BETWEEN THE DEVIL AND THE DEEP SEA: COST AND DIFFERENTIATION STRATEGIES FOR BRAZILIAN COFFEE PRODUCERS[i]

VIVIAN LARA S. SILVA
University of São Paulo (USP), School of Animal Science and Food Engineering (FZEA/USP)
Av. Duque de Caxias Norte, 225 CEP: 13635-900 Pirassununga / SP - BRAZIL
vivianlara@usp.br

RUBENS NUNES
University of São Paulo (USP), School of Animal Science and Food Engineering (FZEA/USP)
Av. Duque de Caxias Norte, 225 CEP: 13635-900 Pirassununga / SP - BRAZIL
E-mail: rnunes@usp.br

MARIA SYLVIA MACHIONNE SAES
University of São Paulo (USP), School of Economics, Business and Accounting (FEA/USP)
Av. Prof. Luciano Gualberto, 908 - C 16, Cde. Universitária CEP: 05508-900 São Paulo / SP - BRAZIL
ssaes@usp.br

RUBIA NARA RINALDI LEÃO DE SOUZA
UNIOESTE / Campus Toledo, Centre for Applied Social Sciences
R. da Faculdade, 645 Jardim Santa Maria CEP: 85903-000 Toledo / PR - BRAZIL
rubiarinaldi@yahoo.com.br

ROBERTA DE CASTRO SOUZA
University of São Paulo (USP), Polytechnic School (POLI/USP)
Av. Prof. Almeida Prado, Trav.2, N.128, Cde. Universitária CEP: 05508-070 Sao Paulo / SP - BRAZIL
csouzaroberta@googlemail.com

Abstract

When strategy of differentiation is feasible for producers? This is our main question in that paper. We state sustainable competitive advantages (SCA) should emerge specifically when an integration of both Industrial Organization (IO) and Resource Based View (RBV) perspectives is considered by the firm. Based on interviews with 119 producers of specialty coffees in the states of São Paulo and Minas Gerais, the paper goes further the literature testing the relationship between differentiation and resources in special coffee sector. We demonstrate the weakness of differentiation in producer income increment; suggesting differentiation is not for all against the drop in agricultural income. The potential gains from differentiation, such as certification process (highlighted by OI approach) depends on the presence of resources that allow differentiation rents (stressed by RBV view); meaning in some circumstances it seems more profitable for the producer 'to stay' keeping on commodity setting, than 'to go' incurring into the costs of differentiation.

Key words: *differentiation; resources; competitive advantages; coffee*

BETWEEN THE DEVIL AND THE DEEP SEA: COST AND DIFFERENTIATION STRATEGIES FOR BRAZILIAN COFFEE PRODUCERS

1. Introduction

The issue of income distribution in economic global value chains has been extensively discussed in recent decades. Several studies have shown a decline in the rural segment's share of the total income generated in the production chain (Cankorel, 2000; Daviron & Ponte, 2005; Morisset, 1997; Talbot, 1997). From this perspective, rural development theorists have suggested 'decommoditization' (differentiation) as the solution to the crisis in the countryside, and to achieve sustainable competitive advantages (SCA) (Fitter & Kaplinsky, 2001; Kaplinsky, 2000, 2004; Valceschini & Nicolas, 1995).

The discussion is supported by the Industrial Organization (IO) approach, which argues that firms obtain SCA by creating entry barriers against competitors and opening potential consumer markets (Foss, 2005; Porter, 1985). It is therefore assumed that – considering the structure of the industry, managers should explore market characteristics in order to create market power (by erecting barriers to competitors), preventing (or mitigating) the action of competitive forces. In that view, competitive strategy is the search for a favorable competitive position in an industry, referring a fundamental arena in which competition occurs.

This approach, however, has been the target of criticism, both theoretical and empirical. On the empirical level, studies of several Brazilian production chains challenge this proposition, such as coffee, soybean, corn, rice, and cotton (Farina & Zylbersztajn, 1998). Product differentiation has not prevented the exclusion of producers who can not keep pace with increased productivity and lower prices. On the theoretical side, studies on strategy field have criticized this approach as well (Barney, 1991; Conner, 1991; Peteraf, 1993; Rumelt, 1984; Wernerfelt, 1984). These scholars have admitted that although firm's competitiveness in the short term may be linked to the price/performance ratio, in the long run there will be a convergence of similar patterns of product cost and quality, implying that increased barriers to competition would be less important as sources of differentiated advantages.

Such critics argue that over the long term, competitiveness arises from the ability of firms to build, with lower costs and greater speed than the competition, the core capability to produce products or services that cannot be foreseen by competitors (Barney, 1991; Peteraf, 1993; Rumelt, 1984; Wernerfelt, 1984). From this approach, Resource Based View (RBV), scholars argue firm's possession of strategic resources as the main source of its competitive advantage. RBV approach, however, is also subject to criticism, because unlike the IO (discussed above) it focuses on the factor market as if the consumer had no importance in the strategy.

