

ECONOMIC ANALYSIS OF THE MARKETING CHANNELS IN CITRUS INDUSTRY IN BRAZIL

**ANDREA CRISTINA DORR, JAQUELINE CARLA GUSE,
RUBIA STRASSBURGER, ALINE ZULIAN,
MARIVANE VESTENA ROSSATO ***

ABSTRACT: *The objective of this article is to analyse the marketing channels adopted and the contractual relations present among certified and uncertified producers of citrus production chain in the region of Vale do Cai, RS, Brazil. 49 producers of this region were selected randomly and semi-structured forms were applied to them. The producers had the biggest success in this market with certified fruits starting from the moment when they became members of a cooperative or an association, preserving a higher governing structure through certification. Although uncertified producers are not marginalized in the chain, they are more vulnerable to market fluctuations and access less sophisticated marketing channels.*

KEY WORDS: *certification; marketing channels; contractual relations.*

JEL CLASSIFICATION: *Q13; L10.*

1. INTRODUCTION

The growing trend in fruit industry is a challenge in producing healthy and qualitative fruit. Due to the new consumer trends the international market requires safe food free from anything that can aggravate human health. Adoption of specific programs which ensure control and traceability of all the fresh fruit production chain in particular has been highlighted in recent years in the perishable goods market.

* *Ph.D. in Economics at the University of Honnover, Germany, andreadoerr@yahoo.com.br;
Academic of Accounting at the Federal University of Santa Maria, Brazil
drjaquelinecarla@yahoo.com.br*

*Academic of Economics at the Federal University of Santa Maria, Brazil,
rubiast@hotmail.com*

*Academic of Economic at the University of Santa Maria, Brazil, alinezulian@hotmail.com
Ph.D. in Economic at the Federal University of Viçosa, Brazil, marivavest@gmail.com*

The fruit sector is one of the most important segments of Brazilian agribusiness. It permeates all Brazilian states as an economic activity which involves directly and indirectly around 5 million people (Anuário Gazeta, 2010). Therefore, according to the same source, Brazil is the third largest producer of fruit after China and India, having a harvest approximately of 40 million tons per year. However, the Brazilian production presents only 2% of the global fruit trade, what demonstrates a high domestic consumption of fruits, which places the country at the 15th place in the world ranking of exporters. More specifically the citrus fruits production is also relevant for Brazil, mainly regarding the orange production, both for the juice production and for its consumption *in natura*. Brazil is considered to be the biggest orange producer and exporter of orange juice, making the commercial citrus industry responsible for creation of about 500 thousands direct and indirect jobs. According to the *Food and Agriculture Organization of United Nations* (FAO, 2007), Brazil had an average of 29% of world production of oranges, with a total of 18,5 million tons per year, and it is responsible for 21% of the world planted area, equivalent to 821 thousands hectares. The export of concentrated frozen orange juice and of its sub products generates an average annual income of 1.5 billions of dollars to Brazil (Oliveira, Scibittaro, Borges et al., 2005).

Based on the data by Brazilian Institute of Geography and Statistics (IBGE, 2008), Rio Grande do Sul had a production of 343.042 tons of orange, occupying the 5th place among the Brazilian states producing fruits. Of this amount, 22.400 kg of orange were exported. Rio Grande do Sul is the fourth biggest exporter of orange in Brazil, after Sao Paulo, Santa Catarina and Rio de Janeiro and it concentrates its production of citrus mainly in the region of Vale do Cai, in the north of the State.

The adoption of certification as market differential can be understood under two perspectives. The first refers to the fact of small producers to be marginalized due to the requirements from the buyers in terms of quality standards regulated by certification programs. Thus, small producers would not have financial conditions and infrastructure to suit the required methods. In this case certification plays the role of increasing production costs (FAO, 2007; Jaffee, Meer & Henson, 2005; Henson & Loader, 2001). The second is not only about the higher price received by the producers by the certified fruit (Basu, Chau & Grote, 2004), but the positive effects that certification would cause on the organization of property, on management control, on the qualification of the enterprise, on traceability and on the manual register of all the production stages throughout the chain in field notebooks (Dorr, 2008; Henson & Jaffee, 2007; Henson & Jaffee, 2004).

However, it is being discussed if these products can access more sophisticated marketing channels and receive higher prices for the certified production. Dorr (2009) affirms that in case of grapes and mango products of Vale do Sao Francisco, Brazil, small producers are not marginalized since they have the same conditions to access and to fill requirements of certification and traceability. These producers also market using the same forms of contract as average producers.

In this context it becomes essential to identify how the small producers of citrus react to the filling in the requirements of certification and verifying if they are marginalized due to the adoption of any certification program. As a theoretical basis

the Transaction Cost Theory and the Global Value Chain are used for classifying the governing structure present in the citrus chain in the region of Vale do Cai. Thus, the main objective of this research is to make an economic analysis of the marketing channels and to verify the contractual relations existing among producers with or without certification who make up the production chain of citrus in the region of Vale do Cai, RS, Brazil.

