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Success factors in the quality chain of animal products from Trás-Os-Montes

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Abstract. The promotion of EU protection regulations and the implementation of mechanisms to support and trade products with protected names are processes which require a permanent negotiation among the actors' (economic and institutional) chain. The success factors of such collective initiatives, involving a variety of actors with different interests, depend on how organizations function and on their ability to coordinate efforts and cooperate with each other. Using the McKinsey model, the paper analyses the performance of Protected Designation of Origin - Protected Geographical Indication (PDO/PGI) animal products of Trás-os-Montes (Portugal), in the context of a reference market. This model evaluates performance using a cross analysis of two complex variables, "market attractiveness" and "competitive position". As a result of the market attractiveness and competitive position evaluation (strong, medium or weak), the products studied are placed in the nine boxes of the McKinsey Matrix. The conclusions regarding the performance of the different products are discussed and explained according to a set of relevant variables. We may say that, in Trás-os-Montes, there is still room for improving the development of animal PDO/PGI products production chain but it does not by itself pose any structural problem since their development depends mostly on their own competitive position rather than on the competitiveness of their reference market.

Keywords. PDO/PGI – Traditional – Quality – Protection – Performance – Attractiveness – Competitiveness.

Facteurs de succès dans la filière de qualité des produits d'origine animale de Trás-Os-Montes

Résumé. *La dynamisation des protections communautaires et l'implantation des mécanismes de promotion et commercialisation des produits qui ont des noms protégés sont des procès qui exigent des négociations permanentes entre les acteurs (économiques et institutionnels) de la filière. Le succès de ces initiatives à caractère collectif, implique un groupe d'acteurs qui ont des intérêts, parfois antagoniques, et dépend de la philosophie de fonctionnement des organisations et de leurs capacités de coordination et de coopération. En utilisant le modèle McKinsey, l'article analyse le fonctionnement des produits D' Appellation d'Origine Protégée (DOP) et Indication Géographique Protégée (IGP) d'origine animale à Trás-Os-Montes (Portugal) dans leur contexte de marché de référence. Ce modèle évalue le fonctionnement des produits par une analyse croisée des variables composées "l'attractivité du marché" et la "position compétitive des produits". En utilisant les résultats sur l'évaluation de l'attractivité du marché (forte, moyenne et faible) et des positions compétitives (forte, moyenne et faible), les produits étudiés sont distribués par les neuf quadrants qui constituent la formule McKinsey. Le développement des filières des produits DOP/IGP d'origine animal de Trás-os-Montes montre une grande marge de progrès, sans de grandes difficultés de nature structurelle, en tenant compte que dans la plupart des cas, leur développement est plus dépendant de leur position compétitive que de l'attractivité de son marché de référence.*

Mots-clés. *DOP/IGP – Qualité – Ffonctionnement – Succès – Attractivité – Compétitivité.*

I – Introduction

According to EU Regulations no. 2081 and 2082[1] dating from July 14 1992, there were almost 730 product names registered and recognized in the European Union falling under the following categories: "Protected Designation of Origin" (PDO), 60%, "Protected Geographical Indication" (PGI), 38% and "Traditional Speciality Guaranteed" (TSG), 2%. Cheese (25%), fruit and horticultural products (20%) and fresh meat (15%) sectors were the most representative. France (22%), Italy (21%) and Portugal (15%) occupy the top places in the ranking (europe.eu.int/comm/agriculture/qual/).

The 37 Protected Designation of Origin products in Trás-os-Montes, 60% of which have already a definitive registration, represent 30% of national protected food names and belong mostly to the animal sector (80%)[2] (IDRHA, 2007).

In the last couple of years, several authors have been studying ways to improve traditional quality food products in Portugal. The studies which have been published so far analyse conceptual aspects associated with the subject in question and focus mainly on the social and economic importance of those products, their contribution to local development, the social and technical creation of specific quality, marketing and trading processes, as well as several other aspects related to protecting product names. Among those studies we would like to point out the works by Fragata and Condado (1996), Pacheco (1996, 2001), Ribeiro and Martins (1996), Marreiros (1997), Tibério (1995, 2004), Tibério and Cristóvão, (2001, 2004), Simões (1998), Fragata (1999), Cristóvão *et al*. (2001), Tibério *et al*., (2001), Salavessa and Almeida (2001), Fragata *et al*. (2002), Matos (2003).

Many of the above mentioned works deal with traditional food products from Trás-os-Montes.

The relevance of a certain field of activity to a business firm is judged by how it may affect both its turnover and profits; therefore, it depends on two main factors (Lindon *et al*., 2000): (i) the attractiveness of the global market; and (ii) the firm's or product's actual and potential competitiveness in the market considered. The global market's attractiveness can be measured by the size of the market today, its growth rate, the present stage of prices and margins and its likely evolution. The competitiveness of a business firm or a product on the market depends on its market share and its advantages *versus* its competitors, in what regards technological development, production costs, economic resources, notoriety and image, distribution network, and sales strength (Lindon *et al.*, 2000). Based on these general principles, several different evaluation models have been created to assess the relative interest of each field of activity in a business firm. The most well-known models are the BCG model, the McKinsey model and the ADL model, elaborated by the Boston Consulting Group, the McKinsey Society and Arthur D. Little Consulting Group, respectively (Lindon *et al*., 2000; Nunes and Cavique, 2001). These models make it possible to evaluate products or activity portofolios in many different ways (Nunes and Cavique, 2001): (i) in terms of each individual product, when the firm does not have

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[1] EU Regulation no. 2081/92 of the European Council from July 14 1992, regarding agricultural and foodstuff products' Protected Designation of Origin and Protected Geographical Indication. EU Regulation no. 2082/92 of the European Council July 14 de 1992, regarding agricultural and foodstuff products' Traditional Speciality Guaranteed.