From that review, it is quite natural to assume both theoretical approaches, RBV and IO, as complementary in developing firm strategies, since each addresses only one side of SCA. This is our main statement in the paper; proposing SCA emerges specifically when an integration of both perspectives (IO and RBV) is take into consideration by the firm.

It is worth noting that this proposition is not new, nevertheless. In fact, some authors, such as Montgomery and Porter (1998, p. 18) have previously suggested the integration of these views by admitting "sustainable competitive positions (a) reflect certain economic

regularities; (b) are often the product of non-inherited advantages created; and (c) are built around sets of unusual capabilities that are difficult to be imitated by competitors."

However few are the studies that test this theoretical issue. This is our main goal in the paper.

Based on a survey undertaken with 119 Brazilian producers of specialty coffee, we go further the literature testing the relationship between differentiation and resources in one agricultural sector.

The choice of specialty coffee chain was deliberate, driven by two main factors. First, coffee is one of the world's most valuable agricultural commodities (Kaplinsky, 2004; Vorley, 2003), and Brazil is a leader in global coffee production. Second, coffee is an emblematic case concerning 'decommoditization' possibilities for agricultural products as a result of consumer trends.

The paper is structured in four parts in add to this introduction. Next section contextualizes when differentiation and resource based strategy are not enough in the increment of producer income. Third section applies an empirical analysis to the case of coffee farmers in Brazil and presents the methodology used in the paper. Fourth section presents a discussion of the results. Finally, the fifth section ends the paper by offering final remarks.

2. Should I Stay or Should I Go? When Differentiation and Resource Based Strategy Are Not Enough

The general downward trend in the value of the agricultural sector's participation in the total income generated by production chains is a historic global challenge, which has prompted intense debate in the economic literature

Along this trajectory, two major inflections have marked the course of the debate. Originally, the question that permeated the discussion was regarding the way forward for the development of poor countries. The debate put the spotlight on the deteriorating terms of trade between poor nations, producing agricultural goods with low income-elasticity, and the rich, producing highly elastic industrialized products (Daviron, Ponte, 2005; Koning, Calo & Jongeneel, 2004; Prebisch, 1982).

The first inflection in the course of the debate comes with the observation that although most pressing in non-developed areas, the problem of declining income from the agricultural sector is not restricted to producers in these countries. Notable gains in productivity have led to a decline in prices in a market which is typically competitive in both contexts. The difference lies in problematic developments. On one hand, the drop in farm income tends to provoke the economic impoverishment of non-developed countries, which are highly dependent on agriculture; on the other, the crisis also burdens the economies of rich countries which, in many cases, are artificially supported by means of agricultural subsidies, burdening all taxpayers in those countries.

Taking into account these two faces of the issue of falling farm income in both poor and rich countries, decommoditization strategies – the creation of differentiating attributes of raw materials – began to be proposed as the way out of the share gains in the value chain.

Here is the second inflection of the debate, when the discussion supersedes the dichotomy of developing versus developed countries, placing itself within the scope of the analysis of global value chains.

The possibility of decommoditization of agricultural products (creating differentiation attributes)1 results from trends in consumer demand, which especially in developed countries has become more sensitized to issues of quality, food security, and social and environmental

sustainability. Notable examples are grapes (for wine), coffee, cocoa, and even water. Products which just over a decade ago lacked any differentiation are now part of a sophisticated market, with multiple attributes.

In this respect, one of the dominant strands of the debate over differentiation-decommoditization is the traditional Industrial Organization (IO) perspective. According to IO, differentiation means the possibility of monopoly gains by avoiding competition through price (Fitter & Kaplinsky, 2001; Kaplinsky, 2000, 2004). Achieving sustainable competitive advantages (SCA) creates entry barriers against competitors and opens potential consumer markets. Decommoditization thus represents, for the rural link, an alternative means to reverse the decline in its share of total income generated by production chains, by changing the price elasticity of the product.

Along with other authors, Valceschini and Nicolas (1995) consider that in a context of saturation of the agricultural and food market, marketing strategies focused on quality, product differentiation, and market segmentation allow firms to avoid price-based competition between identical products, while responding to a growing demand through differentiation associated with a global, post-fordist economy.

These strategies consist in adding value to products to achieve 'above-market prices', or extra income. Market segmentation and product differentiation mobilize various interlocking forms of quality – such as quality of service, quality of nutrition, and health – to coordinate the efforts of producers, agribusinesses, retailers, and consumers (Marsden, 1992; Sylvander, 1995; Thévenot, 1992; Renard, 1999).

But the path does not seem so simple, particularly in the rural sector. Differentiation strategies tend to be copied, resulting in slim profits. Despite investment in decommoditization strategies, over the long run agricultural products tend to revert to the status of commodities, but now incorporating the additional costs of differentiation.

A typical example refers to the strategy of organic production (Saes, 2010). In the wake of this market trend, farmers obtained extra income as a result of the entry barriers based on differentiation. With the spread of this system, the prices obtained began to reflect their marginal costs, leading to a commodity situation in which competition was again marked through price.

