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IMPACT OF TRADE POLICIES ON SME BEHAVIOUR AND FOOD CULTURE: A CASE STUDY ON THE RICE SECTOR IN PORTUGAL

Abstract

Risiculture is an historical sector in Portuguese rural life, and, when agriculture merged with history and tradition, Portugal became the 1st country for rice consumption in the European Union. Internal supply of rice has changed radically since the entrance of Portugal in the EU, with a steady reduction of land harvested (-20% from 1975 to 2006) and the introduction of Indica varieties in local risiculture and distribution channels, causing a dramatic change in the percentage of variety consumed. Accordingly, the industrial sector has suffered a concentration phenomenon.

Through qualitative interviews, this study analyses the implications that free-trade and preferential treatments in trade can cause on a local agricultural context, as it shows that procurement strategies became a crucial issue for firm survival, weakening the relation between Portuguese risiculture and rice millers. Although important for development and for market-led economies, trade openness stimulated a price-competition which directed procurement worldwide, leading to a diversification in food habits, enlarging noticeably the dimension of the market. The side effect seems that the strong link between local agriculture and industrial sector is becoming weaker and weaker, and this is a matter that policy-makers have to consider in order to protect the positive externalities associated with the loss of this links in terms of ecological aspects and landscape preservation.

A first step in protecting local rice production has been the creation of rice districts in the 4 producing areas, protecting through a GI local production, allowed by the WTO framework, albeit not all firms consider the idea positively. Nevertheless, further studies should be directed in order to understand and exploit the potentialities of risiculture.

Along with a rural development insight of the actual reality, this study can also be a first step in order to plan future studies on the Portuguese rice sector in multiple areas of study.

Introduction

Risiculture is an historical sector in Portuguese rural life. Protected continuously throughout history, rice has become a main product in Portuguese eating lifestyle, making of Portugal the first country for rice consumption in the European Union. Along with a high rice demand (17.7 kg per capita in 2002), internal supply of rice has changed radically since the entrance of Portugal in the EU, with a steady reduction of land harvested (-20% from 1975 to 2006) and the introduction of Indica varieties in local risiculture and distribution channels, determining a dramatic change in the percentage of variety consumed.

Accordingly, the industrial sector has suffered a concentration phenomenon, leading to an estimated loss of around 60% of the industrial units since 1970. Procurement strategies for a country that entered a custom union in 1986 with a high cost of raw material became a potential crucial variable for industrial development or, in many cases, just for survival, loosening the tight relation between local rice producers and national rice millers.

The aim of the study was to understand, through qualitative interviews, the importance and the determinants of firms' choice in international procurement of Portuguese rice millers for those units present in 2003.

Theoretical framework

Neo-classical economic scholars base their theory on trade openness as a beneficial source of welfare and an essential condition for economic growth, as free-trade is essential to eliminate loss of welfare generated by barriers (Gaisford, 2001). The development of international common agreements such as the WTO, have tried to gather a uniform point of view and have stimulated converging efforts in this direction, using political instruments to pursue a global abolition of tariffs and non-tariff barriers. Trade liberalization processes have included also agro-food sectors, seen as a fundamental step in the fight of poverty in developing countries (Edwards, 1993) and LDC (Panagariya, 2005), included in the Millennium Goal objectives. As a result, procurement strategies of firms in the agro-food sector has differentiated, choosing whether to import or not, and, if so, opting for the most appropriate origin according to their objectives.

This increase in mobility of raw material, beneficial for producers for the decrease in cost of inputs and, in economic terms, to consumers, having lower prices for processed foods, has raised a set of other questions in developed countries, where the importance of rural areas in terms of conservation, and ethical issues related to international procurements of food (food miles, animal health worries, different standards of food safety and food quality worldwide) have become largely debated in many national governments. A consequence in this direction was that many nations,

including some developing countries, have legislated in favour of the determination of Geographical Indications of agricultural and food products, aiming to strengthen the existing link between the industrial and the agricultural sector in certain areas.

Where these two contrasting points of view actually meet in terms of policy-making is a very debated (and, for some scholars, debatable – Kerr, 2006) issue, namely in some developed countries, where agriculture is characterized by much higher prices if compared to the rest of the world, due mainly to high protectionist regimes.

