorff, 2006) and organizational strategy (Yip and Johnson, 2007; Warren, 2007). A more
demand-focused and dynamic approach is exactly the basis for constructed advantage.

A more structured way to illustrate two dimensions (view of supply / view of demand) with two possible states (static / dynamic) is through a $2 \times 2$ square matrix as shown on Figure 11. According to this framework, the distinction between theories of advantage becomes simple and obvious. Thus, the fundamental difference between competitive and constructed advantage is its greater attention on demand dynamics and its continuous systemic interaction with dynamic supply. Competitive advantage tends to view demand as an aggregated, homogeneous and reactive set of customers. The new constructed advantage, also inspired by the network concept of business strategy, aims to disaggregate demand and understand its inner dynamics, taking into account the heterogeneity of customers and acknowledging their proactivity in stimulating economic activity and in reinventing the supply.

![FIGURE 11 Constructed Advantage Matrix](image)

Demand and supply are inherently dynamic in reality. They are always changing and interacting, one ‘following’ the other and vice-versa. Supply and demand are interdependent and this interdependence calls for a systemic approach to strategy practice. In theory, however, their conceptualization has not been entirely dynamic given the constraints of theoretical and empirical research, modeling, and simulation. In other words, former theories of advantage did not represent the
dynamic nature of both demand and supply. On the contrary, they tended to emphasize the dynamic nature of one to the detriment of the other as a matter of simplification and analytical focus. The Constructed Advantage Matrix is a conceptual effort which attempts to shed light on such a range of theories and respective focus.

As the matrix suggests, different theories of advantage tend to focus on the dynamics of only one side of advantage – demand or supply. The only exception is the recently introduced concept of “constructed advantage”. Constructing advantage is thus defined as the continuous maximization of the ratio of dynamic demand to dynamic supply, in which both parties interact systemically through an evolutionary process. If you can strategically position your value proposition in an ‘ocean’ of highest demand and limited supply, you have been constructing advantage. In reality, the nature of demand and supply remains essentially the same, that is, dynamic. But now, theoretically, we are moving from incomplete, semi-static views of advantage towards a more holistic view which conceptualizes demand and supply as both dynamic. Thus, our definition of constructed advantage calls for a higher participation of demand on supply redefinition.

4.6 Constructed and Competitive Advantage: Differences

Based on previous considerations, we depict a holistic and conceptual view for the construction of advantage that incorporates the new shifts, paradigms and challenges of our economic era (see Figure 12).

The first and most important difference between competitive and constructed advantage, naturally deriving from the Constructed Advantage Matrix, is the ‘dynamic demand’. Competitive advantage models emphasized the role of innovation to continuously renovate their supply, but scarcely addressed the question of demand. We have been discussing that demand is highly and increasingly heterogeneous, due to a greater individuality. This is the contribution of Florida’s (2004) and Anderson’s (2006) discourse for the Business-to-Consumer market (B2C) and of IMP proponents, which address Business-to-Business markets (B2B). Demand is playing a rising pro-active role in the development of new products and
services, through the co-creation of value and through more ‘organized’ initiatives (e.g. customer communities). Thus, demand is becoming gradually more dynamic and gaining ‘access’ in order to share its voice and provoke changes in suppliers’ value propositions. A new model of advantage must integrate this emerging reality. The new constructed advantage theory recognizes not only the dynamics of supply, as competitive advantage theory did, but also the innovative (Florida, 2004) heterogeneous and dynamic nature of the demand-side (Anderson, 2006).

