

ENTREPRENEURSHIP AND COMPETITIVE ADVANTAGE:
EXAMINING THE CASE OF *ILLYCAFFÈ*

Maria Sylvia Macchione Saes
University of Sao Paulo
Member of the Pensa-Agribusiness Program
Dept Administração FEA-USP
Av. Professor Luciano Gualberto, 908 sala C 14
Cidade Universitária 05508-900
São Paulo-SP
Brazil
ssaes@usp.br

and

Ibuki Ishikawa
College of Policy Science, Ritsumeikan University
56-1 Toji- in Kitamachi, Kita-ku, Kyoto 603-8577, Japan.
Email: ibuki@sps.ritsumei.ac.jp

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ABSTRACT

The prevailing academic view in the entrepreneur field is usually focused on business venturing or, at best, on large, highly-intensive technology firms. Particularly in agriculture-related cases, such as that of the coffee roasting industry, only sporadically does the pertinent literature emphasize the significance of the entrepreneurial role in order to provide a fine illustration of how entrepreneurs can exploit heterogeneous resources to capture competitive advantage. Thus, these unfilled gaps in the literature need to be bridged. Initially, this paper sophisticates the concept of entrepreneurship in the sense of Knight (1921) and then links this Knightian Entrepreneurship (Langlois 1992; Langlois and Foss 1999; Foss and Klein 2004; Ishikawa 2006; Foss and Ishikawa 2006) with dynamic transaction cost framework (Langlois 1992; Langlois and Foss 1999) within the context of the resource-base view pioneered by Barney (1986) and Rumelt (1984, 1987). Finally, the paper examines the significance of the role of entrepreneurship in the historical development of the coffee roasting company named *illycaffè* by taking our Knightian entrepreneur framework. Through this examination, we draw a number of implications applied not only to business venturing and technology intensive firms, but also to the other industrial sectors.

Keywords: Entrepreneur theory, entrepreneurial judgment, dynamic transaction cost, competitive advantage

JEL Code: B25, D81, M13, Q13

INTRODUCTION

Academically, the dominant view in the entrepreneur fields is usually focused on business venturing, small business (e.g. Hofer and Sandberg 1987) or, at best, on large, high-technology intensive firms, even though Drucker emphasized that economic development is unthinkable without the role of entrepreneurs (1985). Particularly in agriculture-related cases, such as that of the coffee roasting industry, there has been almost no systematic study emphasizing the significance of the entrepreneur role or providing a fine illustration of how the entrepreneur can capture competitive advantage. Indeed, notwithstanding there have been huge contributions to extant entrepreneur literature (e.g. Schumpeter 1942; Kirzner 1973; Baumol 1968, 1990, 1993; Murray and MacMillan 1988; Ivan and Willard 1993), unfortunately the concept of entrepreneurship seemingly having general application validity is rarely used to analyze an industry, such as that in the case at hand, coffee roasting.

So far, coffee industry analyses have often drawn on traditional models of Industrial Organization focusing on price adjustment in oligopolic industries. The approach herein suggests that the very dynamics of the market would induce endogenous innovation strategies, usually developed in R&D centers of large firms (Cotterill 1999). In this sense, both the firm and its rivals play a game in which the end outcome is known in advance, as though entrepreneurs shared a common knowledge.

Thus, by undermining the role of the entrepreneur as the driving force in the development of capitalist economies, traditional neoclassical models show how a firm's adjustment occurs, albeit they say nothing about changes in an uncertain world or about a firms' heterogeneity. Thus, disregarding the entrepreneur's dimension is akin to telling a partial history of the firm behavior and the dynamics of economies. It is, therefore, necessary to address this gap in the literature.

Based on this agenda, this paper is designed as follow. Firstly we sophisticate the concept of entrepreneurship in the sense of Knight (1921). Secondly, this Knightian Entrepreneurship is linked (Langlois 1992; Langlois and Foss 1999; Foss and Klein 2004; Ishikawa 2006; Foss and Ishikawa 2006) within the dynamic transaction cost framework (Langlois 1992; Langlois and Foss 1999) in the context of the resource-based view pioneered by Barney (1986) and Rumelt (1984, 1987). Thirdly, we examine the significance of the role of entrepreneurship in the historical development

of the Italian coffee roasting company named *illycaffè* by using the Knightian Entrepreneur framework. It is revealed that entrepreneurial judgment determined the first step to potential competitive advantage. The argument here implies our need to understand the analytical effectiveness of the entrepreneurship concept to enhance it and narrow the focus to discussing the role of firms in the development of capitalist economies.