[2] Carne Barrosã, Carne Mirandesa, Carne Maronesa and Carne de Bovino Cruzado dos Lameiros de Barroso; Borrego Terrincho, Cordeiro Bragançano and Cordeiro de Barroso; Cabrito de Barroso and Cabrito Transmontano; Carne de Bísaro Transmontano; Alheira de Mirandela, Presunto de Barroso, Linguiça de Vinhais and Salpicão de Vinhais, Chouriça Doce de Vinhais, Chouriço Azedo de Vinhais, Butelo de Vinhais, Alheira de Vinhais, Salpicão de Barroso – Montalegre, Sangueira do Barroso – Montalegre, Alheira do Barroso – Montalegre, Chouriço de abóbora do Barroso – Montalegre, Chouriça de Carne do Barroso – Montalegre, Presunto de Vinhais; Mel da Terra Quente, Mel do Parque de Montesinho and Mel do Barroso; Queijo Terrincho and Queijo de Cabra Transmontano; Azeite de Trás-os-Montes and Azeitona de Conserva Negrinha de Freixo; Amêndoa Douro, Castanha da Padrela, Castanha da Terra Fria and Castanha dos Soutos da Lapa; Batata de Trás-os-Montes and Frutos em Vinho do Porto.

many products or wishes only to analyse the most relevant ones; (ii) in terms of product lines; and (iii) in terms of brands.

II – Methodology

The main objective of this paper is to evaluate the performance[3] of 17 PDO and PGI animal food products in Trás-os-Montes by empirically applying the McKinsey Matrix Method or the McKinsey Model[4]. This empirical research used other studies on similar products as a conceptual and methodological framework such as the ones carried out by Sylvander *et al.* (1998), Barjolle *et al.* (1998), Barjolle and Sylvander (1999) and Barjolle *et al.* (1999).

The McKinsey model is based on two activity field assessment criteria: (i) the attractiveness of the market; and (ii) the firm's or the product's competitive position (Lindon *et al.*, 2000). These criteria are composed of a complementary number of factors (Lindon *et al.,* 2000; Nunes and Cavique 2001) which together set the basis for their own definition (Table 1).

Table 1. The McKinsey Model and evaluation of the activity areas' interest

Market attractiveness	Competitive position
- Reference market total dimension	- Absolute market share
- Market growth rate	- Market share growth rate
- Historic profit margin	- Product's total quality
- Competitive intensity	- Product's notoriety
- Sector's image and external environment impact	- Distribution and sales network
- Technological innovation perspectives	- Promotion effectiveness
- Surrounding environment impact	- Production capacity
- Energy requirements	- Production efficiency
	- Unit costs
	- Raw-materials
	- R&D
	- Human resources management

Source: Tibério (2004).

By establishing three levels (strong, medium, and weak) for each criterion – "market attractiveness" and "competitive position"-, the McKinsey Matrix allows for the segmentation of a firm's field of activity in nine different areas (Fig. 2) The closer to the left upper angle of the matrix the products and activities position themselves, the stronger their competitive position and the market attractiveness, in which they are included, will be and, therefore, the more appealing they will become to the firm in terms of their potential profitability (Lindon *et al.*, 2000).

[3] We define performance as the relative position a given product or several products occupy in a matrix, regarding the whole of the variables in the analysis.

[4] In the face of the present development stage of PDO/PGI products in Trás-os- Montes and bearing in mind the characteristics of the models referred, we find the McKinsey model to be the most suitable to study the products' performance in their reference markets, respectively. Given its conceptual simplicity, the BCG model presents some inadequacies: (i) it uses very simple criteria: relative market share and market growth rate; (ii) it does not apply to products with a nul relative market share; (iii) the relative market share is neither the only nor the most important factor to define competitive capacity; and (iv) sales growth alone does not explain the market's higher or lower degree of attractiveness to the firm (Lindon *et al*., 2000; Nunes and Cavique, 2001). The ADL matrix departs from two vectors which, according to Nunes and Cavique (2001), represent the two most important features to a strategic evaluation: the competitive position and the market's life cycle. The market life cycle of most PDO/PGI products' in Trás-os-Montes, however, is not yet so well defined as to allow this model to be applied to assessing their performance. The McKinsey model takes into consideration a number of diversified factors to define analysis criteria and is likely to be applied to both products and activities, now or in the future.

The three areas of the diagonal between the left lower angle and the right upper angle include products in need of reorientation. The three right lower angle sectors represent those products which call for such measures as disinvestment, cost reduction or even suppression.

III – Results

1. Reference market's attractiveness

In Barjolle's and Sylvander's viewpoint (1999), specific products should look for demand in a relevant market that should also become their reference market, that is, the market defined by the product in question and its immediate substitutes. In order to measure the reference market's attractiveness of each of the PDO/PGI products in Trás-os-Montes we have selected the indicators or variables included in Table 2, allotting the relative weights indicated. Our selection took under consideration the McKinsey model and the studies carried out by Barjolle and Sylvander (1999) to evaluate the European PDO cheese market's attractiveness, and was complemented by our own perception of the variables which best describe the specific markets of the products being studied.