![FIGURE 12 Illustrating constructed advantage](image)

The fact that both ‘sides’ are dynamic implies that they change constantly, and thus they may diverge even more rapidly. The gap between what a supplier has to offer and what a customer wants to buy may grow rapidly over time if a static approach to advantage is considered. Both parts have to interact constantly, and mutually influence each other, according to a circular causality concept. Linear
causality, i.e. the unidirectional cause and effect paradigm, is too linear and simplistic to describe a non-linear and complex reality. The new strategic management paradigm stresses the relational, human and informal features of business (IMP contribution) and consumer markets (Florida’s contribution). It assumes that economic actors are interdependent and emphasizes that interactions are (or should be) not only transactional but preferably transformational. This more human-centered and relational view has inevitably to add a further layer of complexity. Such dynamic and humanized reality calls inevitably for a systemic approach to the construction of advantage. Only a systems approach may provide a constant consensus between supply features and demand requirements, continuously narrowing the mentioned supplier-customer gap. The new systemic paradigm, in opposition to the more formal and structured mechanicist framework inherited from industrial economics, is a second and fundamental difference between both theories of advantage.

Such a systemic approach, characterized by subsequent interactions performed randomly or circularly by both parties, builds some kind of ‘history’. Former interactions are not erased, but rather memorized by suppliers and buyers, forming something similar to a ‘relational portfolio’, that transcends pure and simple transaction and informs, transforms and conditions future interactions. Thus, future states of the supplier-buyer relationship are conditioned by past states. This ‘cumulative’ portfolio that is generated by both parties, reflects a co-evolutionary perspective. Such a perspective is advocated both by economic geographers (Cooke et al., 2006) and proponents of the network concept of business strategy (Ford et al., 1998). Former models of competitive advantage, due to their more static and time-independent approach, did not address this evolutionary perspective, which constitutes a third crucial distinction.

A fourth distinction between competitive and constructed advantage theories is the greater emphasis on collaboration. The mentioned systemic approach brings supply and demand closer. In fact, both can be so proximate that products and services are co-created between both parties. This co-creation may also require particular adaptations from the supplier and customer. Frequently, the industrial buyer works in the supplier facilities to customize, develop or optimize settings in
the production line, in order to get a better service or product. The opposite, i.e. the supplier going to the buyer facilities, is also a very recurrent situation. The point here is that both parties learn from the situation. The buyer buys but also ‘sells’ their advice, their contribution to the enhancement of supplier’s offer. Both buyer and seller learn together and benefit from this close collaborative interaction, reflecting a win-win situation and not the zero-sum game that is characteristic of competitive thinking. Somehow, supplier and buyer seem to be more diluted, more blended. In a limit situation, both may be acting simultaneously as supplier and buyer in the same supplier-buyer relationship.

The fifth and last nuclear distinction between the two theories of advantage has to do with the differentiation concept. Theories of competitive advantage view this concept as a ‘positioning’ along the supply continuum. Supplier A differentiates between Suppliers B, C, etc. This reflects a somewhat ‘horizontal’ differentiation between competing players in the same industry. But customers are increasingly heterogeneous, different from each other. Customer A also differentiates between Customer B, C, etc. Thus, the differentiation concept is also present in the demand continuum. Furthermore, Customer A may be trying to be supplied by Supplier B rather than A or C. In this case, where a customer is differentiating between suppliers, we say that he is ‘competing for suppliers’. This situation constitutes a ‘vertical’ differentiation (Snehota and Tunisini, 2003) that may cross different industries, and constitutes a much wider view of the differentiation concept. In addition, differentiation may also be obtained not only by competing, but also by collaborating. A partnership between two firms (or even two suppliers) may be a form of differentiation by collaboration. A firm’s positioning is the combination of the relative ‘positionings’ between each firm within a wide network of firms – and some of these firm-firm relationships may be of a more competitive nature and others of a more collaborative nature.

This section concludes the discussion, which includes insights not only concerning the concept of constructed advantage, but also the five nuclear differences between the former theory of competitive advantage. The extent to which such insights answer the research questions of the present study and contribute to theoretical research and management practice is discussed in the following chapter.
5 CONCLUSIONS

5.1 Summary

The present study reviewed four concepts of advantage: 1) absolute advantage, 2) comparative advantage, 3) competitive advantage, and 4) constructed advantage. Such concepts are drawn from the literature of international economics, industrial economics, industrial marketing and purchasing group, and economic geography.