Moving on the framework designed from Tregear (2003), who analyses the existing links between history and denominations of origin, the identification of food districts, due to economy of scale and scope as theorised in Marshallian districts (Chevassus-Lozza, 2003; O'Reilly, 2004; Bertolini, 2006), comes accordingly. In fact, the integration of the different rings of the food chain throughout history, manifested in the continuous use of local raw materials due to autarkic means in closed economies (in dictatorships) or to security concerns (in wars), has brought across time unique food chains in many sectors in terms of process and of localized procurement, which in many cases has resulted in the birth of final products with inimitable characteristics (Tregear, 2003, de Roest, 2000). If the difference in taste is easier to notice for processed food products (wines, cheeses, cured sausages and so on), sometimes it can be more difficult for agricultural products, due to a lower human and microbiological impact, although justified in terms of environmental characteristics.

In this work, a case study has been done analysing the features of national and international procurement of a singular sector in a developed country: the rice sector in Portugal. The choice has been done according to a clear specific idea: the huge disparity between demand and supply of rice in this country forces national suppliers to integrate noticeably national agricultural production through international channels.

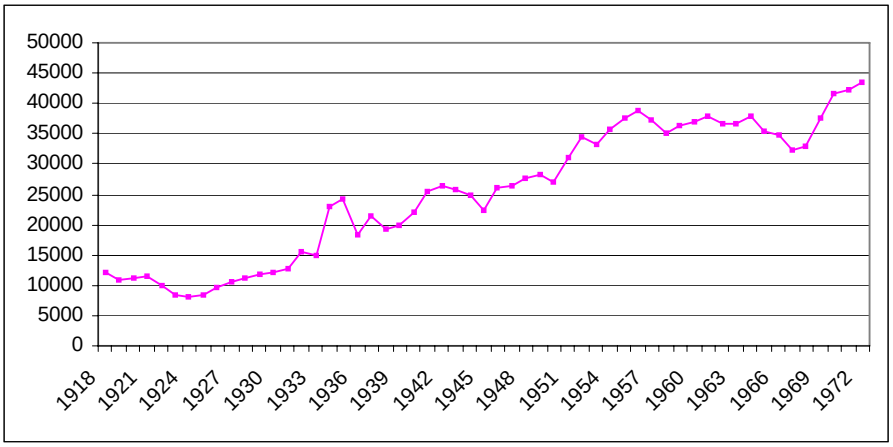
Portuguese rice sector: an overview

Historically, the birth of risiculture in Portugal dates back to the Arabic invasion (8th century A.D. – Medina, 1995). After the liberation of the country (13th century A.D.), rice growing was abandoned, then restored in various ages, the last in the 18th century (MADRP, 2002). Since then, the consumption of rice grew consistently and enrooted in Portuguese agriculture, with a strong increase in consumption in the aftermath of World War I (Lains, 2003). Rice cultivated land increased accordingly (figure 1). A strong protectionist regulation for cereals was started in 1929 with the "Wheat Campaign" by the dictatorial regime of Salazar (1926-1974) due to the development of autarkic ideals after serious concerns on the sufficiency of this cereal (MADRP, 2002), supporting the growing power of "cereal

lobbies" (principally rice and wheat – MADRP, 2002). In the meanwhile, wetland areas were reclaimed, obtaining not very productive arable land, where rice, among other crops, was planted (MADRP, 2002). In 1972 the total rice harvested land reached the level of 43,487 Ha (Vianna e Silva, 1975).

In 1933, a Commission board for rice was instituted (CRCA – Regulating Commission of Rice Commerce), founded by big landowners, in order to have a control over price in the market, regulate imports/exports and buy exceeding quantities of paddy. Also firms established corporations (GIDA = Corporations of Rice Milling Industrialists), to give power to small millers and cooperating directly and closely with the board. These groups kept working until the end of the dictatorial regime in 1976, when they became an association of agricultural/industrial producers with no direct control on the mechanism of the market, nor direct political influence (MADRP, 2002).