Table 2. Evaluating factors of reference market's attractiveness

Factors	%
Reference market's size	20
Reference market's growth rate	20
Obstacles to entering the market	15
Competitiveness capacity	15
Sector's image	15
Technological innovation perspectives	15

Source: Tibério (2004), adapted from Nunes and Cavique (2001); Barjolle and Sylvander (1999).

Each of the following variables was evaluated according to a scale (1 to 5), going from very weak/very low (1), to weak/low (2), medium/neutral (3), strong/high (4) and very strong/very high (5):

(i) Reference market's size. It reflects the national and regional market size of the sector in which the PDO/PGI product is included, expressed in terms of volume or of the evolution of the sector's production volume at national level, in the last decade. It takes into account the weight of the sector's regional production, with or without PDO and PGI, in the national context, as well as how the production of PDO/PGI products is likely to produce an effect at regional level. As regards this variable, it should be pointed out the negative performance of the small ruminant meat market.

(ii) Market growth rate. It measures the reference market's annual evolution doting the period considered. A special attention is paid to how consumption develops. The ovine/caprine meat market, the traditional cheese market and the honey market have developed significantly as far as consumption goes, unlike the bovine meat market which has been somewhat damaged.

(iii) Obstacles to entering the market. We wish to assess the reference markets of products with characteristics of their own, which obey both production and marketing conditions as established in the specification agreement and are run by competent organizations. This indicator becomes, thus, particularly relevant. Demands concerning the type and quality of raw-materials, the observance of hygiene and sanitary conditions in transformation processes, and exclusiveness contracts are among the access conditions which render markets more attractive.

(iv) Competitive capacity. This factor is seen as the aggressive response of the market to new competitors wishing to enter it. The stronger this aggressiveness, the more difficult it will be to actually enter the market and, therefore, the more attractive it will be for those already in it. The level of market differentiation and the ability to meet the competition, namely as far as the same type of non-PDO product traded goes, the *standard* product, and imports are some of the aspects taken into account in the present analysis. The questions related to the rare and typical quality of the traditional sausage market are responsible for this sector's score in what concerns this variable.

(v) The sector's image. The less negative impacts society associates with it, the more positive that image will be. Factors related to environment and health in the honey sector, and the symbolic aspects associated with tradition in the sausage sector do certainly account for the positive image of the sectors in question.

(vi) Technological innovation perspectives. It measures the innovation and modernization perspectives along the production chain. The cheese and traditional sausage sectors have been having a remarkable progress in terms of the industrialization of their production chain. It is possible, however, for a sector to show good innovation and modernization perspectives at transformation level without being able to undergo structural changes that might lead to changes in the production of raw material. This situation actually affects the survival and sustainability of the whole production chain, as it happens with ovine/caprine animal production, with a negative impact on the lamb and goat meat and traditional cheese markets.

The results of the analysis regarding the reference market of the PDO/PGI products studied are presented on Table 3.

The cheese and traditional sausage markets possess the highest level of attractiveness due to such variables as the "obstacles to entering the market", "competitive capacity *vis-à-vis* substitutes", and "sector's positive image", followed by the honey market with a medium/high level of attractiveness. The evolution of the reference market and the sector's positive image are responsible for the "good" score obtained. The ovine, caprine, and beef market register medium/low level of attractiveness. The variable "present size of the market", namely the negative evolution of stocks with repercussions in meat production, affects the caprine market more than any other variable. Otherwise, ovine and bovine meat markets are usually damaged by the whole set of factors together.

2. The products' competitive position

It is evaluated through the simultaneous observation of a diversified set of variables. In order to evaluate the PDO cheese's competitive position, Barjolle *et al*. (1999) use the following factors: (i) production or sales volume evolution; (ii) price trends regarding similar products; (iii) consumption evolution; (iv) the product's quality; (v) the product's notoriety in the region as well as in the country of origin; (vi) the presence in the market of similar products or their direct substitutes; (vii) the capacity to geographically expand the market beyond the limits of the producing and exporting region; and (viii) the products' sustainability in case of a possible decrease or even withdrawal of public, national, or European Union financial aid. These authors acknowledge the fact that it is often difficult to objectively evaluate many of these variables. So, they suggest that a careful selection of only the most relevant variables should be done. In the above mentioned study, the variables selected were: (i) "sales evolution"; (ii) "price trends"; (iii) "the product's notoriety"; (iv) "the product's image"; (v) "the ability to react to imitations"; (vi) " the expansion of sales geographic area"; and (vii) "dependence on public measures and public aid" (Barjolle *et al.*, 1999). The study of PDO/PGI products' competitive position in Trás-os-Montes included the joint analysis of the variables listed on Table 4. These were evaluated on a scale from 1 to 5 – very weak/very low (1), weak/low (2), medium/neutral (3), strong/high (4), very strong/very high (5) – and are as follows:

Table 3. Reference markets' attractiveness

PDO/PGI Products	Present size of reference market (W=0.2)		Reference market evolution (W=0.2)		Obstacles to entering the market (W=0.15)		Competitive capacity *vis-à-vis* substitutes (W=0.15)		Sector's image (W=0.15)		Technological innovation perspectives (W=0.15)		Market's attractiveness		
	C	V	C	V	C	V	C	V	C	V	C	V	Low	Medium	High
Carne Barrosã	3	0.6	3	0.6	4	0.6	3	0.45	3	0.45	3	0.45		3.15	
Carne Maronesa	3	0.6	3	0.6	4	0.6	3	0.45	3	0.45	3	0.45		3.15	
Carne Mirandesa	3	0.6	3	0.6	4	0.6	3	0.45	3	0.45	3	0.45		3.15	
Carne de bovino Lameiros de Barroso	3	0.6	3	0.6	4	0.6	3	0.45	3	0.45	3	0.45		3.15	
Borrego Terrincho	2	0.4	5	1.0	4	0.6	4	0.6	4	0.6	2	0.3		3.5	
Cordeiro Bragançano	2	0.4	5	1.0	4	0.6	4	0.6	4	0.6	2	0.3		3.5	
Cabrito do Barroso	1	0.2	5	1.0	3	0.45	4	0.6	4	0.6	2	0.3		3.15	
Cabrito Transmontano	1	0.2	5	1.0	4	0.6	4	0.6	4	0.6	2	0.3		3.3	
Queijo de Cabra Transmontano	4	0.8	5	1.0	5	1.0	3	0.45	4	0.6	3	0.45			4.3
Queijo Terrincho	4	0.8	5	1.0	5	1.0	3	0.45	4	0.6	3	0.45			4.3
Alheira de Mirandela	4	0.8	4	0.8	3	0.45	3	0.45	5	0.75	5	0.75			4.0
Linguiça de Vinhais	4	0.8	4	0.8	5	0.75	5	0.75	5	0.75	3	0.45			4.45
Salpicão de Vinhais	4	0.8	4	0.8	5	0.75	5	0.75	5	0.75	3	0.45			4.45
Presunto de Barroso	4	0.8	4	0.8	5	0.75	5	0.75	5	0.75	3	0.45			4.45
Mel da Terra Quente	4	0.8	5	1.0	3	0.45	3	0.45	5	0.75	3	0.45		3.9	
Mel do Barroso	4	0.8	5	1.0	3	0.45	3	0.45	5	0.75	3	0.45		3.9	
Mel do P. Montesinho	4	0.8	5	1.0	3	0.45	3	0.45	5	0.75	3	0.45		3.9	

W: Weight; C: Classification (1 to 5); V: Value. Source: Tibério (2004).

Table 4. Relevant factors in evaluating competitive position

Factors	Relative Weight
Relative market share	10%
Present production *vis-à-vis* potential production	10%
Relative weight of PDO products' potential production in regional production	10%
Price trend	10%
Unitary costs	10%
Product's image and notoriety	10%
Product's total quality	10%
Human resources	10%
Distribution and marketing network	10%
Protection against imitations	5%
Independence from public aid	5%
Total	100%

Source: Tibério (2004), adapted from Nunes and Cavique (2001) and Lindon et al. (2000).

A. Relative market share (RMS)

The most commonly used indicator to assess a product's or brand's competitive position is its absolute[5] or relative[6] Market Share (Pires, 1999; Lindon *et al*., 2000). We have chosen the RMS because it is a good indicator of the market's competitive structure and provides reliable information about the distance separating a given product or brand from the market leader product or brand (Lindon *et al*., 2000). The relative market shares of the products studied are presented on Table 5. The *Alheira de Mirandela*, and *Mel do Parque de Montesinho*, the *Linguiça de Vinhais* and *the Cabrito de Barroso* are leader products in their respective markets. The *Salpicão de Vinhais* comes second, very far from the competitor product leading the market.

Table 5. Relative market share (RMS)

Product	RMS	Product	RMS	Product	RMS
1. Carne Barrosã	0.28	*7. Cabrito de Barroso*	2.23	*13. Salpicão de Vinhais*	0.53
2. Carne Maronesa	0.06	*8. Cabrito Transmontano*	0.44	*14. Presunto de Barroso*	0.0
3. Carne Mirandesa	0.36	*9. Queijo de Cabra Transmontano*	0.06	*15. Mel da Terra Quente*	0.0
4. Carne B. L. Barroso	0.07	*10. Queijo Terrincho*	0.26	*16. Mel do Barroso*	0.01
5. Borrego Terrincho	0.06	*11. Alheira de Mirandela*	47	*17. Mel do P. de Montesinho*	6.75
6. Cordeiro Bragançano	0.02	*12.Linguiça de Vinhais*	3.3		

Source: Tibério (2004).

The RMS was evaluated according to the following scale: very low, 1 (≤ 0,1), low, 2 (> 0,1 to ≤ 0,5), medium, 3 (> 0,5 to ≤ 1), high, 4 (> 1 to ≤ 3), very high, 5 (≥ 3).

[5] Coefficient between the sales of the product considered and the total sales of similar products in the same market.
[6] Coeficient between the absolute market share of the product considered and the absolute market share of the market leader.

B. The weight of PDO/PGI products regarding their potential production

This variable is analysed in terms of comparing production and the actors involved, both present and potential (raw-material producers and processing units). The producers associations wish to trade the most of their production using the protected product's name. The relative weight of 100% is thus available to any managing entity and therefore we have established the following classification parameters: (i) very low, 1 (> 0% to <10%); (ii) low, 2 (≥ 10% to <40%); (iii) medium, 3 (≥ 40% to <75%); (iv) high, 4 (≥ 75% to <90%); and (v) very high, 5 (≥ 90%). Table 6 shows the relative weight of PDO/PGI products' present production regarding their production potential. Especially significant are *Mel do Parque de Montesinho*, *Carne Mirandesa* and *Carne Barrosã*.