We discussed recent criticisms of competitive advantage, both at the organizational and regional level. Such criticisms come from several authors and from different streams of thought. Similarities between the network view of business strategy and the theory of constructed advantage proposed by economic geographers were analyzed thoroughly. This exercise aimed at synthesizing the commonalities between both approaches into a unified and coherent view of what could be a new concept of advantage, applicable to different levels of analysis (e.g. individual, organizational, regional, national).

In section 4.5 we brought together the most prominent findings regarding the four concepts of advantage: 1) absolute advantage views supply as static and neglects demand; 2) comparative advantage maintains a static view of supply but focuses on the dynamics of demand; 3) competitive advantage revolutionizes with a much more dynamic view of supply, but scarcely refers to demand; 4) constructed advantage maintains the emphasis on a dynamic supply, but complements it with a more dynamic view of demand. Based on such conclusions, a matrix model was proposed, with both an integrative and explanatory function.

The constructed advantage matrix sheds light on a new definition for constructed advantage: the continuous maximization of the ratio of dynamic demand to dynamic supply, in which both parts interact systemically throughout an evolutionary process. This definition attempts to answer the first research question. However, it is not possible to define such a complex concept in a single sentence. Thus, additional considerations were also included, which clarify and enrich the concept.

In section 4.6 we attempted to distinguish constructed advantage from competitive advantage. Such a distinction is grouped in five main differences: 1)
dynamic demand (versus a more static demand); 2) systemic approach (vs a more structured and reductionist approach); 3) co-evolution (vs an ‘automatic’ creation); 4) emphasis also on co-opetition (vs competition only); and 5) wider differentiation concept (vs a narrower, horizontal only one). This coherent comparison provides an answer to the second research question of the study. The overall theoretical findings of the study and their contribution to extant research traditions are discussed in the following section.

5.2 Theoretical Contribution

The present study contributes theoretically to the research traditions which form its theoretical context (see section 2.1) by clarifying the concept of constructed advantage and by distinguishing it from the concept of competitive advantage. Furthermore, this conceptual thesis contributes to existing literature with a trans-disciplinary, chronological and up-to-date review of the concept of advantage.

Present models of competitive advantage are unsatisfactory in constructing advantage at the organizational, regional or national level, due to their narrow emphasis on supply and competition. Economic geography models, such as the triple-helix, are also too generic and insufficient to conceive and implement winning strategies for regions. In sum, different research traditions or streams of thought propose distinctive approaches because they focus on different units or levels of analysis. Thus, this study attempts to uncover the fundamental principles of a theory capable of constructing advantage in today’s more demanding business dynamics. Such principles may be useful and refreshing to all the research traditions invoked in this study.

Constructed advantage has multiple interpretations. Mothe and Mallory (2003) advanced a definition for this concept. Later, Cooke and Leydesdorff (2006) proposed a refined version of constructed advantage. We now suggest what appears to be a more coherent vision of the concept, elaborated on the basis of a more extensive review of extant literature, and integrating different disciplines. Thus, this thesis presents our definition of the concept of constructed advantage, as there are also many perspectives for a wide variety of concepts (e.g. competitive advantage,
core competence). Constructed advantage does not ‘destroy’ competitive advantage, but complements it.

The fact that both supply and demand are dynamic implies that one must follow the other in a cyclical fashion. Suppliers provide products to customers, but they (read: the demand) supply knowledge in the other way around. Thus, in a certain way, both are supply and both are demand. The distinction between supply and demand is blurred – and this is constructed advantage. Moreover, business interactions, usually described as occasional and transactional, are also blurred with a more relational and transformational stance. Interactions might become frequent between the same supplier and customer and a relationship is developed. Such a relationship might change the actors, individual or organization, and is thus transformational. In a similar fashion, we can say that this brings a mixture between the more traditional market or barter economy and an emerging gift-economy (e.g. open source software communities).