Figure 1: Area harvested with rice in Portugal in the period 1918-1972



Source: National Statistical Office of Portugal (INE), cited in Vianna e Silva (1975)

In more recent times, the entrance of Portugal in the former EEC, dated 1986, stimulated the increase of arable land cultivated with rice (figure 2), but then, due to a 3-years drought period in the early 1990s it decreased, setting to around 25,000 Ha. The first reform in 1995 (COUNCIL REGULATION (CE) 3072/1995) gave a further stimulus to grow rice, as production-dependent subsidies were an incentive for great improvement in yields, giving an unexpected increase in rice production (Commission of the European Communities, 2002). The following 2003 reform was being approved during the interview period; therefore its outcome did not influence the interview, whereas the expectations about its content might have.

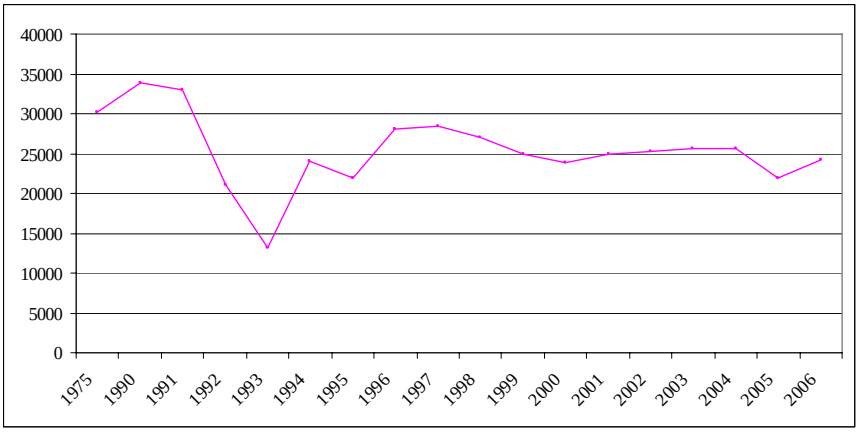
In terms of demand, Portugal is the European country with the highest individual consumption of rice. In 2002 supply was of 17.7 kg per capita of milled equivalent[1], corresponding to more than three times the UE average (5.1 kg)[2]. Despite this relatively high internal needs, agricultural production remains rather limited, located in three main areas along rivers that are completely in the national territory (excluding the river Tagus), and are (figure 3):

- Baixo Mondego e Baixo Vouga (with 26% of the area in 2000);
- Vale do Tejo e do Sorraia (37% of the total area);
- Vale do Sado (37% of the total area).

Firms have originated all in these same areas, originally starting as small structures used mainly for milling rice, even for self-consumption, which have subsequently developed commercially, facing a strong concentration process, passing from around 60 in 1970 to around 18 in 2003.

Internal production in 2002/2003 potentially covered around 70% of the demand (ENR, 2003). However, while rice production in Portugal is almost only oriented toward Japonica varieties, consumption is around 60%-40% nowadays (ANIA, 2006), approaching 50%-50%. As the Indica consumption grew because of a change in consumers' taste, growing fluxes of this variety carne into the EU, contributing to the increase of rice stocks of Japonica. However, due to a continue decrease in price (historically higher in Portugal compared to other EU producers, as well as of many other countries outside the EU – figure 4), many local producers find not remunerative to grow rice, threatening the future of a strong food culture in Portugal.

Figure 2: Area harvested with rice in Portugal in the period 1990-2006 compared to 1975