Table 6. PDO/PGI products' relative production (RP) compared to their potential production

Product	RP (%)	Product	RP (%)	Product	RP (%)
1. Carne Barrosã	35	*7. Cabrito de Barroso*	23	*13. Salpicão de Vinhais*	20
2. Carne Maronesa	13	*8. Cabrito Transmontano*	6.5	*14. Presunto de Barroso*	0
3. Carne Mirandesa	63	*9. Queijo de Cabra Transmontano*	2	*15. Mel da Terra Quente*	0
4. Carne B. L. Barroso	10	*10. Queijo Terrincho*	5	*16. Mel do Barroso*	0
5. Borrego Terrincho	3.5	*11. Alheira de Mirandela*	13	*17. Mel do P. de Montesinho*	90
6. Cordeiro Bragançano	5	*12.Linguiça de Vinhais*	20		

Source: Tibério (2004).

C. Relative weight of PDO/PGI potential production on the regional production

This variable was introduced as a means to allow those products which have not yet entered the market to show their competitive position. Production limitations as well as the specificity of this type of products pose some difficulties to both the products' development and representativity *vis-à-vis* the sector's regional production. In order to avoid products to obtain score 1 (very low) or 2 (low), we have established less demanding levels than the ones defined for the preceding variable: (i) very low, 1 (> 0% to < 10%); (ii) low, 2 (≥ 10% to < 25%); (iii) medium, 3 (≥ 25% to < 50%); (iv) high, 4 (≥ 50% to < 75%); (v) very high, 5 (≥ 75%). *Alheira de Mirandela, Mel do Parque de Montesinho* and *Queijo Terrincho* are the most representative products at regional level (Table 7).

D. Price trend

It reflects the price evolution and the differences between the prices received by the producers and the market prices in the PDO/PGI products' market when compared to similar products.

E. Unitary costs

It expresses the possibility of reducing production costs and making the product more competitive as regards its price variable and of/or generating bigger profit margins and, consequently, a greater competitive capacity.

F. The product's notoriety and image

Identifying and perceiving the product has to do with how effective the product's supply in the market is and it may make the difference between products which are known only geographically in the area where they are produced/manufactured, and products with a wide regional or national reputation. The evaluation in terms of very low (1); low (2); medium (3); high (4) and very high (5), is based on the information at the distribution level and publicizing initiatives carried out by their respective managing entities.

Table 7. Relative importance (RI) of PDO/PGI products' potential production compared to the sector's regional production

Product	RI (%)	Product	RI (%)	Product	RI (%)
1. Carne Barrosã	10	*7. Cabrito de Barroso*	23	*13. Salpicão de Vinhais*	30
2. Carne Maronesa	10	*8. Cabrito Transmontano*	42	*14. Presunto de Barroso*	27
3. Carne Mirandesa	9	*9. Queijo de Cabra Transmontano*	42	*15. Mel da Terra Quente*	50
4. Carne B. L. Barroso	30	*10. Queijo Terrincho*	75[†]	*16. Mel do Barroso*	12.5
5. Borrego Terrincho	16	*11. Alheira de Mirandela*	100	*17. Mel do P. de Montesinho*	90
6. Cordeiro Bragançano	3	*12. Linguiça de Vinhais*	30		

[†]Due to lack of information on the regional production of sheep's milk cheese, this value was estimated. The Churra da Terra Quente breed is the only autochthonous breed in the region used for milk production purposes.
Source: Tibério (2004).

G. The product's total quality

It is usually understood as the product's technical, technological, or functional quality and the perception of its value to the customer or consumer. We took into consideration the several levels of quality usually associated with this type of products and the modernization and innovation processes implemented at the production chain level.

H. Human resources level

The success of PDO/PGI products' production chain depends on the running entities' management and coordination. The number and quality of qualified human resources available has been proven to be a successful factor in these products' production chain.

I. Distribution and marketing network's effectiveness

It evaluates the innovation effort, both to trading and promoting the products, as well as the ability to conquer wider markets.

J. Protection against imitations and the abusive use of the name

The protection system seeks to avoid the abusive use of the products' name. Yet many are still often being the object of abusive use, with a negative impact on their competitive capacity and assertiveness in the market.

K. Independence from public aid

What are being discussed here are micro-productions obtained in ill-favoured peripherical regions which, as such, benefit from aid mechanisms within the Common Agricultural Policy. This variable was introduced with the purpose of assessing the products' sustainability should there be a decrease or cut down from the multiple public financial aid, albeit national or European.