2. CONCEPT OF GLOBAL VALUE CHAIN

An analysis of the market channels and market strategies for fresh fruit shows how the development of niche markets for the products with higher added value creates new opportunities for producers and exporters of developing countries who manage to meet the required standards. New marketing channels were opened as a result of a combination of the change in consumer tastes and the growing field of large retailers in the markets of industrialized countries. The identification of opportunities by adding value and developing strategies to take advantage of them are based on an analysis of changes in governance structures of food value chains (UNCTAD, 2000).

According to Dorr & Grote (2010), certified producers are more willing to have access to the international markets and uncertified ones are more willing to sell the fruit products in the domestic market. The producers can market with groups, associations and cooperatives, or with individual customers who sell the fruit products in the domestic market. Entering new export markets could be considered a big challenge for many producers of the developing countries. New competencies and knowledge are required, mainly related to bureaucratic procedures, national standards and procedures, marketing channels and consumer tastes. The improvement could facilitate and promote competitiveness to access these markets.

The literature on Global Value Chain (GVC) focuses on the role of global buyers and of the governance to define the opportunities for improvement. Humphrey & Schmitz (2000) use the concept *upgrading* in its different forms for referring to three different actions which the companies could realize. First, the process upgrade: the companies can upgrade both by transforming inputs into outputs in a more efficient way by re-organizing the production system and by introducing superior technology; second, product upgrade: the companies can upgrade by moving into more sophisticated product lines; and third, functional upgrade: the companies can upgrade by a higher added value. Kaplinsky & Morris (2002) added a fourth case, intersectional upgrade: where the companies can upgrade by leaving one chain and going to another chain.

2.1 Governance in the Global Value Chain

The concept of governance "[...] is central for the approach to global value chain [...] the concept is used to refer to the inter-relations of the company and institutional mechanisms through which the coordination of non-market activities of the chain occurs. This coordination is achieved through definition and application of

product parameters and process to be fulfilled by the agents where the products of the developing countries usually operate” (Humphrey & Schmitz, 2001: 03).

The same authors use the concept of governance “to express that some companies in the whole chain and/or adapt to the parameters in which the others operate in the chain. A chain without governance would be a tangle of market relations” (2001: 04). The determinants of the governance presented by Humphrey & Schmitz (2000: 06) are: independent market relations (buyer and supplier do not define the product, without long-term relation, and the risks of the buyers and of the products are low); networks (the buyer and supplier define the product specifications together; the risk of the buyers is minimized due to the high level of competence of suppliers); quasi-hierarchy (high level of control of the buyers on the suppliers, the first defines the product) and hierarchy (buyers control the production process of the supplier). The authors suggest that the quasi-hierarchy is more probable to occur where the global value chains frequently unite the products of developing countries and retailers of developed countries.

Similarly Keesing & Lall (1992) argue that producers from developing countries must meet the requirements which frequently do not apply to their domestic markets. It creates a gap between the required capacities for the domestic market and the needs for the international one, for example. This gap is expanded when the buyers require consistent quality and supply, creating two reasons for the quasi-hierarchical governance. The first reason refers to the monitoring and control which can be necessary for ensuring that the products and processes fulfil the required standards. The second, in case where the gap needs to be filled rapidly, is that the buyers would have to invest in small suppliers chosen and help them to make updates.

Gereffi, Humphrey & Sturgeon (2005: 83) propose a more complete typology of governance in value chain, divided in five types: (i) markets: market links can persist over time with repeated operations – the cost of changing the partner is low for both, (ii) modular value chains: suppliers make the products according to the specifics of the clients more or less detailed by the previous one, (iii) relational value chains: complex interactions between buyer and sellers, often creating mutual dependence and a higher level of specificity of resources, (iv) captive value chains: small suppliers are dependent in transactions on bigger buyers, characterized by a high level of surveillance and control by business leaders, and, finally, (v) the hierarchy: characterized by a vertical integration.

In the same study the authors develop a governance theory in value chain based on three factors: (i) complexity of information and knowledge necessary for sustaining a special operation regarding the specificities of product and process, (ii) the extension in which the knowledge and the information are codified and transmitted in an efficient form, and (iii) the capacity of the current and potential suppliers regarding the requirements of the transaction.

3. METHODOLOGY

3.1. Sample definition

The total population of citrus farmers of the Vale do Cai region is 4,000, according to a listing provided by the Technical Assistance and Rural Extension Company (EMATER) of Montenegro-RS, and with the help of Ecocitrus Cooperative and Montengro Association which comprise the region of Vale do Cai. The sample is composed by certified citrus producers of the cooperative Ecocitrus situated in Montenegro-RS, formed by producers of different locations which comprise the region of Vale do Cai-RS. They produce in organic form and adopt the following certification seals: Organic, Fair trade and Ecovida. Along with these, the analysis includes the group of citrus farmers of the region which do not adopt any type of certification, where some belong to an association of fruit farmers, and others do not have any link with any type of organization, i.e., act as individuals on the market. Thus, a comparative analysis will be realized among these groups of citrus producers.