Lastly, we can draw a number of implications applied to not only to business settings and technology-intensive firms, but also to other industrial sectors, although our approach herein presented never directly intended to generalize its conclusion.

ENTREPRENEURSHIP, DYNAMIC TRANSACTION COST AND HETEROGENEOUS RESOURCE

What is Entrepreneurship?

The role of the entrepreneur in economic activity has long been ignored in orthodox economics although the concept of entrepreneur, originally rooted in Cantillon's work, emerged a couple of century ago (Elkjaer 1991). Orthodox economics mainly focuses on the market competitive equilibrium. This framework sets generally called "price taker" and "perfect knowledge" assumptions; buyer and seller both having "perfect knowledge" in the market adjust his/her response to market prices perfectly and market equilibrium is thereby instantaneously achieved. Thus there is no room for time lags or the functional role of entrepreneurs.

In contrast to this orthodox approach, Austrian economists have long seen entrepreneur's role as pivotal in their analyses. It is widely known that Schumpeter conceptualized the entrepreneur as an 'innovator', one who carries out new combinations (Schumpeter 1912). He saw the entrepreneur within the Walrasian general-equilibrium system, as an agent who has exogenous force and breaks the static economic circular flow. He called this process 'creative destruction' (1942). Whereas Schumpeter's argument that there is inherently no logical role for the entrepreneur in the perfect equilibrium framework was not clear cut,¹ Kirzner (1973)

¹ Indeed, it is noted that the original Schumpeterian model he relied on makes no attempt to deduce how an entrepreneur can make innovations. As Baumol (1993) indicates, what Schumpeter did was to provide a generalized list such as five classes of innovation

focuses on the entrepreneur as the important driver for the reality-based market where there is always supposed to be disequilibrium.

Indeed, Kirznerean entrepreneurs are interpreted as arbitrageurs who discover profit opportunity rooted in the discrepancy among present prices. The knowledge of where to discover this market data and how to open up the possibilities for profit opportunities is what Kirzner calls entrepreneurship as “alertness”, although mere alertness is not sufficient for characterizing the role of the entrepreneur.

Knight (1921) argues that entrepreneurship consists of judgmental decision-making under conditions of uncertainty. Thus, judgment primarily refers to the process of businessmen forming estimates of future events in situations in which the relevant probability distributions are themselves “uncertainty” (Foss and Ishikawa 2006). It is crucially important that this uncertainty violates the role of the price system (perfect competition equilibrium) as theoretically meaningless, with the entrepreneur taking up this role (Ibrahim and Vyakarnam 2003). This implies that entrepreneurship not only represents the judgment that cannot be assessed in terms of marginal products (as in the manner of mainstream economics), but also that the expected output, as judged by an entrepreneur to be produced, is not taken as a *given*. As opposed to Kirznerean entrepreneurship, Knightian entrepreneurship is interpreted as making judgments in relation to uncertain events, such as defining a new market where no preceding market exists for entrepreneurs to base their judgments on (Ishikawa 2006), rather than arbitraging the discrepancy among present prices in existing market (Casson 2004). More generally, judgment is required “either when no obviously correct model or decision rule is available or when relevant data are unreliable or incomplete” (Casson, 1993). Thus, entrepreneurship should be seen to link to “commercial experimentation” (Hayek 1948; Demsetz 1988; Foss and Klein 2004, Ishikawa 2006; Foss and Ishikawa 2006).

Heterogeneous Expectation and Entrepreneur-specific Judgment

Following Shane (2000), individual entrepreneurs who appear to be in the same situation have different interpretations, thereby making different judgments about business opportunities. Indeed, experience is believed to be the “raw material out of which all expectations are formed” (Lachmann 1956, p. 21), since each expectation is

(Schumpeter 1912).

formed out of a cumulative process in which previous expectation is revised through the “trial and error” process. This sometimes leads to what Hayek (1948, p.80) called “the knowledge of the particular circumstances of time and place.” Thus, different expectations triggering entrepreneurial judgment generally vary from entrepreneur to entrepreneur.

Indeed, if entrepreneurs share exactly the same expectations, it is implied that there will be no profit and thereby no change happens in this equilibrium setting because nothing unexpected happens (Hayek, 1945). There is no strategic significance in a situation characterized by the absence of change, requiring no plan or no decision (Lewin and Phelan, 2002).