The main theoretical criticism of this view comes from Resource-Based View (RBV), which argues that companies acquire and maintain SCA by identifying, developing, and emphasizing their internal resources, so that competitors can not imitate them (Kim & Mahoney, 2007).

Assuming SCA view, Barney (1991) built a theoretical model that incorporates two assumptions: (a) firms within the industry are heterogeneous with respect to the strategic resources they control; and (b) resources do not have perfect mobility, which can mean the perpetuation of a firm's heterogeneity for a long period of time. Considering that there is not a perfect mobility of resources, because not all factors external to the firm can be purchased on the market, the possibility of creation of economic rents emerges. Therefore, the heterogeneity of resources is sustainable if there is perfect transferability and imitability (Barney, 1991; Barney & Akiran, 2001).2

Although this view has been important in highlighting the heterogeneity of firms, even those embedded in a competitive market structure, one might question the way in which the arguments of the RBV have been constructed. To underline the difference from IO, which is focused on the product market, RBV is excessively concerned with the factor market and ignores the consumer as an agent of decision.

Against this theoretical premise, it is quite natural to assume resource-based strategy is not enough if consumer market is not taken into consideration. About that, Combs and Ketchen Jr. (1999) suggest firm's ability to control resources (according to the criteria presented by the authors of the RBV approach) also depends on industry characteristics; which in turn may affect the value of these resources.

In that context, we state SCA should specifically emerge when an integration of IO and RBV perspectives is adopted by firm. Starting from that, the economic problem addressed in this paper is the follow: differentiation is not enough to reverse the loss of rural segment participation in the value chain. Farmers should not necessarily pursue the strategy of decommoditization. Sometimes 'to stay', keeping on commodity setting can be more profitable for producer than 'to go', incurring into the costs of differentiation.

This holistic and integrative strategic view implies that in order to capture value, businesses must establish a unique position in the market, for which they require strategic resources that allow them to differentiate themselves from their competitors in terms of cost. This hypothesis will be tested based on the study of the differentiated coffee market in Brazil.

3. Empirical Analysis: The Case of Specialty Coffee Producers in Brazil

According to Kotler (1999), a commodity is a product waiting to be differentiated. It is only necessary to develop or discover attributes that allow consumers to perceive the product in the desired manner. This perception can be based on physical differences, availability of services, an image associated with the good such as its place of origin, or the exclusive use of a name or brand.

Coffee offers a host of possibilities for differentiation, beginning with the attributes related to the variety (Brazilian Bourbon coffee beans, for instance), and further including production processes (such as organic, shade-grown, family-farmed, and fairtrade3); place of production (origin, and estate coffee for instance4); types of processing (i.e., natural coffee, hulled cherry, and pulped or demucilated cherry5); quality of the beverage (which takes into account aroma, taste, body, and acidity); processing (concerning aromatization, and decaffeination); type of preparation (i.e., espresso, and cappuccino); and even the location where it is sold (such as retailers).

Brazil is the world's largest producer of coffee, with an average production of 45 million 60 kg bags per year. Despite being known as a major exporter of coffee as commodity, Brazil has adopted differentiation strategies that can be categorized as shown in Table 1, which indicates the attributes and criteria required for differentiation.

Despite the great varieties of differentiation strategy, we are intended to test the relationship between differentiation and resources in producer income improvement in the special coffee sector. We test the capacity of achieving higher prices (an indicator of differentiation strategy) as a function of variables related with different kinds of resources (such as certification; instruction level; experience in the activity (in years); and cost differentiation), and variables concerned with organizational features of business (member of association / grower cooperative; percentage of production sold through contracts; forward vertical integration; number of coffee buyers; and the length of business relationships with key buyers.

Table 1. Categories of Specialty Coffee.

Differentiation		Attributes	Requirements
Specialty		Specific production standards from farm to processing	Harvest, selection, drying, and processing (for cocoa beans: fermentation)
	Origin	Geographic definition	Geographic definition in order to address certification requirements
Certified	Organic	Free of fertilizers and pesticides	Certification requirements
	Fair trade	Small scale	Certification requirements

Note. Adapted from Giovannucci (2001).

3.1 Material and methods

The data used in the estimate was obtained from interviews with 119 producers of specialty coffees in the states of São Paulo and Minas Gerais, conducted by telephone between July and November 2007.

The dependent variable [DPRICE] is the percentage increase in the price of specialty coffee in relation to commodity coffee, as perceived by the producer. In the questionnaire, we asked for an "estimate of the price differential between the specialty coffee sold by your property and that sold in the non-specialty market (as a percentage)."

The independent variables are:

[DCOST], referring to the increase in percentage of the cost of specialty coffee compared to the cost of the commodity, as perceived by the producer. In the interview, we asked producers to "[estimate] the cost differential between the specialty coffee produced on the farm and non-specialty sold on the market (as a percentage)".

[CERTIF], a dummy variable for coffee certification.

[EDU], related to the level of education of rural producer.

[ASSOC], a dummy variable for the producer's membership of an association or grower cooperative.