The variable used for the calculation of the sample is the time, in years, that the interviewee sells to his main buyer (association, cooperative or an individual client). The mean and the standard deviation of the key variable vary among the three groups. The calculation of the size of the sample is given according to Schneider (2004), through the following formula:

$$n = \frac{(t_{\frac{\delta, a}{2}})^2 \times s^2 \times N}{e_0^2 (N - 1) + (t_{\frac{\delta, a}{2}})^2 \times s^2}$$

Where:

n = minimum size of the calculated sample;

$t_{\frac{\delta, a}{2}}$ = value obtained through the pilot sample;

N = population size;

s = standard deviation of the mean (variable: years selling to the main buyer)

e_0^2 = square of the sampling error obtained with the data of the pilot sample;

3.2. Proportions of the groups and proportional sample

The methodology adopted in this research was based on the method proposed by Levy & Lemeshow (1999) where the target population was stratified into groups. In other words, the sampling is probabilistic and randomly stratified. The first group was composed by certified producers of citrus who belong to a cooperative of the region. The second group was formed by citrus farmers of the region who do not adopt certification; some of them belong to an association and others without any participation in organizations.

In total, 49 producers were selected randomly in the region of Vale do Cai where 24 are certified and participate in a cooperative and the other 25 do not have certification. Among 25 producers without certification 7 producers are members of an association while the rest 18 do not take part in any organization.

The group which comprises certified producers whose population (N) equals to 96 follows the sample calculation:

$$n = \frac{4,169764 \times 5,5 \times 96}{4(95) + 4,169764 \times 5,5} = 24,67877$$

The sample for the groups of certified producers is 24 individuals.

For the group of uncertified producers who belong to an association whose population is 20, the sample is 7 individuals, as shown in the calculation below:

$$n = \frac{4,169764 \times 3,0 \times 20}{4(19) + 4,169764 \times 3,0} = 6,796455$$

And, lastly, for the producers who do not have certification and who do not belong to organizations, whose population is 4,000 citrus farmers in the whole region, the sample is 18 individuals as it is shown in the following calculation:

$$n = \frac{4,169764 \times 4,1 \times 4000}{4(3999) + 4,169764 \times 4,1} = 18,30907$$

3.3. Data collection and analysis

The collection of primary data consisted in applying a semi-structured form for the citrus farmers through field research (or survey). The form of approach was based on personal home interview and on flow points (such as: opening party of the citrus crops in 2011). The form was applied to 49 producers and was divided in the following axes:

- Socio-economic characteristics: age, gender, education, duration of activity, duration of property residency, family labour, family size, gross income;
- Property characteristics: total size of property, area devoted to citrus, owned or rented area, permanent preservation areas;
- Marketing: the target market, since when, negotiations, why this client is the target, storage, prices definition, transportation inside and outside of the property.

After the collection, the data was tabulated and analysed statistically and qualitatively. The averages and frequencies of variables were calculated, as well as the respective levels of significance. The analyses divided the producers in three categories, namely: certified producers (members of a cooperative), producers associated and uncertified (belonging to an association of fruit farmers) and individual uncertified producers.

4. RESULTS AND DISCUSSION

4.1. Characterization of Citrus Farmers

The Table 1 shows the results of the descriptive socio-economic analysis and of the property characteristics of the certified and uncertified producers (individual and members of associations). The citrus farmers of the region have an average age of 48 years old and approximately 8 years of education (equivalent to the complete basic education).

Table 1. Descriptive analyses of socio-economic conditions and property characteristics

Variables		Certified producers N=24	Non-certified Producers members N=7	Non-certified Producers N=18	Total N=49	Chi ² , t test
Age in years	Average s.d.	50,13 12,63	50,86 10,24	45,56 14,32	48,55 12,94	0,472
Schooling (years)	Average s.d.	8,83 3,57	8,57 4,16	7,00 2,70	8,12 3,41	0,123
Time in activity (years)	Average s.d.	33,92 15,25	41,00 15,61	27,83 14,98	32,69 15,52	0,141
Time living on land (years)	Average s.d.	36,54 17,88	31,14 17,27	31,33 16,91	33,86 17,29	0,577
Annual Gross Income of citrus (R\$/ha)	Average s.d.	6015,27 9262,22	4540,17 2190,91	3874,28 2292,43	4930,41 6280,07	0,650
Kids living on land (%)	Average s.d.	65,26	75,00	78,79	71,02	0,657
Total area (ha)	Average s.d.	16,74 13,26	33,00 16,38	16,78 9,87	19,08 13,61	0,011**
Area of citrus (ha)	Average s.d.	8,51 7,29	19,00 6,73	8,38 5,27	10,09 7,40	0,001***
PPA area (ha)	Average s.d.	2,79 3,26	3,71 3,20	2,68 2,55	2,88 2,96	0,728
Own area in ha (%)	Average s.d.	94,29	64,57	91,99	89,20	0,019**
Arrended area in ha (%)	Average s.d.	2,43	15,43	8,01	6,42	0,267

Source: Research data.