In contrast to this situation, it is therefore apparent that the emergence of strategic opportunities must be due to the different expectations among the economic actors. It is these differences that determine different entrepreneurial qualities. Strategic opportunity is, therefore, contingent upon the entrepreneur’s successful judgment. Ultimately, it is clear that the real strategic opportunity emerges neither from outside the firm, nor does it even objectively exist, but rather it emerges from the entrepreneur’s “subjective expectation” (Hayek 1948; Ishikawa 2006; Foss and Ishikawa 2006). Under the Knightian uncertainty, entrepreneurial judgment is highly subjective in nature. The more heterogeneous the expectation, the more specific the entrepreneurial judgment becomes.

Dynamic Transaction Cost in Entrepreneurial Judgment and Heterogeneous Resources

In the previous section, it became clear that strategic opportunity emerges from the entrepreneur’s expectation. When the entrepreneur pioneers the strategic opportunity, it is inferred that he/she is required to exercise judgment because of the subjective nature of the decision. It is especially true when the market cannot provide a specific input shaped by entrepreneur’s judgment at a specific (right) point in time. Moreover, even if the entrepreneur tries to sell his/her judgment (heterogeneous knowledge) on the market, its significance cannot be sufficiently communicated through the market (Teece 1980, 1982). As Polanyi (1958) taught us, knowledge cannot be always formed or conveyed in words. In fact, much knowledge, including particularly the one shaped by entrepreneur’s subjective judgment, may be specific and “tacit” (Hayek 1948;

Nonaka 1994). Based on bounded rationality (Simon 1945[1997]), it can be acquired only “through a time-consuming process of learning by doing” (Langlois and Foss 1999, p.207). This will bring about an extremely high level of what Langlois (1992) has categorized as “dynamic transaction cost²” in trying to achieve the market transaction; “the cost of persuading, negotiating, coordinating and teaching outside suppliers” (p.113). Put in a different way, there is a specific category of cost that “close [s] the market for entrepreneurial judgment” (Foss, Foss, Klein, and Klein 2005, p. 9). The market cannot act as a substitute for judgment; that is, the market fails.

Thus, in order to gain the profit, entrepreneurs have an incentive to exploit judgment through their own efforts. In fact, to the extent that the heterogeneity of the judgment is extremely high, the dynamic transaction cost of integrating the judgment into the firm would be lower than relying on the outside market area. In other words, the exploitation of the entrepreneur’s knowledge determines the degree of integration in the transaction and the boundary of the firm. This is so because the application of the knowledge shaped by entrepreneurial judgment, which cannot be easily known by others, would be relatively or efficiently more concentrated than using an arms-length transaction. The intra-firm transfer of the entrepreneur’s knowledge avoids the need for repeated negotiations, persuasions, coordination, and learning (Williamson 1975; Teece 1980; Langlois 1992). It is important to notice that this essentially leads to a firm’s asset specificity, for judgmental decision-making is ultimately decision-making about the heterogeneous way of allocating resources (Foss and Klein 2004; Ishikawa 2006; Foss and Ishikawa 2006). Indeed, the heterogeneity in the resources would be typical because the resource combinations are actually developed in a particular firm through the firm-specific, path-dependent learning process (Dierickx and Cool 1989; Teece, Pisano, and Shuen 1997; Jacobides and Winter 2005).

² Originally, Coase (1937) pioneered the first theoretical insight into understanding the concept of transaction costs. He explains that firms exist because “there is a cost of using the price mechanism” (p. 390). The cost is generally called “transaction cost” (Williamson 1975). In a market economy, there are always certain transaction costs such as discovering appropriate prices, negotiating the term and enforcing the contract. Dynamic transaction costs are distinguished from mere transaction costs. While the former emphasize “the cost of persuading, negotiating, coordinating and teaching”, the latter emphasize “a cost of using the price mechanism”.

Heterogeneous Resource and Competitive Advantage

Rumelt (1987) argued that entrepreneurial profit emerges from the difference between the *ex post* value and the *ex ante* cost of resource combination. Because if we hypothesize that expectational equilibrium, that is, *ex ante* cost equals expected *ex post* value, then it will be soon clear that profit is zero (Barney 1986). Thus, we can conjecture that profit is the result of entrepreneurial judgment in *ex ante* uncertainty. Similar to Rumelt's argument, Barney (1986) argued that supposing all the resources for firm-level strategies must ultimately be purchased in the external factor market, there would emerge no economic profit from this market, while economic profit could possibly be gained if the entrepreneur could control heterogeneous resources that did not previously exist in the factor market.