[CONTRA], referring to the percentage of production sold through contracts.

[ROAST], concerning with the percentage of production retained for their own roasting (forward vertical integration).

[NBUYER], the number of buyers of coffee.

[TIME], related to the length of business relationships with key buyers.

It is important to note that the variables related to increases in prices and costs associated with the production of specialty coffees reflect an impressionistic assessment by the interviewees, and are not necessarily anchored in accounting procedures or objective market information.

The equation was estimated using the ordinary least-squares method, where the subscript indicates the i-th producer of specialty coffees and β are the parameters to be estimated:

DPRICEi = β 0 + β 1DCOSTi + β 2CERTIFi + β 3EDUi + β 4ASSOCIi + β 5CONTRAi + β 6ROASTERi + β 7NBUYERi + β 8TIMEi + ei

The estimates were obtained using PASW (Predictive Analytics Software) Statistics 17.0, produced by the IBM Corporation.

4. Results and Discussion

Estimates of equation parameters and variance analysis are presented in Tables 2 and 3. The estimate of the constant indicates that the specialty coffee producers interviewed assessed the premium for specialty coffee to be 15% over the price of commodity coffee. If the coffee is certified, it is perceived to obtain a price nearly 21% higher than the price of the commodity.

The increase in the perceived cost is positively associated with the perceived increase in prices: on average, producers estimate that a 1% increase in costs required for the production of specialty coffee is associated with an approximately 0.65% increase in the price received.

Producers of certified coffees estimate their costs to be on average 16.7% (standard deviation of 11.54%) higher than the costs of producing commodity coffee, while establishments that do not certify specialty coffee estimate the increase in costs at 15% (standard deviation of 9.26%).

Table 2. Coefficients.

	Non-standardized Coefficients		Standardized Coefficients		
Model	B	Std. Error	Beta	t	Sig.
(Constant)	15.026	4.644		3.236	0.002
ASSOCI	-0.123	1.187	-0.008	-0.103	0.918
CERTIF	5.963	2.539	0.2	2.349	0.021
CONTRA	-0.01	0.013	-0.065	-0.794	0.429
DCOST	0.648	0.119	0.459	5.443	0
EDU	-1.527	1.079	-0.118	-1.416	0.16
NBUYER	-0.151	0.78	-0.016	-0.193	0.847
TIME	0.087	0.132	0.056	0.662	0.509
ROASTER	0.211	0.558	0.031	0.378	0.706

Note. Dependent Variable (DPRICE).

The dispersion of the increase in cost may be associated with the presence of fixed costs in certification, so that for smaller establishments the incremental cost of certification is relatively higher. Another factor that may explain the dispersion of the perceived increase in costs is the existence of entry costs for certification systems, making the cost for new entrants relatively higher than for establishments that participate in certification systems for a longer period.

The estimates of the coefficients of the variables related to the governance of transactions (CONTRA and ROASTER) were not statistically significant. Apparently, the governance structure does not influence the price obtained as perceived by the producers of specialty coffees. Likewise, the variables designed to capture aspects of the transactions

related to the availability and ability to process information (EDU, ASSOC, TIME, and NBUYER) did not prove significant.

Table 3. ANOVA.

Model		Sum of Squares	DF	Mean Square	F	Sig.
1	Regression	7,114.413	8	889.302	5.482	0.000[a]
	Residual	18,007.585	111	162.230		
	Total	25,121.998	119			

The coefficient of the variable level of education had a negative sign, with a significance level of 16%. One hypothesis to explain this phenomenon is that the level of education may be associated with conservative estimates of the quality premium for specialty coffee.

The number of buyers and the length of relationship with key buyers did not affect the quality premium for specialty coffee. It is likely that the specialty coffee market is transparent, so that even those who sell for few and/or traditional clients have adequate information on market conditions.

The variable DCOST, the incremental costs required for the production of specialty coffees, captures aspects of the technology used for the production of specialty coffees, and at the same time reflects specific characteristics of each agricultural establishment. Different businesses require different increments of cost to produce specialty coffee, depending on the ownership of resources: natural conditions (climate, topography, soil) and the provision of physical and human capital that existed prior to the decision to produce specialty coffees. Incentives to produce specialty coffees are therefore different for different facilities, as predicted by the RBV.

The basic premium for specialty coffee (regression intercept) is very close to the average increase in cost borne by the producers of specialty coffees: some 15%. The proximity of the price increase and cost increase, valid for the average producer, suggests strong competition among producers of specialty coffees. Performance starts to depend on the position that each producer occupies on the axis of quality versus cost.

Being a good producer is not enough; it is necessary to be better than others with regard to the combination of quality versus cost. The choice of the optimal strategy is conditional on the firm's resources.

With full information, producers who were below the line DPRICE = DCOST would not have produced specialty coffee, because they had no advantages arising from private resources – the quality differential is small and/or the cost is too great.