As mentioned in previous sections, Porter’s theory of competitive advantage is fundamentally focused on suppliers and scarcely refers to ‘customers’. Later, Mothe and Mallory (2003) advance the concept of constructed advantage in a regional context, and thus do not address the topic of ‘customers’. In a similar fashion, Cooke and Leydesdorff’s (2006) maintain the same emphasis on regions. However, their perspective of constructed advantage incorporates the triple-helix model, which involves business, university and government relationships. Nevertheless, ‘customers’ remain unaddressed. Our view of constructed advantage attempts to fill such a gap. We introduce demand as a set of customers. These customers may be industrial buyers (B2B) or consumers (B2C). In fact, our vision of constructed advantage is co-inspired by the network concept of business strategy, which deals with industrial customers, embedded in a network of buyer-seller relationships. The consumer’s market has also been addressed by Anderson (2006) in his Long Tail theory and Florida (2006), who describes a creative-class formed by heterogeneous and demanding individuals. This contribution enriches the existing theoretical framework and allows the required extension of the concept to the organizational context (see Table 12). Thus, constructed advantage may also be seen as value creation based on knowledge. From the point of view of an organization, such
knowledge is also a ‘relational gift’ of all these four types of ‘demand’: 1) industrial 
customers, 2) consumers, 3) government, and 4) university. Due to the rising number 
of non-profit organizations (NPOs) and conferences about management in the third 
sector, we suggest the introduction of an important fifth relationship, which has not 
been identified in the literature mentioned above: B2T (Business-to-Third Sector).

<table>
<thead>
<tr>
<th>Paradigm</th>
<th>Research Traditions</th>
<th>Model</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>B2U Business-to-University</td>
<td>Economic Geography</td>
<td>Triple Helix</td>
<td>Etzkowitz et al. (1997)</td>
</tr>
<tr>
<td>B2T Business-to-Third Sector</td>
<td>Strategic Management</td>
<td>Constructed Advantage</td>
<td>Costa, Madureira and Werther</td>
</tr>
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Porter’s theory of competitive advantage already emphasized knowledge as an 
important factor of production. However, such acknowledgement was fundamentally 
focused on the supply-side. We argue that knowledge, as a crucial production factor, 
is not only present in the organization, but within all the actors who may interact 
with it. Thus, knowledge is simultaneously a factor of production and also a ‘gift’ of 
demand, represented by the above mentioned four types of customers. Using only 
input from supply-side knowledge is innovation using only half of the available 
knowledge resources. In order to absorb the whole knowledge input into the 
innovation process, it is necessary to incorporate demand’s knowledge. Demand is 
also a production factor – not only a ‘recipient’ of products and services. Considering 
a generic production function, demand is not only the end-user of the output – 
demand is an increasingly important input of that function (e.g. Wikipedia, Youtube, 
Press interviews, TV reality shows).

Constructed advantage calls for a reversal of perspective when looking at 
business relationships. Traditional perspectives tend to look at these relationships
from the supply-side, i.e. from business-to-'other entities’ (e.g. business, consumer, government, universities, third sector), as represented in Table 12. However, we argue in favor of a complementary ‘reversed perspective’ by looking also from the demand-side. In fact, the unidirectionality of B2C, B2G, B2U and B2T must be complemented by their counterparts C2B, G2B, U2B and T2B. The supply-centered paradigm, based on gaining advantage thorough ‘horizontal differentiation’, must be complemented by a demand-centered paradigm which also constructs advantage thorough ‘vertical differentiation’ (see section 2.4.5). Such a bidirectional view of business relationships entails the development of a bidimensional differentiation (horizontal and vertical), which is the way for attaining full advantage.