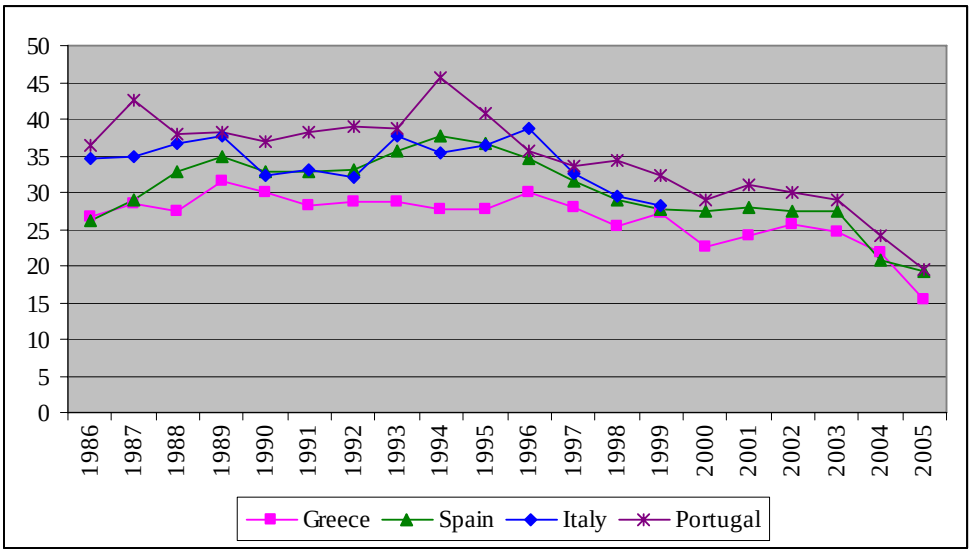
Source: Eurostat database, retrieved on www.eurostat.com on the 12th January 2007

[1] FAO Database, http://faostat.fao.org/faostat/collections?subset=agriculture, retrieved on the 12th January 2007
[2] ibidem

Figure 3: location of Portuguese risicultural districts.

Courtesy of www.maps.com

Figure 4: Selling prices of crop products (absolute prices) – annual (Euro (from 1.1.1999)/ECU (up to 31.12.1998)



Source: Eurostat database

The survey

In order to have an insight into the sector, one-to-one interviews have been performed, interviewing for every firm the person responsible or co-responsible for procurement of raw material, aiming to know origin and motivation of the firm's strategy, along with an overlook of the structural situation of the industry.

18 firms were detected using various sources of information (ANIA – National Association of Rice Millers, internet, yellow pages, and existing publications). Of the whole sector, 16 firms were contacted and invited to participate (2 were excluded due to missing contacts). Of these, 2 firms refused to participate, one firm was excluded as it was starting up, hence with no historical experience, and one gave an insufficient number of answers. The remaining 12 (accounting for an estimate of more than 80-85% of the market share, both in sales and production terms), completed a semi-structured questionnaire on their strategic choices. Interviews were performed between March and May 2003. Some multiple choice questions, essential to classify firms, were also integrated in different points in the questionnaire.

Results

Description of the sample

The characteristics of the sample of firms interviewed are reported in table 1. The rice milling sector is relatively atomised, with a large number of very small firms in the market (50% in our sample), set below 5% of the total market share, sometimes even family-run.

Of the 12 firms interviewed, 4 do not import any rice, while the remaining 8 do it in different amounts. It is interesting to notice that non-importers in any case share less than 10% of the market, while those firms importing more than 25% of their production share more than 10% of the market (according to AC Nielsen, the top 3 firms in the sector in 2002 accounted for 40% of the market).

In terms of products sold, all the 12 firms market the two basic segments: Agulha (Indica varieties, almost entirely imported) and Carolino (mixture of Japonica varieties). However, product differentiation is higher for bigger firms, while smaller firms in many cases produce only the two main varieties, in a few cases along with only another segment. The impression is that firms that specialize in the sale of a particular segment, apart from the basic products, still can survive in the market; accordingly, those selling most segments seem to be the most profitable.

The technological level in 2003 appeared to be low, as only one firm had an ISO certification, while only two firms had specialized personnel for food safety and quality control (food engineers).

Real considerations on the dimension can be done analysing the ability to adapt to sudden changes of supply. One firm, due to its dimension, refers to be unable to adapt at all in the short run, four firms are able to adapt only in terms of quantity, while the remaining seven can adapt either in terms of quantity and variety of the final product relatively easily.