Since entrepreneur-specific judgment is not ~~a thing that is~~ completely tradable on the market, the factor markets (or competitors) cannot easily evaluate the entrepreneur's expected value of resources (in other words, the discounted net present values as seen by the supply side of factor markets are likely to differ from the entrepreneur's appraisal) and even the factor markets may rarely be able to place a value on entrepreneurial judgment *per se* (Schumpeter 1912; Knight 1921; Kirzner 1973).

On the other side, the force to imitate this resource combination is weakened by the fact that knowledge shaping the resource combinations is not easily conveyed through the market. Firm-level resources initiated by entrepreneur judgment are causally ambiguous (Lippman and Rumelt 1982; Rumelt 1984), are highly characterized by complexity and interconnectedness among the resources and, thereby, are inelastic in supply (Barney and Arian 2001). As resource-based scholars taught us, the heterogeneous resources are associated with different efficiency levels (Barney and Peteraf 2003) and contributed to gain the superior profit; in other words, competitive advantage (Barney 1991). However, without the entrepreneurial judgment, firms cannot gain the competitive advantage.

EXAMINING THE CASE OF *ILLYCAFFÈ*³

An Analytical focus on this case

Following the Knightian Entrepreneurship presented here, entrepreneurs transform their specific judgmental knowledge into heterogeneous resources as potential competitive advantage. This paper presents a discussion on the role of the entrepreneur in driving competitive advantage. Although many questions remain unanswered, such as how to formalize the concept of the entrepreneur at the operational level, it should still be useful to analyze the successful entrepreneur's behavior, here taking the case in *illycaffè*.

It is inferred that in this case, competitive advantage is certainly associated with Dr Ernesto Illy's capacity to carry out actions that differentiate him from other entrepreneurs in the sector. This paper will focus on two factors accounting for the great success of *illycaffè* and which seem to be relevant in defining the singularity of a successful entrepreneur's judgment: Dr Illy's specific knowledge of the inherent features of roast and ground coffee production and his novel judgment in direct sales to his customers.

illycaffè and Dr Ernesto Illy's Strategy

illycaffè is inserted in the coffee roasting and grinding industry, which generally requires simple production technology and low set-up costs. Its production process encompasses roasting and grinding green coffee beans and packaging them to be later consumed filtered or as espresso. Most companies in this sector are characterized as labor intensive, having minimum capital investment. The gains of scale, mainly with packaging systems, make the sector highly concentrated. Thus both the easy access into the industry and the clustering process allow companies of different sizes to join the industry, which is thereby characterized as an oligopoly with the presence of a competitive fringe. The current number of companies can range from 50 in Germany to around 400 in Japan and one thousand in Italy (Sutton 1991).

In 1933, Francesco Illy established *illycaffè*. It is headquartered in Trieste, Italy. Dr Ernesto Illy, the son of Francesco Illy, inherited the company in 1956 and was its CEO until early 2000, when his son Andréa Illy took over the business. When Dr

³ Interview conducted with Dr. Ernesto Illy on March 9 2006.

Ernesto Illy left, *illycaffé* had some 500 employees, a turnover of over €200 million and operations in almost 70 countries (Neves, Saes, Resende 2003).

Understanding the characteristics determining the quality of the coffee (aroma, flavor and stability) started to be the main target of the company when Dr Ernesto Illy realized the full economic potential of a market opportunity in the production of exceptional quality coffee, one not yet anticipated, or not even imagined by other market competitors. Dr Ernesto Illy believed that, like wine or even water, coffee should not be perceived merely as a commodity, but rather, it should meet consumers' differentiated demands.

Positioning a single product in a high aggregated value market with a single brand meant high stakes for the company. For one reason, the green coffee input is highly unstable, depending on ideal climate conditions, adequate nutrition and careful handling of the crops. In other words, the quality of the product requires a close coordination with the sector at the upstream end of the company. And, for another reason, most coffee producers are from poor countries with precarious conditions for education, production techniques and capital investment.

The production of espresso relies on the supply of raw material within a defined, stable standard. Coffee, as a commodity, can be purchased through dealers, but the ordinary classification makes the achievement of a desired quality standard very expensive. And this was Dr Ernesto Illy's major dilemma: to resolve this became his major strategy.