3. Assessing competitive position

The results concerning the assessment of the competitive position of the PDO/PGI products studied are presented on Table 8. Generally speaking, it seems PDO/PGI products of animal origin, in Trás-os-Montes, score low or medium competitive position. Despite low production volumes, *Linguiça de Vinhais* leads the market at national level in its category displaying a competitive position above the average. Worthy of notice, with medium/high competitive position, are *Salpicão de Vinhais*, *Mel do Parque de Montesinho* and *Alheira de Mirandela*. In the case of *Salpicão de Vinhais*, the most pertinent variables are the "price trend", the "product's quality" and the "human resources". The *Mel do Parque de Montesinho* owes its competitive position to being the PDO honey market leader in Portugal, to its high relative weight on the honey production within its production area, and to its external market based distribution and marketing network. The *Alheira de Mirandela*'s competitive position is based on its high relative market share, its relevance within the context of this product's regional production, its high notoriety, and its independence from public national or EU aid. The meat labelled *Mirandesa*, *Barrosã* and *Bovino Cruzado dos Lameiros de Barroso*, the kid goat *Cabrito de Barroso*, and the cheeses *Queijo Terrincho* and *Queijo de Cabra Transmontano* register medium/low competitive position. On top of the ranking list of products with a low competitive position we find *Carne Maronesa* and *Cabrito Transmontano*, followed by *Cordeiro Bragançano*, *Mel do Barroso* and *Borrego Terrincho*. The fact that these products are not often available on the market explains their low score. With a very low competitive position, due mainly to not being available on the market, we find *Mel da Terra Quente* and *Presunto de Barroso*. The sectorial analysis has revealed the following aspects[7]:

(i) Beef. *Carne Mirandesa* and *Carne Barrosã* show some advantages over the other two products of the sector. Carne Maronesa holds a lower competitive position as a result of there being no human resources available as regards producer associations and the protection of the managing entities at an early stage of the process, something which reflects itself on how the production chain works and on the production volume in the market. The score of the variables considered is not much different from product to product. They are all characterized by low relative market shares, significant changes in the marketing process, in the distribution network and advertising initiatives and positive price differences as compared to the standard product. POD production chains of these products experience a certain amount of difficulty when fighting the abusive use of a product's name in view of the high notoriety of autochthonous breed's meat. Management of these products is supported by Producers Associations in the form of highly qualified human resources.

(ii) Ovine meat. *Borrego Terrincho* and *Cordeiro Bragançano* present a weak competitiveness. Their RMS is very low, and the same applies to their market volumes regarding their potential production.

(iii) Caprine meat. *Cabrito de Barroso* scores a higher competitive position than *Cabrito Transmontano*, as a result of it leading the market, although the latter registers a much higher production potential.

(iv) Cheeses. *Queijo Terrincho* and *Queijo de Cabra Transmontano* hold very proximate competitive positions, with only a slight advantage of the former due to its larger production. None of them, yet, leads the traditional cheese market.

(v) Traditional sausage products. PDO/PGI products in this sector hold a competitive position over the average but for *Presunto de Barroso* whose certification as a PDO product has not yet become effective. The *Alheira de Mirandela*, more often subject to having its name abusively used and under the purview of a managing entity intervening little on the production

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[7] The whole of the PDO/PGI meat in Trás-os-Montes is obtained from autochthonous breeds, at the expense of high production costs and heavy dependence on national and EU public aid.

chain, comes lower on the ranking than *Linguiça* and *Salpicão de Vinhais* as regards competitive position.

(vi) Honey. The differences found have mainly to do with the dynamics imposed on the product's production chains by their respective managing entities. The *Mel do Parque de Montesinho,* being a market leader, has a positive performance, unlike *Mel da Terra Quente*, despite its greater production potential, and *Mel do Barroso* which achieve a negative performance.

4. Assessing the performance

By doing a cross analysis of the "products' competitive position" and the "market's attractiveness" variables it was possible to distribute the products by the nine MacKinsey matrix segments and thus obtain a general overview of their relevance for and performance in the market (Fig. 1).

Figures 1 and 2 show a concentration of products on three segments of the matrix. These results allow us to make some considerations in terms of ordered pairs (competitive position – market's attractiveness):

(i) Segment 1 (strong - strong): Because it leads the market, *Linguiça de Vinhais* holds a strong competitive position in an attractive market. Consolidating its position in order to ensure the future is the right strategy to pursue.

(ii) Segment 2 (medium - strong): This segment includes *Salpicão de Vinhais*, *Alheira de Mirandela, Queijo Terrincho* and *Queijo de Cabra Transmontano*. These products do have a certain potential provided they are available on the market. Only then can they increase their competitive position and move on to segment 1. Therefore, investing to grow is the motto to be followed.

(iii) Segment 5 (medium - medium): It groups products into categories, depending on how close they are to their life cycle maturity stage, with the exception of *Carne de Bovino Cruzado dos Lameiros de Barroso. Mel do Parque de Montesinho, Carne Barrosã* and *Carne Mirandesa* are very near their maximum production threshold. The trade growth margin of *Carne de Bovino Cruzado dos Lameiros de Barroso*, however, may allow it to move on to segment 3. In these cases, emphasis is placed on profit.

(iv) Segment 6 (weak - strong): It aggregates only *Presunto de Barroso*. We are dealing with a segment with strong market attractiveness. It is expected that the beginning of the marketing process and the production chain development will take a normal course.

(v) Segment 7 (weak - medium): It is the matrix zone, which aggregates a high number of products. The situation is not dramatic, though, since the success of the production chains of the products therein depends more on their competitive position rather than on the market's attractiveness. These products have a weak representativeness on the market a situation that must be dealt with and solved in the short run if they are to move on to segment 5.

IV – Conclusions

Reference market attractiveness. PDO/PGI traditional sausages and cheeses show more attractive reference markets. Beef meat markets present medium/low attractiveness. The remaining products are included in medium or high/medium attractiveness markets.