Table 1: General characteristics of the sample

	Market share			
Number of firms	**0-5%**	**6-10%**	**11-20%**	**>20%**
Total	6	1	3	2
Import				
0% - Does not import	3	1	0	0
1 - 25% of total output	3	0	0	0
26 - 50% of total output	0	0	2	1
51 - 75% of total output	0	0	1	0
76 - 99% of total output	0	0	0	1
100% of total output	0	0	0	0
Products sold				
Carolino (Japonica)	6	1	3	2
Agulha (Indica)	6	1	3	2
Fragrant	0	0	1	2
Wholemeal	1	0	0	1
Parboiled	2	0	2	2
Others	2	0	1	0
Technological level				
ISO	0	0	1	0
Specialized personnel	0	0	1	1

Qualitative analysis of the interviews

- Insight into the sector

Asked about the current situation and about a comparison between present and past times in the sector, managers agree on the idea of a worse sector if compared with the past (11 of the 12 respondents), whereas only a firm, growing and belonging to a multinational enterprise, revealed the opposite.

The main present problem referred in the market is an unfair competition. Market pricing issues are considered the more serious, as many interviewees considered it as a relevant problem. It all emerges from a price-based competition, started, according to four managers, by the big supermarket chains, and to further three managers, to the entrance into the market of more competitive multinational enterprises. It all forced present firms to start a low-price fight, which resulted, according to two different respondents, in a “decrease of quality along with price” and “no

attention to basic hygiene in the production area", in both cases as a consequence of a lack of liquidity. Extreme price competition has become exceedingly pressuring if compared to the past (answer for 7 respondents), and for three respondents those who import from outside the EU do it just for the lower price. Also economic recession and a decrease in the intervention price are seen as concurring causes for the worse present situation.

Technology is referred by some managers as an important matter: in their opinion, the sector has not been restructured, it does not aim to look for quality at compatible prices, and the loss of traditional/natural procedures has big responsibilities as well. However, one respondent refers that nowadays the situation in the market has improved compared to the past, since quality is increased thanks to foreign investments in the sector.

Analysing the prospective given by the Common Agricultural Policy, four firms consider it negatively, since it creates uncertainties to the local agriculture, which is strongly linked to the industrial sector: in fact, half of the firms in the sample refer to know personally 100% of their rice supplier, whereas the rest knows between 75% and 99% of their suppliers (only one firm states to know less than 75% of the suppliers). Moreover, single opinions highlight it will favour the entrance of new competitors for the low price of raw materials, since at the time of the interview the structure was considered unable to process much more imported rice. While two firms consider it is too early to know the future scenario, and one firm was not completely aware of the CAP content, other four firms consider the CAP and its reform advantageous. The possible advantages considered are the possible increase in exports, due to a higher competitiveness worldwide, and, with a decreased, market-led price those firms expect a fairer competition in the internal market.

- Non-importers strategy': exclusive interest in national procurement

The choice of those producers who preferred not to use foreign raw materials motivated their choice in two main reasons: the commitment is too high in economic terms, and their market needs are satisfied by the local production. As seen before, those firms are actually small, in some cases owning rice harvested land, and two of them are cooperatives of producers, therefore their first interest, rather than consumers' needs, is to give value to the production of their members. As a result, three of the four small firms agree that, in the words of one of the interviewee, "We do not import because we give value to national rice, which has a higher quality".

In two cases, firms cannot find any disadvantage in not importing, although they recognize the economic issue is very pressing. In fact, from one side prices give problems because of not being very remunerative, the idea of having to obtain a loan to be able to import raw material in a phase where the market seems not to pay back is a risk small firms are not willing to take. Another

perceived advantage is seen in the inability to market products that cannot be grown in the EU, although considered "fashion" by one of the owners.

- Importers' strategy: interest in both national and international procurement

Being in such a competitive environment like Portugal, where rice is an essential commodity (a loss-leader for supermarkets), and competition is greatly based on price, importing raw material from outside the community becomes essential for the firm's survival. Questioned on their motivation, three main issues are mentioned: agronomical problems (not enough rice is produced locally, for both Indica and Japonica varieties), uniqueness of imported products (the rice from Guyana for its taste, easy-cook rice because in Portugal only one firm has appropriate machinery), and only marginally price (only one firm mentions the issue).

In general, international procurement is not a direct transaction (only one firm whose headquarter is in Spain buys directly from producers), meaning that although buyers have to add to the production, transport, and transaction costs, it is still more convenient for producers. Brokers are the most common intermediaries (four firms refer to them), followed by Cooperatives and other firms managed by the same holding, while other options are other independent firms (for processed/semi-processed rice), and representatives of producers.