Heterogeneous Resources exploited by illycaffé: Electronic sorting of machine

A random but recurring event led Dr Ernesto Illy to invest in the research and development of a machine capable to sort high quality green coffee beans.

From time to time, high quality coffee coming from his African produced a foul odor, a characteristic that consumers resented. To bring his strategy into fruition, Dr Ernesto Illy had to solve that puzzle at any cost. After years of investment in research, associated German scientists discovered that the problem arose because the eggs of an insect deposited on the ripe fruits produced a disease that provoked this negative effect. Though it was actually a rather hard problem to work out, those scientists eventually were able to find out that those fruits could be eliminated from the production process in the factory if a selection could be made using ultra violet rays,

since contamination produces a fluorescent stain in the coffee beans.

No such equipment was available at that time and developing it would take years of investigation and a huge amount of capital. In fact, the type of research laboratory required would involve a large, highly uncertain investment. Even though Dr Ernesto Illy was confident to grasp this new profit opportunity, this seemed altogether an abnormal decision, when his peers would consider this opportunity as mere irresponsibility. This led, similarly to the Knightian entrepreneur, Dr Ernesto Illy to exercise judgment by his own effort.

Indeed, he understood that the quality of the product should not be hampered by faulty inputs. In the Arabica species⁴, bean contamination was observed to produce an amplification of the quantity of volatile aromas that dissolve when coffee is processed through pressurization. Pressure increases the solubility of all the gases, which then concentrate those aromas. A huge amplification occurs: one grain contaminates 10 kilos of coffee.

That observation originated the decision to control quality based on science and not on human analyses⁵. Research thus then involved an associated English company called Sortex, which developed a machine to select in *natura* beans using an ultra refined technique (near-infrared spectrophotometer), thus causing the elimination of coffee beans contaminated by microorganisms that affect the quality of the beverage. The research team worked three years with spectrophotometric methods that allowed the product to be sound and free of all defects. To create a machine that selects 400 beans per second involves a new vision in business. In the words of Dr Illy, “That is like having a Stradivarius. Though it costs 2 million dollars, if not well played, it will only be enjoyed by cats”. And that means one has to learn how to use the instruments to reach high levels of utilization.

⁴ There are many coffee species and varieties. The most economically important species used in production are: *Coffea Arabica* generally called "Arabica" coffee, and *C. Canephora*, called "Robusta" coffee. The former is better known for its quality and superior price. The enterprise illycaffè use only the Arabica specie. It is mainly grown in Brazil, Colombia, Central America, Kenya and Tanzania. The latter is grown in a larger scale in Vietnam, Brazil, Ivory Coast, Angola, Uganda, India and several other countries in Africa, Asia and Oceania (Saes and Farina 1999).

⁵ Traditionally, coffee classification is made by an expert that counts the quantity of faults seen in a sample of 300 grams of green coffee beans.

illycaffè was granted the patent of that machine, whose process is today used by all major ground and roast manufacturers in coffee bean classification. This strategy illustrates how the entrepreneur exploits his/her specific knowledge, which is in turn shaped by judgment. The innovations idealized by entrepreneurs require human or physical specific assets that are not readily available on the market. Thus the limits of the firm must be understood within the context of the passage of time. In the case in point, the capability required accomplishing the innovation strategies could not be found on the market, and hence the need to vertically integrate the electronic coffee bean sorter⁶.

In the development of *illycaffè*, this electronic sorting machine had long been placed as illy's competitive advantage.

Dr Ernesto Illy's Innovation in Green Bean Supply Management in Brazil

The same motivation— beverage quality— pushed Dr Ernesto Illy into a new way of ensuring the supply of coffee according to his needs. Brazilian coffee suppliers are strategically significant for *illycaffè* and, besides being the largest producers worldwide, they are also responsible for approximately 65% to 70% of the blend of *illycaffè*'s coffee.

The main reason accounting for this fact is that Brazil is one of the few countries using a dry production process. Such practice is essential in the espresso composition, since sun-dried coffee contains a higher content of sugar, which provides more aroma and body to the blend, arising from the migration of the sugars of the gum to the grain (Neves, Saes and Rezende, 2002).