Note: *significant to 1%, ** significant to 5% and *** significant to 10%.

Out of the total of the interviewed, the majority are married men and have citrus production as the main activity where they have been working for an average of 33 years. In other words, 54% of the interviewees are assumed as citrus growers, 16% as citrus growers and farmers, 12% as fruit growers (along with working with citrus,

they grow other fruits), and 18%, apart from citrus and/or fruit growing, perform other activities (employees and/or self-employed).

Many of the interviewed (92%) reside on the property where they work with citrus. The interviewees work on the activity together with their wives and kids. In 71% of the cases the children live in the property and help in the citrus growing activity. This result indicates that the activity is mainly based on family labour. Among the three groups of producers uncertified producers have higher percentage of children (78.79%) compared to certified producers (65,26%) who are associated to the cooperative. Many family members of the certified producers work in the same cooperative.

The average gross income obtained annually in the rural property with the citrus, for the uncertified producers is approximately R\$5,000.00 per hectare planted by citrus. This result shows a very high standard deviation of R\$6,280.00. Many producers also have extra incomes as retirement, services provision to third parties, wage labour of the husband of wife. Among the groups of producers the certified producers are shown as having a higher annual gross income of approximately R\$6,015.00 per hectare of citrus. The next topic will discuss and show details of this result.

The total area of the property is an average of 19 hectares where 89% of the interviewees are the owners of the land or of some part of it, and the remaining use lease or partnership. An average of 10 hectares is devoted to the citrus cultivation. Moreover, 77% of the interviewees have an area of environmental preservation (APP) corresponding to an average of 3 hectares. It is noteworthy that certified and uncertified producers have both total area property and the part devoted to citrus very similar in size. However, the results related to the gross income are completely distinct. It is observed that the total area and the owned area in hectares are significant to 5% while the variable of the area devoted to citrus is significant to 1%.

4.2. Analysis of the marketing channels and contractual relations

The Table 2 shows the results of the descriptive analyses of the marketing channels used by the certified and uncertified producers (members of associations and individuals). The next topics are focused on variables which characterize the marketing channels and explain how the negotiating process occurs between producers and buyers, as well as the details of the contractual relations.

Table 2. Descriptive analyses of the marketing channels and of the contractual relations

Variables	Cert. prod. N=24	Non-certif. Prod (members) N=7	Nom-certif. Prod. N=18	Total N=49	Chi ² , t test
Since when sells (average in years and standard deviation.)	10,54 (5,64)	8,14 (3,05)	15,29 (4,20)	11,87 (7,30)	0,083*
Distance until buyer (average in	16,95	181,57	273,41	142,22	0,074*

km and standard deviation)	(11,76)	(449,33)	(457,16)	(346,92)	
Number of talking until deal (average and standard deviation)	0,30 (0,47)	0,14 (0,37)	0,29 (0,68)	0,27 (0,54)	0,796
Buyers					0,000***
Co-op (%)	95,80	0,00	0,00	46,90	
Association and intermediates (%)	0,00	100,00	0,00	14,30	
Price Definition					0,000***
Co-op/association (%)	91,70	24,30	0,00	46,90	
Buyer (%)	4,20	71,40	94,40	46,90	
Form of payment					0,023**
Installments (%)	100,00	100,00	61,10	85,40	
Why selling to these buyers					0,000***
Member (%)	65,20	14,30	0,00	33,33	
Better Price (%)	4,30	28,60	5,60	8,30	
Lack of option (%)	0,00	0,00	38,90	14,60	
Safer option (%)	4,30	42,90	16,70	14,60	
Problems of payments					0,278
No, cae sells to co-cop or association (%)	100,00	100,00	-	100,00	
Contracts of selling					0,958
No contracts (%)	82,60	57,10	88,90	81,30	
Only verbal contract (%)	13,00	28,60	11,10	14,60	
Formo f storage					0,064*
No storage (%)	83,30	33,30	61,10	68,80	
On shelter (%)	8,30	50,00	33,30	22,90	
Transport in the farm					0,292
Tractor and truck (%)	0,00	28,60	5,60	6,30	
Only tractor (%)	82,60	71,40	83,30	81,30	
Transport out the farm					0,000***
Co-op takes with truck (%)	95,70	0,00	0,00	45,80	
Producer takes with truck and buyer comes with truck to the farm (%)	0,00	92,90	16,70	12,50	
Buyer takes with own truck (%)	0,00	0,00	72,20	27,10	
Satisfied with marketing Chanel					0,000***
Yes (%)	79,20	50,00	33,30	58,30	
No (%)	0,00	16,70	33,30	14,60	
Reasonable (%)	0,00	33,33	27,80	14,60	

Source: Research data.