We have been advocating the need for a more systemic approach to construct advantage, in opposition to the more mechanicist frameworks in existing literature. A systems perspective is already an important upgrade to the existing mechanic models. However, if we want to explore better ways of constructing advantage, one should also consider the cybernetic approach. In fact, organizational cybernetics and systems theory study essentially the same problem – the dichotomy formed by organization and its context. Although the distinction between cybernetics and systems theory is not straightforward, we might say that systems theory is more focused on the structure of systems, i.e. on drawing boundaries around the objects of study. On the other hand, cybernetics is more focused on how systems function, i.e. with the dynamics of the systems: how they control their actions, how they communicate with other systems or with their own components, and how they evolve (‘systemic wisdom’). It implies a more holistic and integrative thinking than a systemic perspective. It also appears to be adequate to address the issues of complexity and chaos in networked organizations and to explain the strategic co-evolution of organizations with their surrounding environments. Since structure and function of a system cannot be understood in separation, it might imply that cybernetics and systems theory should be viewed as two facets of a single approach to constructed advantage.
5.3 Managerial Implications

The findings of the present study are expected to have visible implications on strategic management and on management issues in general. Such practical implications are discussed in the following paragraphs.

First, we may need to emphasize that power is shifting to the demand (Prahalad, 2000). The Internet is changing the role of customers, providing them with necessary information to negotiate electronically with firms. Thus, managers have to be much more sensitive in personalizing products and services. In fact, segmentation followed standardization, but we still have to evolve to a more sensitive personalization. To address such sensitiveness it is necessary to construct proper information infrastructures, in order to dialogue with customers in a realtime basis. Developing and maintaining well-structured databases of products, customers, and competitors is critical to provide rapid response.

Second, we conclude that demand is knowledgeable and is also a factor input of the production function. Thus, production and innovation activities must involve the customers (see Figure 13). Wikipedia and Youtube are excellent examples of continuous production of content by customers, who perform it freely. They maintain their formal status of economic customers, but in reality they are free suppliers of knowledge. Also managers must value their customers as suppliers. For instance, ‘user communities’, usually associated with technology products, help customers (read: demand) connect with each other and the company (read: supply). Harley Owner's Group is an exceptional example of such an active and diverse user community (Desouza and Awazu, 2004). Even Harley-Davidson’s CEO personally meets outside the company with its loyal customer base (read: demand) and inside the company with its workforce (read: supply). Some decades ago, Levitt (1960) wrote an article entitled Marketing Myopia. In that article, he argued that some industries were declining not due to market saturation but because firms were

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3 In Figure 13, the nodes of the network are firms (Firm 1, Firm 2, and Firm 3). However, each node can correspond to other entities as well (e.g. consumers, universities, government, third sector).
essentially “product-oriented instead of customer-oriented” (Levitt, 1960: 1). In fact, we could rephrase this symptom as “supply myopia”, which ought to be corrected.

Third, managers must build organizations capable of providing their customers with satisfactory experiences. The new ‘creative class’ tends to value fulfillment rather than only money. An immaterial way of thinking is substituting, or at least, complementing the traditional materialism. People are beginning to value more feelings and experiences than just ‘things’. They are starting to realize that it is better to reach the end of life with a great stock of happiness than with a great amount of money in a bank account. Prahalad and Ramaswamy (2004) argue that the notion of value is shifting to experiences, and the market is becoming a forum of conversation and interactions between consumers, consumer communities, and firms. Thus, offering products or services alone is no longer enough (Berry et al., 2002). Managers must create value for their customers in the form of experiences that are transformational, rather than just transactional. According to Berry et al. (2002: 87), “companies must manage the emotional component of experiences with the same rigor they bring to the management of product and service functionality”. The
interaction between firms (read: supply) and customers (read: demand) is becoming the locus of value creation and extraction (Prahalad and Ramaswamy, 2004). Thus, the dialogue, access, transparency and understanding of demand are central to the next practice in value creation.

Fourth, such a focus on the relational side of business interactions calls for a better approach to the management of supplier-customer relationships. According to Meyer and Schwager (2007: 126), “customer dissatisfaction is widespread and, because of customers’ empowerment, increasingly dangerous”. Thus, managers must prepare their organizations to value the relationship component of business. Such relational proximity with the customers might be attained via information systems which support and leverage this closeness, and by training employers to develop a stronger ‘attachment’ with them. Since the cost of attracting new customers is significantly higher than maintaining a steady customer base, the efforts towards building stronger relationships will certainly payoff in the long-run. A step towards improving customer loyalty is a step towards a successful and profitable business, and thus to constructed advantage.