Although *illycaffè*'s presence in Brazil is traced back to 1933, it was only in the 1990s that it started to increase green bean operations. Before that period, the Brazilian market was regulated by the Brazilian Institute for Coffee (IBC), and the exportation of the produce was made by certified exporters who mixed coffees from different qualities and regions, thereby making the achievement of the desired pattern too expensive. Out of 10 to 12 coffee samples received, only 1 used to be approved for

⁶ The research center actively pursued new methods of objective evaluation regarding the quality of the beverage. The analysis of the beverage is usually made through the sniffing and cup tasting techniques performed by experts. But *illycaffè* went further to create the "Aromalab" in 1998, which provided for the analytical identification of coffee chemical compounds, thus avoiding the subjectivity factor.

purchase.

In the early 1990s, depressed coffee prices in the international market reflected in significant falls in the quality of the Brazilian coffee causing *illycaffè* to have to address supply difficulties. In 1989, out of the 36 samples examined by *illycaffè*, not a single one was approved.

By and large, the Brazilian coffee trading practice did not value product with superior quality. As a result, producers stopped making investments and an adverse selection occurred, with the prevalence of coffee with a large number of defects.

Worries about supply hitches fueled Dr Ernesto Illy's decision to conduct an *in loco* observation. While visiting coffee estates in Brazil, though he became quite surprised at the high quality of the coffee, he also felt frustrated with harvest and processing methods, as well as with the mixtures of beans, all of which resulting in low product quality.

Dr Ernesto Illy jumped at the opportunity of finding a new way to obtain the raw material so as to be able to pursue his strategy of producing high quality espresso. But, how could he do it? He was at a loss: How could he coordinate the Brazilian downstream supply chain (production, processing and trade)? What could he do to induce traders to modify the way they bought coffee beans? How could he persuade growers to invest in high quality if the market did not provide the right signalization? The usual market practice was not to pay for quality. Indeed, traders' comparative advantage relied solely on buying the cheapest coffee bean. How would Dr Ernesto Illy show that all of the chain's agents could earn more if growers produced high quality?

Trusting his judgment, Dr Ernesto Illy endeavored to solve the difficult task of convincing all of the chain agents to accept his vision, mainly taking into account the path dependence in the process of acquiring the coffee beans.

Dr Ernesto Illy's solution came in the new way he devised to manage suppliers in order to obtain high quality raw material: an annual quality contest, the "Brazilian Award for Quality of the Espresso", in 1991. The event had been born out of his observation of the strategy of the Italian fashion designer Ermenegildo Zegna, whose difficulty finding quality cashmere had led him to launch a contest to financially motivate the communities offering the best fabric (*L'espresso illycaffè* 2006).

The Brazilian annual contest aims to identify the best gourmet coffees, which are purchased by the company after receiving a premium of 25% to 30% above the international prices of good quality coffee.

The contest was an innovative solution that allowed creating a new way of managing suppliers. Whereas in the traditional classification system the whole bulk of information on raw material quality was completely lost, the annual quality contest enabled the company to identify the growers present in the transaction and offer the right incentives (Zylbersztajn 1996).

Now the *illycaffè* contest was a landmark in Brazilian coffee production; it triggered a dramatic change in the competition pattern. Brazilian producers realized that their average-quality coffee could actually obtain premium prices on the international market so long as better harvest practices and new marketing strategies were adopted. The number of candidates interested in supplying to *illycaffè* becomes higher every year. Through a multiplying effect, other contests have appeared and regions that usually produced low-quality beans now seek technology for their processes (Saes and Nakazone 2003). Dr Ernesto Illy's strategy to motivate growers to produce quality solved the problem of adverse selection.

Encouraged by the results of the contest, the Brazilian government announced policies to support coffee growers and, as a result, regional associations joined the quality marathon. *illycaffè* has established strong alliances with cooperatives, associations, government bodies, the coffee roasting industry, as well as with the scientific and academic communities dedicated to the study of coffee.

In both examples, of the development of a machine to sort green coffee beans and of the new way to manage the supply chain provided above, entrepreneurial judgment is seen to lead to the firm's competitive advantage.

IMPLICATIONS AND DISCUSSIONS FROM *ILLYCAFFÈ*'S ENTREPRENEURSHIP

The Conceptual Effectiveness of Entrepreneurship

Through examining a rare case in the entrepreneur literature, our aim in this paper intends to argue the significance of entrepreneurship not only for business venturing

and technology intensive firms but also for the other service sectors, rather than directly generalize the validity of the Knightian entrepreneur framework. Whereas this paper focused only a single case, still, fruitful implications to the actual behavior of a firm, in terms of for instance, such as business policy making can possibly be gained.