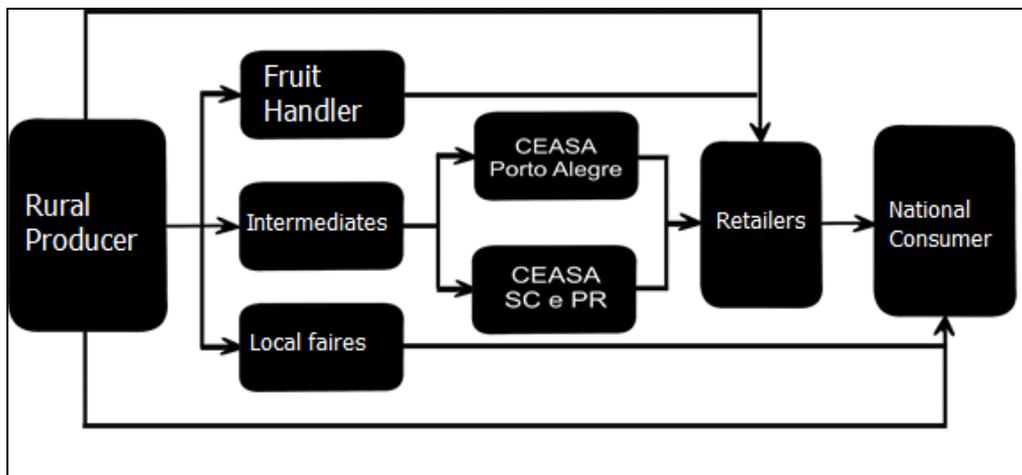
Note: *significant to 1%, ** significant to 5% and *** significant to 10%.

4.2.1. Individual uncertified producers

The producers who market their fruits in individual form, in other words, do not belong to any association or cooperative, face diverse challenges. They do not have certification or any other quality program or traceability procedure. The main means of marketing are intermediate (which channel the production to states like: Rio Grande do Sul, Santa Catarina and Sao Paulo) and municipal and state fairs (Figure 1). The most

adopted marketing channel for 87.5% of producers has been through intermediaries, since about 15 years. The distance travelled to reach the customer is 273 km in average.

Among the challenges, for example, the lack of fruit sale assurance or of payment receipt is cited. The sales occur in 72.20% of these cases through the buyer (middleman) who leads directly to the property to load the truck. The negotiations of purchase and sale are realized, in the majority of cases, on the day of purchasing, but the payment is not always immediate. In 95% of the cases the producer does not have the right to bargain for negotiating the price per fruit box. In average the producers talked only 0.3 times with the responsible for these marketing means, to start a trade relation between the parties. It is worth noting that there is no formal contract but only a verbal agreement. The data of the research shows that there were a few records (12%) of problems of payment receipt and of ordering and delivery of the products from the consumers side (intermediaries and fairs).



Source: *Elaborated by the authors.*

Figure 1. Marketing channel adopted by the individual uncertified producers

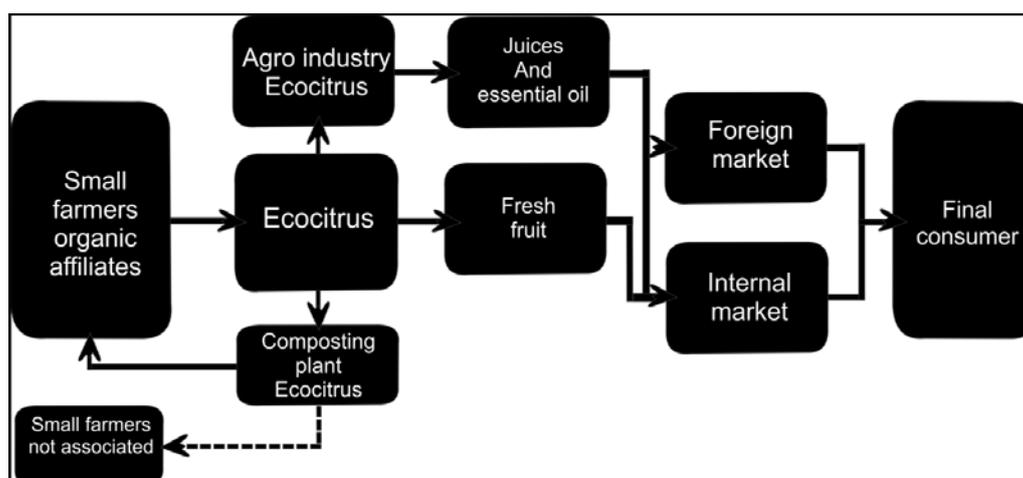
The buyer defines the rules of the game, including the payment form, which is usually time-bound (61%). Along with the price the producer still faces instability in relation to the crop flow programming. He does not have assurance of purchase and, thus, expects a buyer to get interested in the fruit on the time of harvesting. As the fruits are perishable, the losses can be high when there is no buyer – because the producer does not have cold storage. These products can earn higher profits in the beginning of harvest due to the scarcity of fruits in the market. But, this margin decreases gradually as supply increases.