Fifth, a systemic approach calls for a shorter horizon to strategic planning. Traditional long range planning should be less determinant in the strategic behavior of the firm. In fact, as already mentioned in section 4.2.1, strategy is partially planned and partially unplanned. Thus, the organization should not be ‘blind’ to emerging opportunities and threats. ‘Sticking to the plan’ is maybe just as important as paying great attention to new situations. A more dynamic view of strategy is crucial to attaining advantage within current hyper-competitive environments. An interesting and inspiring concept is the “ambidextrous organization”, suggested by O’Reilly and Tushman (2004: 74). Such an organization is both focused on exploiting existing and more predictable businesses, and on exploring new opportunities for growth. However, these two goals require very different mindsets, strategies, structures and processes, which might not be easy to develop and manage. The next section elaborates on possible paths for further research.
5.4 Suggestions for Further Research

The findings of the present study suggest several avenues for further research. In fact, this thesis is essentially exploratory and aims to answer “what” questions. After answering ‘what’ questions, the more explanatory ‘how’ questions naturally arise. For instance, “how to construct advantage” would be an interesting question to answer. Such explanatory nature calls for the development of methodologies or processes to aid business managers and policy makers to attain constructed advantage. This would be a first qualitative step, necessary to achieve structure and shed light on ‘how’ to strategize for constructed advantage.

Following an inherently qualitative phase, the need would naturally arise to develop a set of measures and build a more quantitative perspective of constructed advantage. Thus, a ‘constructed advantage scorecard’ could be developed in order to support and monitor the implementation of new strategies. Such metrics could open the possibility of developing accurate models and running complex computer simulations in order to predict future behaviors and emergent states.

Over the last few decades, and as already stated in previous sections, individuals are shifting their interest from product to experience, from tangible to intangible, from material to immaterial. Fulfillment is becoming a bigger concern to people than wealth. Social science researchers are starting to question whether the ultimate goal of economics should be wealth or happiness. A recent branch of economy called “happiness economics” arose from such questioning. The development of this movement is fueled by the growing concerns over accumulated evidence that despite economic growth and huge increases in living standards, happiness in the West has not grown in the last 50 years (Layard, 2003). The goal of this new branch is to determine from what source people derive their well-being. Historically, economists argued that well-being was directly related to income. However, they have recently found that once wealth reaches a subsistence level, its effectiveness as a generator of well-being is greatly diminished. ‘Happiness economists’ are struggling to change the traditional focus on wealth to well-being, and they are adapting economic policies to address such a goal. In fact, wealth is just part of the happiness equation. It is one of many other means to attain a higher state
of happiness. Money is just an argument of the happiness function we seek to maximize in a lifetime.

Thus, the ‘value for money’ paradigm appears to be an unsatisfactory term for the new ‘gift economy’ (Cheal, 1988). Humankind is also seeking ‘value for fulfillment’. The 21st Century promises to be the most ‘generous’ of all centuries⁴: suppliers and customers are ‘holding hands’, and offering their knowledge and time informally in exchange for intangibles (e.g. recognition, fulfillment, happiness). The term ‘co-opetition’ reflects the ongoing trend from a purely competitive domain to one that also embraces collaboration. Past decades have shown that in fact, competition may not always be constructive – we have now clear evidence that competition-based strategies might also be destructive (Kim and Mauborgne, 2005). Thus, just for a moment, I would like you to think on the meaning of the following two verbs: to ‘compete’ and to ‘construct’. In the long-run, which of them seems to you the more advantageous and sustainable?

⁴ For instance, Google offered search capabilities to end-users before selling services. Wikipedia is also another good example of a more ‘generous’ paradigm.
6 SUMMARY IN PORTUGUESE

A literatura mais recente em geografia económica sugere a emergência de uma nova teoria de vantagem para o século vinte e um – vantagem construída – no seguimento das teorias da vantagem absoluta, comparativa e competitiva. No entanto, as definições e descrições actuais deste conceito pecam pela ambiguidade conceptual e pela distinção pouco clara em relação às teorias anteriores, em particular a teoria da vantagem competitiva. Este estudo pretende clarificar o conceito de vantagem construída ao nível regional e estender o âmbito desta teoria ao nível organizacional.