Perhaps the apparent irrationality of these producers 'below the line' is explained by lack of information (bias of overestimation of returns) or by a dynamic effect: the return on a strategy is conditioned by the number of producers who adopt the same strategy. For the pioneers, it could be profitable to produce specialty coffees, even with large increases in cost. Over time, the premium falls because of the entry of new producers of specialty coffees. In this interpretation, it is the 'line' (of the feasibility of the strategy) that is lowered.

Figure 1 (payoff matrix) shows certifying decision as a result of resources that enable the generation of income differentiation.

		RESSOURCES ADEQUATE	INADEQUATE
	YES	++++	-
CERTIF	NO	+++	++

Figure 1. Payoff matrix.

Indeed, Figure 2 shows that there are incentives for some firms (with a low incremental cost) to produce specialty coffees; for other establishments, incentives will be positive only if the special coffee receives some type of certification. For a third group of producers, with high incremental costs, incentives are insufficient for the production of specialty coffees. The vertical axis (Incremental Price) represents, as a percentage, the average premium over commodity coffee that producers believe they receive for quality coffee, positively associated with product differentiation. The horizontal axis (Incremental Cost) reflects the allocation of firms' resources: firms less (more) gifted exhibit higher (lower) incremental costs to produce specialty coffee. It should be noted that the chart reflects both IO and RBV approaches. Vertical axis shows the influence of differentiation, while horizontal axis discloses the gains based on resources.

Figure 3 shows the plot of real data, taking into account the incremental gain variables arising from the differentiation and costs resulting from the ownership of resources.

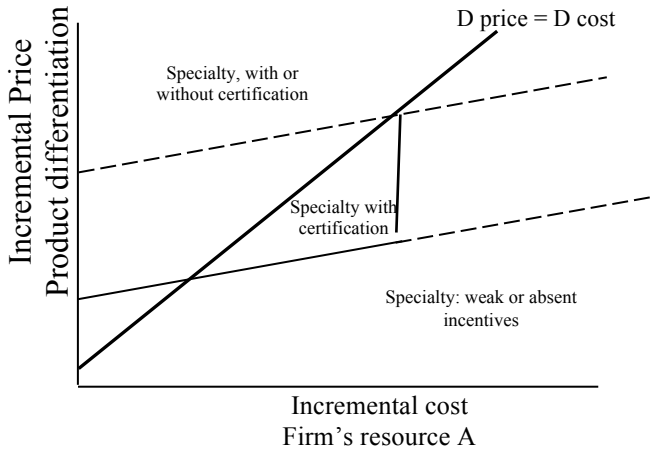

Figure 2. Incentives for the production of specialty coffees, according to the firm's resources and capacity for product differentiation.

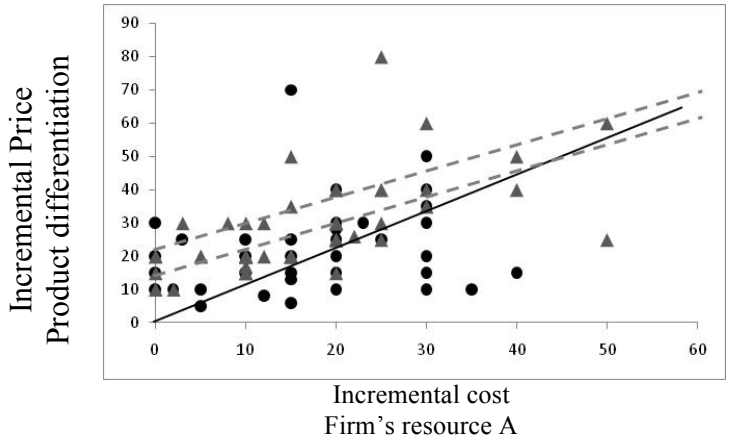

Figure 3. Plot of observations in the plane incremental cost X incremental price.
Note. • without certification; ▲ with certification

Figure 2 shows, in greater detail, the position of firms in the plane incremental cost X incremental price: 17 observations are in the region of weak or nonexistent incentives for the production of specialty coffees, three of which correspond to certified coffee and 14 without certification. Most producers are in the area where incentives would be sufficient to produce specialty coffee with or without certification.

From the results presented above, a question remains opened nevertheless: the relevant resources in the certification decision. It's important to notice that risk aversion may influence the decision toward certification process, even in the presence of adequate resources (see Figure 1).

We estimated the conditional probability of farmer does not certify their coffee, by using Probit model:

$$\text{Prob}\left(Y = 0\right) = \frac{1}{e^{-\Phi} + 1} \qquad \Phi = \beta_0 + \beta_1 x_1 + ... + \varepsilon$$

Main finds are showed on Tables 4 and 5. Results suggest probability of certifying is positively related to marketing channel practiced by coffee producers. The relationship with roaster industry (ROAST) increases the probability of certifying. In add, the probability of certifying decreases with the participation in associations / cooperatives (ASSOC). However, the volume of coffee (VOLUME) is positively related with certification decision (probably due to fixed costs of certification). In add, members of associations / cooperatives can produce specialty coffees with lower increments of costs comparatively to producers not associated. In turn, non-members who certify get larger price increments. Risk aversion may be a component of the decision to join a cooperative or association (lower incremental cost).