Table 8. PDO/PGI products' competitive position in Trás-os-Montes

Products	Relative Market share W=10%		POD/PGI products' relative weight W=10'%		Relative weight of PDO/PGI products' potential production W=10%		Price trend W=10%		Unitary costs W=10%		Product's notoriety and image W=10%		Product's total quality W=10%		Human Resources W=10%		Distribution and marketing network W=10%		Protection against imitations W=5%		Independence from public aid W=5%		Competitive position		
	C	V	C	V	C	V	C	V	C	V	C	V	C	V	C	V	C	V	C	V	C	V	Low <3	Medium ≥3 to <4	High≥4
Carne Barrosã	2	0.2	3	0.3	2	0.2	4	0.4	1	0.1	5	0.5	5	0.5	4	0.4	4	0.4	2	0.1	1	0.05		3..15	
Carne Maronesa	1	0.1	2	0.2	2	0.2	4	0.4	1	0.1	4	0.4	5	0.5	3	0.3	4	0.4	2	0.1	1	0.05	2.75		
Carne Mirandesa	2	0.2	3	0.3	1	0.1	4	0.4	1	0.1	5	0.5	5	0.5	5	0.5	4	0.4	2	0.1	1	0.05		3.15	
Carne Lameiros de Barroso	1	0.1	1	0.1	3	0.3	4	0.4	3	0.3	3	0.3	4	0.4	5	0.5	4	0.4	3	0.15	3	0.15		3.1	
Borrego Terrincho	1	0.1	1	0.1	2	0.2	2	0.2	2	0.2	2	0.2	5	0.5	1	0.1	1	0.1	3	0.15	1	0.05	1.9		
Cordeiro Bragançano	1	0.1	1	0.1	1	0.1	3	0.3	2	0.2	2	0.2	5	0.5	2	0.2	3	0.3	3	0.15	1	0.05	2.2		
Cabrito do Barroso	4	0.4	2	0.2	2	0.2	3	0.3	2	0.2	3	0.3	5	0.5	5	0.5	4	0.4	3	0.15	1	0.05		3.2	
Cabrito Transmontano	2	0.2	1	0.1	3	0.3	2	0.2	2	0.2	3	0.3	5	0.5	5	0.5	3	0.3	3	0.15	1	0.05	2.8		
Queijo de Cabra Transmontano	1	0.1	1	0.1	3	0.3	4	0.4	3	0.3	2	0.2	4	0.4	5	0.5	4	0.4	4	0.2	4	0.2		3.1	
Queijo Terrincho	2	0.2	1	0.1	5	0.5	4	0.4	3	0.3	2	0.2	4	0.4	4	0.4	4	0.4	4	0.2	4	0.2		3.3	
Alheira de Mirandela	5	0.5	2	0.2	5	0.5	3	0.3	4	0.4	5	0.5	3	0.3	2	0.2	4	0.4	1	0.05	5	0.25		3.6	
Linguiça de Vinhais	5	0.5	2	0.2	3	0.3	5	0.5	4	0.4	4	0.4	5	0.5	5	0.5	4	0.4	4	0.2	4	0.2			4.1
Salpicão de Vinhais	3	0.3	2	0.2	3	0.3	5	0.5	4	0.4	4	0.4	5	0.5	5	0.5	4	0.4	4	0.2	4	0.2		3.9	
Presunto de Barroso	-	-	-	-	4	0.4	-	-	-	-	4	0.4	-	-	5	0.5	-	-	1	0.05	4	0.2	1.65		
Mel da Terra Quente	-	-	-	-	3	0.3	1	0.1	1	0.1	2	0.2	3	0.3	1	0.1	1	0.1	4	0.2	3	0.15	1.55		
Mel do Barroso	0	0.0	1	0.1	2	0.2	3	0.3	2	0.2	2	0.2	4	0.4	2	0.2	2	0.2	4	0.2	3	0.15	2.15		
Mel do P. Montesinho	5	0.5	5	0.5	2	0.2	3	0.3	2	0.2	3	0.3	5	0.5	3	0.3	5	0.5	4	0.2	3	0.15		3.65	

W: Weight; C: Classification; V: Value.
Source: Tibério (2004).