As questões principais deste estudo são: 1) O que é ‘Vantagem Construída”? e 2) Quais as diferenças entre vantagem construída e vantagem competitiva? Estas questões de investigação são do tipo ‘o quê’, o que reflecte a natureza exploratória deste estudo.

O presente estudo assenta numa revisão cronológica das quatro teorias de vantagem referidas, inspiradas em diferentes domínios do conhecimento científico – economia internacional, economia industrial, marketing industrial e compras, e geografia económica. Para esse efeito, bibliografia foi cuidadosamente selecionada e analisada, sem recorrer directamente a recolha e análise de dados. Logo, esta investigação é exclusivamente conceptual.

É proposta uma visão estruturada das teorias de vantagem. Estas teorias são organizadas de acordo com um modelo matricial com duas dimensões, relacionando quatro séculos de teorias de vantagem. Proponentes do marketing industrial e compras vêem as relações de negócio como uma rede de fornecedores e clientes, sugerindo uma distinção entre oferta e procura, as duas dimensões da matriz proposta. Geógrafos económicos e estrategas defendem a necessidade de uma abordagem mais dinâmica à ‘construção’ de vantagem, sugerindo a existência de uma dicotomia estática-dinâmica. Com base neste modelo, é apresentada uma redefinição de vantagem construída.

As implicações para investigadores e gestores, nomeadamente ao nível regional e organizacional, concluem o estudo. Sugestões para futuras investigações incluem o desenvolvimento de metodologias e métricas de vantagem construída.

Palavras-chave: vantagem construída, vantagem competitiva, vantagem regional, gestão estratégica, estratégias dinâmicas, geografia económica
7 REFERENCES


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8 APPENDICES

8.1 Appendix A - Contact with International Researchers

To ‘validate’ the research gap, and probe for the utility and credibility of this research project, I contacted seven worldwide specialists on Economic Geography, in particular those who wrote about Constructed Advantage.

These researchers were contacted by e-mail. In that e-mail I presented myself and shared my enthusiasm concerning the topic of Constructed Advantage. I said also that I was preparing a master thesis on this subject and asked for their opinion about my questions and thoughts regarding this research project.

On the same day, four of the specialists on Constructed Advantage attentively answered the e-mail. Their answers are transcribed bellow.

Dear Sergio,

Please see the attached report, which will give you the necessary answers.

Best wishes

Researcher 1

Attached file (PDF): European Commission (EC) 2006. Constructing Regional Advantage

Dear Sergio,

Thank you very much for the message. It would be a big pleasure to respond to your queries and indeed you are providing stimulating thoughts! Thank you for contacting me. I will try to respond as soon as I can, but it might be a bit delayed due to a number of commitment in the coming week. For your questions 2 and 3, what are your ideas? Perhaps we can start discussing on these....Anyway, I will get in touch again soon.

With best regards,

Researcher 2
Sergio - Good question. Look at the discussion at my blog on creativeclass.com and try to come up with some options.

Researcher 3

Dear Sergio,

What interesting! Please, send me a copy of your Thesis in due time.

Your questions seem excellent questions to me. It is up to you to do the research, isn't it?

Best wishes,

Researcher 4

8.2 Appendix B – SMS Conference Reviewer’s Notes


Notes from Reviewers

Mar. 04, 2008: The review and categorization of the four advantage theories is interesting. A bit more detail about the added insights accruing to the adoption of the constructed advantage perspective would add.

Reviewer 1

Mar. 03, 2008: I think you may be trying to do too much here. Rather than review all four theories, focus your attention on the objective of the paper: constructed advantage. It is almost like you have two papers here: a comparison of different forms of advantage, and the definition/explication of constructed advantage. I would recommend focusing on the latter for now since that has the greatest need in the literature.

Reviewer 2