Observing the origin of imports, it can be grouped in two main areas: the European Union, which is represented primarily by Spain (7 of the 8 importing firms buy from there, due to a location advantage), which is source of differentiated products (Japonica, Indica – the Thaibonnet variety growing in Europe – and easy-cook rice); and Guyana (former British Guyana), and Suriname (former Dutch Guyana), two producers with preferential treatment for rice supply (are included in the EBA agreement) and with strong historical links with European countries, and an important origin for Indica varieties.

Table 2: Origin of imports

Origin of imports	Number	Segment
France	2 firms	Japonica
Greece	1 firm	Easy-cook (Parboiled)
Guyana	6 firms	Indica
Italy	2 firms	Japonica and easy-cook (parboiled)
Spain	7 firms	Indica and easy-cook (parboiled)
Suriname	5 firms	Indica
Others	0 firms	

Reasons behind the choice of a country for procurement are many. In general, the main justification is the need to compensate national disparity between demand and supply, cited for rice coming from Italy, France, and Spain. Spain is preferred for being close (low transport cost), with cheap and good quality rice. Proximity is also a reason for France. A limited technological level is a reason for procuring rice from Italy and Greece, where there is "easy-cook rice with excellent value-for-money", while pre-cooked rice comes from Spain. Consumers are cited as determining the choice of Guyana and Suriname, since characteristics of products coming from South America cannot be replicated in Portugal.

Price, although an essential variable, is not cited directly by the interviewees. Apparently, all the pricing issues emerged analysing the situation of the sector are being faced using strategies aiming to a higher segmentation and a search for quality. However, strategies focusing on vicinity (meaning decreasing less transport cost), quality and different products (price premium), and value for money are clear indications of price-based competition strategies.

- Links between local agriculture and local millers

Interviewed firms agree on the importance of local rice production. Most of the managers know personally a large percentage of their national suppliers, and in some cases they refer to cooperating to their development.

An option to protect the sector, which has received attention in the national and local authorities, was the establishment of a new market category of Carolino DOP, certifying the origin from the main areas of productions. However, among firms there is no agreement on the utility of this policy. Firms against the option of a DOP denomination are importers, who consider that it will increase unfair competition since it gives temporary advantages to those firms that base their sale only on rice coming from the local production (small firms); furthermore, a manager claims correctly that there does not exist a real DOP product, since all seeds come from outside the country (mostly from Italy).

Favourable firms (8 firms out of the 12 interviewed) recognize the advantage of having a product with a higher value added, since it creates a new segment in the market, giving a stimulus to the protection of the local production. In addition, it protects consumers, going in the direction, a manager suggested, of a higher quality of the process starting from the first link of the food chain.

Conclusions

The present study analyses the implication that free trade can have on a local agricultural context, where agriculture merges with history and tradition, in a social-agricultural context. Although

important for development and for market-led economies, it is showing some negative side effects on Portuguese risiculture. In fact, the fight for lower prices that in the last years has been fought has decreased noticeably profitability of the industrial sector, directing procurement strategies to search for cheaper raw materials outside the national borders. The new search for foreign rice has determined a positive diversification in food habits, based only on Japonica varieties before the entrance in the EU and about 60%-40% nowadays (ANIA, 2006), enlarging noticeably the dimension of the market. However, the international procurement seems to be loosening the strong link between local agriculture and the industrial sector, and this is a matter that policy-makers have to consider in order to protect the positive externalities associated with agro-environmental goods (Lankoski, 2003).

The creation of rice districts in the 4 producing areas, protecting through a GI local production and guaranteeing a control on the food-chain, seems a feasible option for protecting, in the legality of the WTO framework, traditions and local agriculture, as already has become reality in Italy (Casati, 1999) and is debated in all the other rice producing countries. Nevertheless, further studies should be directed in order to understand and exploit the potentialities of risiculture. Along with a rural development insight of the various areas of production (such as those presented by Banks, 2000), from a marketing point of view it will be essential to understand the perception of the population, trying to understand the perception towards rice from a consumer point of view and risiculture from an environmental point of view (for environmental evaluation, see Adamowicz, 2004), estimating the importance of the issue and the willingness to pay for different characteristics.

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