The relevance of association as an apparent substitute for certification led to investigate the differences between groups of producers (Tables 6 and 7). For most, association and certification function as substitutes (Groups 2 and 3, related to 90 observations): certification increases price increment, whereas association reduces cost increment. For a small group (Group 1, with 17 observations) however, certification and association seem to behave as complements. This strategy apparently requires high volume production.

Tables 4. Parameter Estimates.

	CERTIF – parameter estimates Distribution: BINOMINAL, Link function: PROBIT Model probabiliy that CERTIF = 0					
Effect	Estimate	Standard Error	Wald. Stat.	Lower CL 95, %	Upper CL 95, %	p
Intercept	0,374331	0,356461	1,08444	-0,330200	1,078862	0,297706
ASSOC	0,541991	0,164613	10,84066	0,219355	0,864626	0,000993
INCOME	-0,001253	0,002343	0,28585	-0,005846	0,00334	0,592894
EXPORT	0,000020	0,000017	1,49946	-0,000012	0,000053	0,220755
ROAST	-0,000668	0,000135	24,37354	-0,000933	-0,000403	0,000001
INSTANT COFFE	-0,000288	0,000187	2,37769	-0,000655	0,000078	0,123079
TRADER	0,000002	0,000314	0,00003	-0,000613	0,000617	0,996006
TIME	0,00648	0,008893	0,53088	-0,010951	0,023911	0,466236
VOLUME	-0,000086	0,000030	8,55066	-0,000144	-0,000028	0,003454
CONTRA	0,000513	0,001945	0,06953	-0,003300	0,004326	0,79202
SPOT	-0,000285	0,003282	0,00754	-0,006718	0,006148	0,930802

Table 5. Likelihood Type 1 Test.

	CERTIF - Likelihood Type 1 Test Distribution: BINOMIAL, Link function: PROBIT Modeled probability that CERTIF = 0			
Effect	Degr. Of Freedom	Log-Likelihd	Chi-Square	p
Intercept	1	-226,363		
ASSOC	1	-221,88	8,96687	0,002749
INCOME	1	-221,571	0,61707	0,432138
EXPORT	1	-215,522	12,09872	0,000505
ROAST	1	-196,752	37,54071	0,00000
INSTANT COFEE	1	-195,707	2,08887	0,148376
TRADER	1	-195,689	0,03658	0,848329
TIME	1	-195,38	0,61788	0,431834
VOLUME	1	-190,829	9,10152	0,002554
CONTRA	1	-190,774	0,11138	0,738575
SPOT	1	-190,77	0,00725	0,932126

Tables 6. Summary Frequency.

ASSOC	CERTIF 0	CERTIF 1	Row Totals
0	51	41	92
1	49	17	66
All groups	100	58	158

Note. Summary Frequency Table (Spreadsheet 25).
Marked cells counts > 10. (Marginal summaries are not marked).

Table 7. Differences Between Groups of Producers (Certified *Versus* Not Certified).

	CERTIF				**NO CERTIF**			
	1 ASSOC (N=17)		**2 NO ASSOC (N = 41)**		**3 ASSOC (N = 49)**		**4 NO ASSOC (N = 51)**	
INSTR	3,706	0,772	2,780	1,275	3,347	0,948	3,077	1,045
INCOME	54,706	31,941	61,268	33,128	52,083	32,811	61,040	34,773
NBUYER	3,188	1,223	2,583	2,062	2,261	1,769	2,083	1,028
ASSOC	4447,706	6811,086	917,317	3250,179	1079,449	1716,231	918,846	1875,062
EXPORT	5643,118	9107,406	3114,488	5250,704	1225,714	5740,640	1257,058	4321,628
ROAST	463,824	851,597	679,268	2719,949	114,082	380,120	75,519	277,409
INSTANT COFFEE	0,000	0,000	82,927	471,117	2,041	14,286	50,962	367,489
TRADER	0,000	0,000	53,659	240,933	20,408	142,857	2,500	18,028
TIME	11,588	6,548	9,475	7,900	12,723	8,922	12,694	9,894
VOLUME	7412,941	7098,598	2271,667	3298,234	1864,362	2859,327	1592,245	2431,539
CONTRA INF	5,294	21,828	2,707	11,833	1,939	6,833	4,423	12,274
CONTRA SAFRA	1,765	7,276	1,463	7,925	1,633	10,072	0,192	1,387
CONTRA LP	0,000	0,000	0,366	2,343	21,429	142,887	1,154	8,321
CONTRA CASA	1,765	4,982	0,561	2,098	1,673	5,035	1,442	5,454
CONTRA CPR	4,588	8,931	3,171	10,826	0,918	3,174	0,673	3,136
CONTRA TODOS	13,412	25,194	8,268	18,277	27,592	142,878	7,885	17,611
INTVERT	0,588	2,425	0,366	2,343	0,306	2,143	0,000	0,000
SPOT	82,176	28,050	86,268	27,344	83,429	29,982	89,808	22,073
OUTROS	5,000	11,456	4,146	12,293	3,163	10,738	3,077	15,408
DCOST	15,000	12,982	17,415	11,025	13,568	9,424	16,900	8,924
DPRICE	24,706	10,073	28,488	15,097	20,413	14,148	21,784	13,000