Despite the prevailing governance structure being the market one, it is shown that many producers have trust relations with the buyers. In this case, the fact of knowing the origin of the buyer contributes to minimize problems like lack of payment. These producers are not marginalized, but only access less sophisticated

marketing channels, subject to the laws of supply and demand on the market. These producers also do not have technical assistance and do not have bargaining power in the purchase of production inputs.

4.2.2. Certified producers

The producers who are members of the cooperative Ecocitrus have Organic, Fair trade and Ecovida certification. As they are members of this entity, they do not need to establish any type of contract with the cooperative on the supply chain – raw materials and on downstream – marketing. The cooperative has control over supply of inputs, agribusiness operation where the fruits are selected, processes and packaged, and over the access to marketing channels. The producers deliver 96% of the total citrus production to the cooperative who is responsible for the rest. The price is paid per kilo and based on the quality and size of the fruit (the price is established by the cooperative based on the market prices). Although the producer does not know the final value to be paid for the amount of fruit, he is very satisfied in 79% of the cases, since the cooperative gives assurance of purchase of the total production of the producer, and pays a better price for the fruit (Figure 2).



Source: Elaborated by the authors.

Figure 2. Marketing channel adopted by the Ecocitrus Cooperative

The cooperative provides the producer with a report on the classification of the fruits based on the quality, size, colour and price paid per kilo. The payment is made within the time frame, maximum of 30 days. Till the present time, there were no cases of delay in payment. The cooperative is responsible for the collecting of fruit on the property as well as for the supply and application of inputs, technical assistance and transfer of information. The average distance between the properties and the agribusiness where the fruits are processes and packaged is 17 km. According to the interviewees, the prices paid by the cooperative are higher than the prices paid on the market. In other words, the certified fruit is valued, not only for the differential price

received by the producers but also for the fact that the cooperative accesses specific market niches.

The cooperative markets to the customers through formal contract on the domestic and international market. The client of the General Warehouses Company of Sao Paulo (CEAGESP) is a specific client who only buys organic food. This client pays a differential price for both orange juice and the fruit *in natura*, what does not happen with other two clients of supermarkets. Regarding the contracts it is worth emphasizing that there are contracts between the cooperative and the supermarkets for the fruit *in natura* on the domestic market. As far as the external buyers are concerned, there are also contracts with the *traders* who have carried requirements. Among them there are the size and colour of the fruit. The prevailing governance structure between the cooperative and its members is characterized as the relational value chain (complex interactions between the buyers and sellers, many times creating mutual dependence and a higher level of resource specificities).

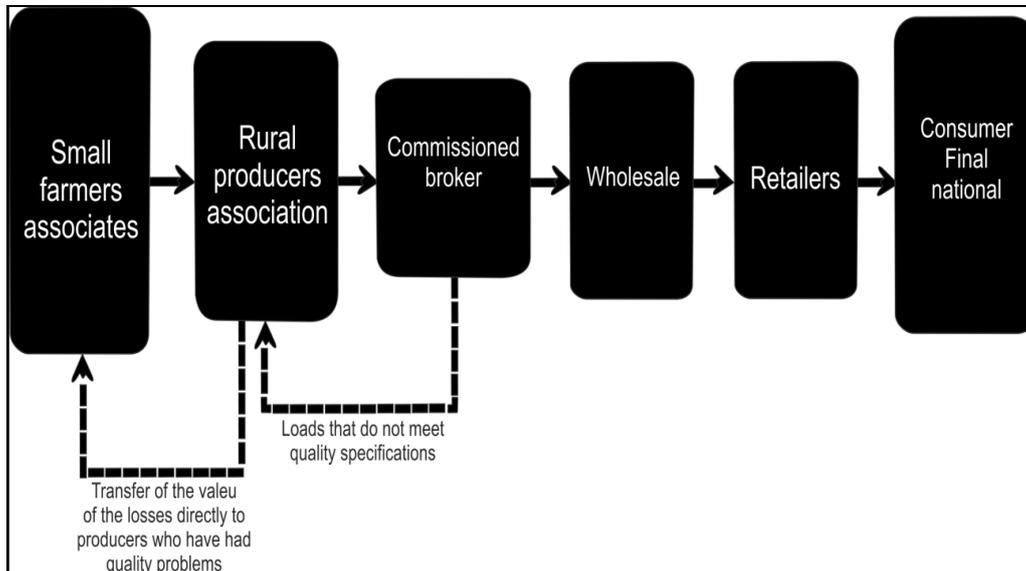
The results show that these products achieved a higher level within the productive chain (*upgrade*) since they became members of the cooperative, as before they used to market as individual producers. Thus, the certification enabled them to access more sophisticated marketing channels through the cooperative and pass from the governance structure of market purchase to the relational value chain.

4.2.3. Associated uncertified producers

The producers who are members of the Montenegro Association do not have certificate but plan to adopt the Integrated Fruit Production (PIF) as market differential. On the average the producers have been marketing with the association for 8 years and as members they do not need to have a contract between them. The association is responsible for the processing and packaging of only a part of production of the members, considering its limited capacity of processing and marketing.