The Significant of Entrepreneur-Specific Judgment

In examining the case of *illycaffè*, it is clear that it was entrepreneurial judgment that determined the first step on the road to potential competitive advantage. It is implied that the source of competitive advantage is derived from entrepreneur's judgment. Indeed, it was true that Dr Ernesto Illy's specific judgment seemed totally implausible at first. Nevertheless, as a result of it, *illycaffè* was allowed to have the heterogenous resources basing the competitive advantage, which became a strong barrier to competition. Strategically speaking, this means that the *ex ante* limits to competition are among of the most important dimensions in strategic activities. In other words, there is always logically first superior judgment in forming the competitive advantage. Despite our inability to know which judgments will bring competitive advantage, it nonetheless remains important to understand that the entrepreneur is the endogenous driver of the successful firm.

No Panacea for Successful Entrepreneurial Judgment, But No Choice

Indeed, it is also noted that even in *ex ante* decisions it is by no means sure which judgment will bring competitive advantage. Thus, this successful case does not imply that no matter which decisions are made profit is automatically gained. Rather, the real problem is that any successful entrepreneur's judgment may be like 'needles in a haystack of mistakes' (Denrell, Fang and Winter 2003). There is no doubt that in a world of uncertainty some entrepreneurial judgments will fail while others will succeed, some even beyond expectations. However, unless entrepreneurial judgment is forged under circumstances of uncertainty *unknown* to others, the uniqueness of this judgment holds no special role. As we can learn from the case of Dr Ernesto Illy, it was true that the entrepreneur must sometimes judge when he believes that he envisages profit opportunities that no one really realized. Firm's innovation should be understood in this way.

Positive Influence of the Entrepreneur's Initial Knowledge

In order to understand the nature of the decision based on uncertainty, we must examine the entrepreneur's initial knowledge. Since different expectations are gained through learning and preceding experience, superior knowledge forming judgment will increase an entrepreneur's chance of success. As we have seen, when Dr Ernesto Illy took over as illycaffè's C.E.O., he already had a sound knowledge of the coffee market, consumers and his enterprise. This knowledge, fruit of his experience in the enterprise, was one of the factors that gave him a better basis for judgment. This made him chose differently than others.

Further development for the Entrepreneurial Literature

Not only in practice, but also in the academic field, it is now clear that fruitful insights into a firm's behavior can be gained by bringing the entrepreneurial theory into a more central role. Although this article focuses particularly on the entrepreneur's judgment, it also showed that an important relation exists between the entrepreneur-specific judgment and the appropriate types of "governance structure" in the sense Williamson (1975). Entrepreneur-specific knowledge tends to increase the vertical integration, since entrepreneurs do not find on the market the necessary capability to accomplish their innovation strategies.

illycaffè's experience indicated that alternative supply chain structures will depend on the cost of implementing them. This finding implies that our approach presents a great opportunity to bridge the entrepreneurship approach with the theory of firm initiated by neo-institutional economists. Therefore, it is hoped that this will stimulate a more comprehensive understanding of the strategic behavior of the firm.

SUMMARY AND CONCLUSION

This paper examined the real concept of entrepreneurship through the case study of *illycaffè*. It is clear that the competitive advantage of *illycaffè* is illustrated as a result of entrepreneurial judgment. Indeed, our approach presented in this paper intends only to provide ~~posses~~ some implications to business policy rather than directly generalize the conclusion.

The *illycaffè* case study reconfirmed our understanding of the importance of the entrepreneur concept, showing that *illycaffè's* source of competitive advantage derived from Dr Illy's judgment. His entrepreneurial vision allowed *illycaffè* to base its competitive advantage on heterogenous resources not available in the market,

which became the strongest barrier to competition.

This paper revealed that judgment based on superior knowledge in critical areas increases an entrepreneur's chance of success. In essence, it was Dr Ernesto Illy's sound knowledge of the coffee market, consumers and his enterprise that refined his ability to judge marketing strategies in a world of uncertainty. It is also showed that an important relation exists between the entrepreneur-specific judgment and the appropriate types of "governance structure". Entrepreneur-specific knowledge tends to increase the vertical integration when the firm cannot find on the market the necessary capability to accomplish its innovation strategies. Although further research is still necessary to address this specific issue, this finding is an opportunity to bridge the entrepreneurship approach with the theory of firm that was initiated by neo-institutional economists.

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