5. Final Remarks

A large set of factors have been discussed as barriers to sustainability of rural income: tariff policies, market concentration, or technical aspects of market regulation and standards. In this respect, a reading of FAO papers clearly demonstrates aspects of market power in commodity processing (Gilbert, 2008), in addition to imperfect competition (Stiegert, 2008); foreign investment (Rama; Wilkinson, 2008); and technical regulations and standards (Cuffaro & Liu, 2008; Neves, 2008).

Evidently these bottlenecks are real, and they contribute to the analysis of why a differentiation strategy does not result in improvements in the rural situation. However, the discussion is not limited to them; the role of the firm's resources in the process of differentiation should be considered. Indeed, the solution usually offered by differentiation omits the costs inherent to these unique resources which govern the strategy of decommoditization.

The paper shows differentiation is not for all. The empirical results focus on coffee segment are not restrict to it. In fact, our results suggest differentiation strategy is no guarantee of success in achieving monopolistic gains doesn't matter the segment, as the costs involved in its implementation can erode the gain in market share of the product. For this reason, a strategy of differentiation should be aligned with a resource strategy that enables the generation of economic rents in creating entry barriers to the factor market.

The attempts to unify different views on the study of strategy show us the long path to be follow nevertheless. Though the above-mentioned analysis point to the limits of dealing with the issue of value creation and capture in an isolated manner.

Having this in mind, the question of this paper (When differentiation and resource based strategy are not enough) must be interpreted in light of an integration view considering both: IO and RBV perspectives. RBV view explains why successful strategies may not be copied by all producers. From the perspective of OI, the different resource endowments, especially the non-reproducible, act as barriers to entry in a differentiated segment. Each firm has a unique combination of resources.

According Brazilian specialty coffee producers, the incentives to adopt the strategy of differentiation vary significantly between firms. Some hope to achieve substantial improvements in product quality, translated into higher prices received, with relatively modest increases in costs. Other producers believe that prices can only improve with investments that result in high costs. The differences between firms are due, at least in part, to irreproducible factors peculiar to the firm. The analysis of strategic choice of firms cannot be detached from the identification of resources available to competitors.

Notes

1 Decommoditization might also arise from the introduction of a new technology to explore new attributes of a given product, such as the production of pulped coffee beans.

2 Thus, efficient firms can sustain this type of competitive advantage only if their resources cannot be expanded freely or imitated by other firms (Peteraf, 1993 p.181).

3 Fairtrade coffee is directly bought by small producers' cooperatives that guarantee a pre-established, contracted minimum price. This market will be discussed in the next item.

4 Coffee originating on a farm.

5 Coffee is processed in the following ways: (a) natural coffee – after being washed, newly harvested coffee fruits are taken to sun-dry on a brick patio before going to the dryer; (b) hulled cherry – coffee beans are washed, green and dry beans are separated from ripe ones, and then they are hulled. Next, they go to a drying terrace where the mucilage adheres

to the beans, giving unique characteristics like body, acidity, and sweetness; (c) pulped, also known as demucilated, are processed similarly to hulled cherry coffee – beans are also hulled, but this process includes a fermentation process that requires from 24 to 36 hours to remove the mucilage. That allows a uniform type of coffee, mild and more acidic. It is recommended in regions with an excess of rain.

References

Barney, J. B. (1991). Firm, resources and sustained competitive advantage. *Journal of Management 17*, 99-120.

Barney, J. B. & Arikan, A.M. (2001). The resource-based view: Origins and implication. In Hitt., M., A. *et al. The Blackwell Handbook of Strategic Management*. Oxford: Blackwell.

Cankorel, T. I. (2000). *Industrial organization analysis of coffee markets: Does increasing market concentration impact the spread between world prices and domestic retail prices?* Manuscript.

Combs, J. G. & Ketchen Jr., D. J. (1999). Explaining interfirm cooperation and performance: Toward a reconciliation of predictions from the resource-based view and organizational economics. *Strategic Management Journal 20*, 867-888.

Conner, K. R. (1991). A historical comparison of resource-based theory and five schools of thought within industrial organization economics: Do we have a new theory of the firm? *Journal of Management 17*, 121-154.

Cuffaro, N. & Liu, P. (2008). Technical regulations and standards for food exports: Trust and the credence goods problem. *Commodity Market Review*, FAO, Rome.

Daviron, B. & Ponte, S. (2005). *The coffee paradox: Global markets, commodity trade and the elusive promise of development*. Zed Books in association with CTA, London and New York.

Fitter, R. & Kaplinsky, R. (2001). *Can an agricultural commodity be de-commodified , and, if so who is to gain?* Institute of Development Studies, University of Sussex.