The marketing channels of the association are shown in the Figure 3. The interviewees send part of the production to the association for the reasons such as: security and trust among the members (42.90%); receipt of higher prices (28.60%); preference to work together and access bigger markets (production scale of the association allows sales to new markets).

The prices paid for the fruits are defined according to the market prices, which are discussed in meetings among the associates and buyers. The payment for the fruits to the producers is made within a time frame according to the payment schedule of the buyers. It is noteworthy that at the present moment there was no evidence of lack of payment from the association to the associates.



Source: Elaborated by the authors.

Figure 3. Channel of Citrus marketing – Montenegro Association of Fruit farmers

Unlike Ecocitrus, these producers need to find means to deliver the production into the cold storage of the association. Based on a productive planning, the association receives an average of 30% of the total production of the associates. The remaining production, 70%, stays under the responsibility of each producer to sell on the local or regional market. Producers travel approximately 181 km to reach the final buyer. In these cases the data shows that the producers receive lower prices and are vulnerable to market forces (such as individual uncertified producers). 25% of the producers have already faced problems with payment receipt from particular intermediaries with whom they used to realize marketing, but they have never had problems of ordering and delivery of the products.

The association delivers the production mainly to a middleman in Sao Paulo who markets the production in the big wholesale networks. These agents do not have formal contracts but they have a strong trust relationship between them. According to the interviewee responsible for the marketing, both the middleman and the clients of the wholesalers visit the association and the producers-members in various opportunities. The interviewee has also been in Sao Paulo to accompany the production and to meet the buyers. The interviewee highlights that when the parties know each other, the (informal) contractual relations of trust are stronger and more important than a (formal) written contract. Thus, it is evident that trust relationships among the agents perform a fundamental and prime role for the continuation of negotiations.

The prevailing governance structure between the association and the buyers is the modular value chain (suppliers make the products according to the clients' specifications, more or less detailed before). And between the association and the middleman it is the captive value chain (small suppliers are dependent in transactions on bigger buyers, characterized by a high degree of vigilance and control from the

leading companies' side). Thus it is observed that even though the members of the association have not yet adopted certification, these producers also had an *upgrade* in the governance structure – considering the production marketed through the association. In this case the relations of trust between the associates and the middleman dictate the negotiation rules.

5. CONCLUSIONS

The certification shows to the consumer an assurance of purchasing quality goods. For the producer, it shows a market differential enabling to expand sales contracts and achieve other public, such as, for example, the international market. Thus, this study was aimed at realizing an economic analysis of the marketing channels and of the contractual relations which enable small citrus producers to participate in this market and fulfil the requirements.

The associations and the cooperative are the main agents concerned to get the certification, being able to provide benefit in diverse forms to a series of producers they are linked to. The organic producers already have the seals which attribute the stated characteristics to their products. In the organic market the certificate is extremely important as it serves as assurance to the consumer that he is purchasing a product free from additional chemicals, of what he would not be sure without the presence of the certificate. Thus, the producers had an *upgrade* since they became members of the cooperative, enabled by the certification, passing from the governance structure of market purchasing to the relational value chains.

The marketing channels of the certified producers are more organized and efficient compared to the other two groups. The chain is coordinated by the cooperative which had control from the inputs supply, processing to the marketing to the final buyer. Many links along this chain were eliminated by the fact that the cooperative markets the production via formal contract.

The association, although marketing via formal contract to its buyers, has intense relations of trust. Thus, the trust substitutes and is considered for these producers as more efficient than the formal contract. The individual producers are the most vulnerable ones as they need to realize their marketing on their own, using only verbal (informal) contractual relations.

While the cooperative and the association define the prices of citrus according to the classification of the certified and uncertified producers, respectively, the fruit prices for the individual uncertified producers are defined by the buyers. Uncertified producers market longer to the same clients, travel longer distances and, although talk more before setting a deal, had default problems. In other words, producers organized in cooperatives or associations are more secure regarding the payment assurance. However, these organizations apart from performing fundamental role in the processing and delivering the production provide higher financial security to their members. Regarding the main factors which make the producers market to their respective buyers, it is evident that for the individual uncertified producers it is the lack of options; for the certified producers it is the fact of being members; and, lastly, for

the member uncertified producers it is the better price paid by the association and security in marketing.

The fruit certification is not yet required by the domestic market. However, the producers believe that in the future the requirements in the food sector will be stricter and that the certification seals will be more valued and required. The search for the certification can add the fruit brand – well accepted by the consumers – as being the quality differential. Thus, it can be concluded that the individual uncertified producers are not marginalized but are subject to market fluctuations, prices instability and negotiation conditions, along with the difficulty to access the differentiated and more sophisticated marketing channels.

6. ACKNOWLEDGEMENT

The authors thank the Research Support Foundation of Rio Grande do Sul State (FAPERGS) for the financial support in the realization of this research.

REFERENCES:

- [1]. **Anuário Gazeta** (2010) *Anuário Brasileiro de Fruticultura*, Santa Cruz do Sul: Gazeta Santa Cruz
- [2]. **Basu, A.; Chau, N.; Grote, U.** (2004) *On Export Rivalry and the Greening of Agriculture - The Role of Eco-labels*, *Agricultural Economics*, v. 31, pp. 135-147
- [3]. **Dorr, A.C.** (2008) *Understanding the marketing chain: a case study of certified and non-certified cashew nut farmers*, *Revista de Adm. Eletrônica*, São Paulo, v. 1, n. 2
- [4]. **Dorr, A. C.; Grote, U.** (2010) *The role of certification in the Brazilian fruit sector*, *Revista de Economia Contemporânea*, v. 13, pp. 539-571
- [5]. **Gereffi, G.; Humphrey, J.; Sturgeon, T.** (2005) *The Governance of Global Value Chains*, *Review International Political Economy*, pp. 78-104
- [6]. **Henson, S.; Jaffee, S.** (2004) *Standards and Agro-Food Exports from Developing Countries: Rebalancing the Debate*, *World Bank Policy Research Working Paper*, n. 3348
- [7]. **Henson, S.; Jaffee, S.** (2007) *Developing Country Responses to the Enhancement of Food Safety Standards*, in: Grote, U.; Basu, A. K.; Chau, N. H. (Eds). *New Frontiers in Environmental and Social Labeling*, Physica-Verlag, pp. 193-220
- [8]. **Henson, S.; Loader, R.** (2001) *Barriers to Agricultural Exports from Developing Countries: The Role of Sanitary and Phytosanitary Requirements*, *World Development*, v. 29, n. 1, p. 86-102.
- [9]. **Humphrey, J.; Schmitz, H.** (2000) *Governance and Upgrading in Global Value Chains*, Paper for the Bellagio Value Chain Workshop
- [10]. **Humphrey, J.; Schmitz, H.** (2001) *Governance in Global Value Chains*, *IDS Bulletin*, v. 2, n. 3
- [11]. **Jaffee, S.; Meer, K.V.D.; Henson, H.** (2005) *Food Safety and Agricultural Health Standards: Challenges and Opportunities for Developing Country Exports*, Washington D.C.
- [12]. **Kaplisky, R.; Morris, M.** (2002) *A Handbook for Value Chain Research*, University of Sussex, Institute of Development Studies, [Online], Available at: <www.ids.ac.uk/ids/global/pdfs/VchNov01.pdf>, [Accessed 05 May 11]

- [13]. **Keesing, D.; Lall, S.** (1992) *Marketing Manufactured Exports from Developing Countries: Learning Sequences and Public Support*, in: G. Helleiner (Ed). Trade Policy, Industrialization and Development, Oxford: Oxford University Press
- [14]. **Levy, P.S.; Lemeshow, S.** (1999) *Sampling of populations: methods and applications*, 3rd ed. New York: John Wiley & Sons
- [15]. **Oliveira, R.P.; Scibittaro, W.B; Borges, R.S.; Nakasu, B.H.** (2005) *Mudas de citros. Embrapa Clima Temperado*, Sistemas de Produção, Versão Eletrônica, n. 1, 2005, [Online], Available at: <<http://sistemasdeproducao.cnptia.embrapa.br/FontesHTML/Citros/MudasdeCitros/index.htm>>, [Accessed 08 June 11]
- [16]. **Schneider, L.** (2004) *Estimativa dos Gastos dos Alunos da UFSM (2002): aplicação da amostragem estratificada proporcional*. Monografia (Especialização em Estatística e Modelagem Quantitativa) - Faculdade de Estatística, Santa Maria: Universidade Federal de Santa Maria
- [17]. **ECOVIDA** (2011) *Rede de Agroecologia Ecovida*, [Online], Available at: <http://www.ecovida.org.br/>, [Accessed 28 April 11]
- [18]. **FAO** (2007) *Costs and Benefits in Food Quality Systems: Concepts and a Multi-criteria Evaluation Approach*, Agricultural Management, Marketing and Finance, Working Document, Rome, n. 22
- [19]. **IBGE** (2008) *Instituto Brasileiro de Geografia e Estatística*, [Online], Available at: <<http://www.ibge.gov.br/home/>>, [Accessed 05 May 11]
- [20]. **Prefeitura Municipal De Montenegro** (2011) *Secretaria Municipal de Agricultura e Meio Ambiente de Montenegro: dados citricultura*, Rio Grande do Sul
- [21]. **UNCTAD** (2000) *Strategies for Diversification and Adding Value to Food Exports: a Value Chain Perspective*, UNCTAD/DITC/COM/TM/1, UNCTAD/ITE/MISC. 23, 2000, [Online], Available at: <<http://www.unctad.org/en/docs/poitem23.en.pdf>>, [Accessed 08 June 11]