Foss, N. J. (2005) *Strategy, economic, organization, and the knowledge economy: The coordination of firms and resources*. Oxford : Oxford University Press.

Gilbert, C. L. (2008). *Value chain analysis and market power in commodity processing with application to the cocoa and coffee sectors*. Commodity Market Review, FAO, Rome.

Giovannucci, D. (2001). *Sustainable coffee survey of the North American specialty coffee industry*. Conducted for the Summit Foundation, Nature Conservancy, North American Commission for Environmental Cooperation, Specialty Coffee Association of America and The Word Bank.

Kaplinsky, R. (2000). Globalisation and unequalization: What can be learned from value chain analysis. *Journal of Development Studies 37* (2), 117-146.

Kaplinsky, R. (2004). *Competitions policy and the global coffee and cocoa value chains*. Unpublished paper prepared for the United Nations Conference on Trade and Development.

Kim, J. & Mahoney, J. T. (2007). Appropriating economic rents from resources: An integrative property rights and resource-based approach. *Int. J. Learning and Intellectual Capital 4* (1).

Kotler, P. (1999). How to create, win, and dominate markets. New York: The Free Press.

Koning, N., Calo, M. & Jongeneel, R. (2004). *Fair trade in tropical crops is possible: International commodity agreements revisited*. North-South Centre, Discussion paper. Manuscript.

Leibtag, E., Nakamura, A., Nakamura, E. & Zerom, D. (2007). *Cost pass-through in the U.S. coffee industry*. United States Department of Agriculture. Economic. Research Service. Economic Research Report.
Marsden, T. (1992). Exploring a rural sociology for the fordist transition. *Sociologıa Ruralis* XXXII *2* (3), 209–229.
Montgomery, C. & Porter, M. (1998). *Strategy: The search for competitive advantage*, 3th ed. Campus, Rio de Janeiro.
Morisset, J. (1997). *Unfair trade: Empirical evidence in world commodity markets over the past 25 years*. Policy working, paper, 1825. DC: World Bank, Washington.
Neves, M. F. (2008). *The Brazilian orange juice chain*. In FAO, Food and Agriculture Organization of the United Nations. (Org.) *Commodity Market Review*, FAO, Rome.
Peteraf, M. A. (1993). The cornerstones of competitive advantage: A Resource-Based View. *Strategic Management Journal*, *14*, 179-191.
Porter, M. E. (1985). *Competitive advantage: Creating and sustaining superior performance*. The Free Press, New York.
Porter, M. E. (1998). *On competition*. Boston: Harvard Business School.
Prebisch, R., (1982). El desarrollo económico de la América Latina y algunos de sus principales problemas. In Gurrieri, A. *La obra de Prebisch en la Cepal. México: Fondo de Cultura Económica*.
Rama, R. &Wilkinsom, J. (2008). Foreign direct investment and agri-food value chains in developing countries: A review of the main issues. *Commodity Market Review*, FAO, Rome.
Renard, M. C. (1999). The interstices of globalization: The example of Fair Coffee. *Sociologıa Ruralis 39* , 484–501.
Rumelt, R. P. (1984). Towards a strategic theory of the firm. In Lamb, B. (Eds). *Competitive Strategic Management*. Englewood Cliffs, NJ: Prentice Hall.
Saes, M. S. M. (2010). *Strategies for differentiation and quase-rent appropriation in agriculture: The small-scale production*. Sao Paulo: Annablume.
Stiegert, K. W. (2008). Imperfect competition, agriculture and development. *Commodity Market Review*, FAO, Rome.
Sylvander, B. (1995). Conventions de qualite et institutions: Le cas desproduits specifiques. In Valceshini, E. & Nicolas, F. (Eds.) *Agro-alimentaire: Une economie de la qualite*. INRA Economica, 167–184.
Talbot, J. M. (1997). Where does your coffee dollar go? The division of income and surplus along the coffee commodity chain. *Studies in Comparative International Development, 32*, 56-91.
Thévenot, L. (1992). Des marches aux norms. In Allaire, G., Boyer, R. (Eds.) *Regulation et conventions dans l'agriculture et l'agro-alimentaire*. INRA Economica.
Valceschini, E. & Nicolas, F. (1995). La dynamique économique de la qualité agro-alimentaire; une économie de la qualité. In Valceschini, E. & Nicolas, F. (Eds.) *Agro-alimentaire: Une économie de la qualité*. INRA Economica, 15-38.
Vorley, B. (2003). *Food, Inc.: Corporate concentration from farm to consumer*. UK Food Group, London.
Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, *5*, 171-180.
Farina, E. M. M. Q & Zylbersztajn, D. (Coords.) (1998). *Competitividade no Agribusiness Brasileiro*. Instituto de Pesquisa Econômica Aplicada, Pensa-USP.

[i] The authors would like to thank FAPESP (São Paulo State Research Foundation) for their indispensable financial support. Special thanks also go to the Center for Organization Studies for providing a fruitful environment for the development of this research. We are especially grateful for Bruna N.M. Teixeira (FZEA/USP) for her kind support during the development of the paper.