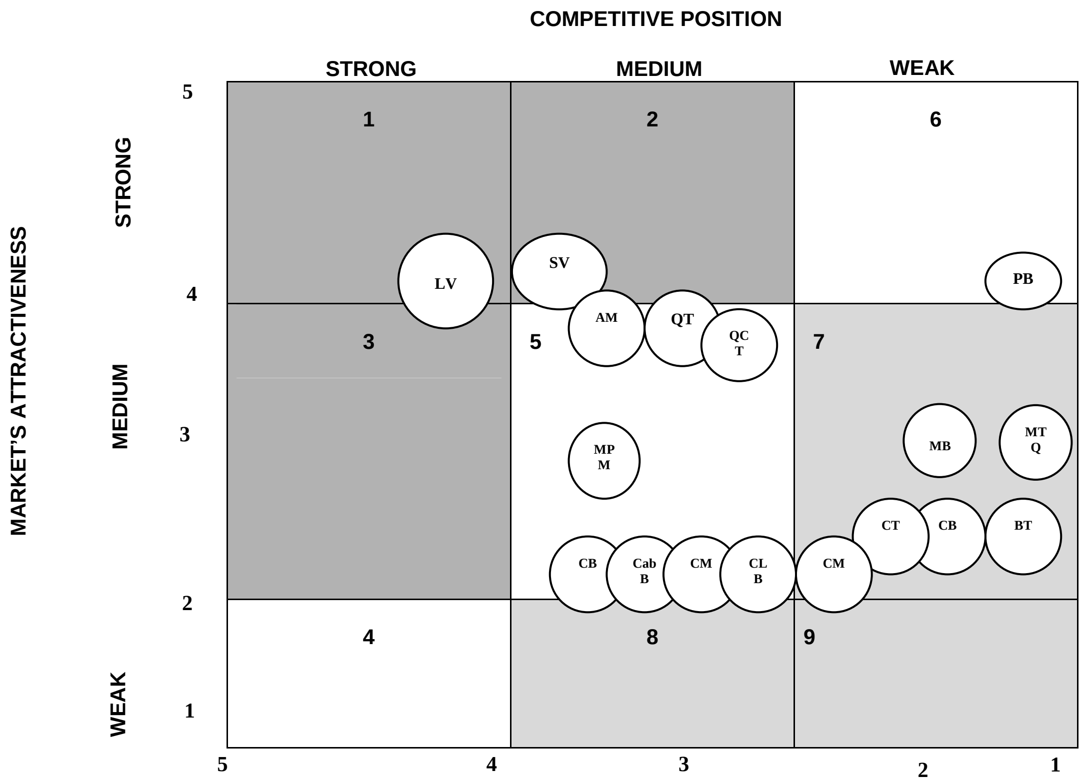

Fig. 1. PDO/PGI products' relative position according to the McKinsey model. Source: Tibério (2004).

MARKET'S COMPETITIVENESS	STRONG	MEDIUM	WEAK
STRONG	1 **PROTECT THE POSITION** ▪ Linguiça de Vinhais	2 **INVEST TO GROW** ▪ Salpicão de Vinhais ▪ Queijo Terrincho ▪ Queijo de Cabra Transmontano ▪ Alheira de Mirandela	6 **GROW SELECTIVELY** ▪ Presunto de Barroso
MEDIUM	3 **GROW SELECTIVELY**	5 **SELECTIVITY: EMPHASIS ON PROFIT** ▪ Mel do Parque de Montesinho ▪ Cabrito de Barroso ▪ Carne Mirandesa ▪ Carne Barrosã ▪ Carne Lameiros de Barroso	7 **LIMITED EXPANSION OR SLOWDOWN** ▪ Carne Maronesa ▪ Cabrito Transmontano ▪ Mel do Barroso ▪ Mel da Terra Quente ▪ Cordeiro Bragançano ▪ Borrego Terrincho
WEAK	4	8	9 **ABANDON**

Vertical scale: 5, 4, 3, 2, 1. Horizontal scale: 5, 4, 3, 2, 1.

Fig. 2. PDO/PGI products distribution according to the Mckinsey model. Source: Tibério (2004).

Competitive position. PDO/PGI products in Trás-os-Montes hold mostly weak or medium competitive position. Worth mentioning is *Linguiça de Vinhais* with a strong competitive position and *Salpicão de Vinhais, Mel do Parque de Montesinho* and *Alheira de Mirandela*, with a high/medium competitive position. The meat varieties *Mirandesa*, *Barrosã* and *Lameiros de Barroso*, *Cabrito de Barroso* and the cheeses *Terrincho* and *Cabra Transmontano* occupy an intermediate position. *Carne Maronesa* and *Cabrito Transmontano* are leaders of a group of products with a low or very low competitive position.

Performance (attractiveness versus competitive position). The cross analysis of the variables places the products within the various sections of the McKinsey matrix, making it possible to assess their performance in their respective reference markets and to set up suitable development strategies. As shown in Figs 1 and 2, a small group of products (*Salpicão de Vinhais*, *Queijo Terrincho*, *Queijo de Cabra Transmontano* and *Alheira de Mirandela*) on the left upper part of the matrix, show a competitive position lower than the market's attractiveness. As such, the right strategy would be to make investments in order to grow and to develop the strong points in order to become leader of the market. Another group of products, namely *Mel do Parque de Montesinho*, *Cabrito de Barroso* and the beef meats *Mirandesa*, *Barrosã* and *Lameiros de Barroso*, is situated in the centre of the matrix. To protect the position by investing on high profitability activities and segments and focusing on profit are likely strategic actions to be adopted. A high number of products (45%) are situated in the right lower part of the matrix, which, from a theoretical viewpoint, corresponds to less attractive products. Actually, in practical terms, it is not exactly so since they owe their lesser suitable performance to their weak competitive position which, in turn, depends on organizational aspects.

In short, we may say that, in Trás-os-Montes, there is still room for improving the development of animal PDO/PGI products production chain but it does not by itself pose any structural problem since their development depends mostly on their own competitive position rather than on the competitiveness of their reference market. Of all the products studied, only *Carne Barrosã* and *Cabrito de Barroso* show a competitive position higher than the market's attractiveness. Besides, their development is subject to external factors which cannot be controlled. The products with the worst level of performance (right lower sector of the matrix), show a competitive position lower than the attractiveness levels of their respective markets and their development depends on controllable, internal factors.

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Glossary

PDO/PGI Products	Description
Alheira de Mirandela	A typical sausage from Mirandela made of bread and meat
Borrego Terrincho	Lamb from certain areas and municipalities of Trás-os-Montes which constitute the designation Terrincho
Cabrito do Barroso	Kid goat from Barroso
Cabrito Transmontano	Kid goat from Trás-os-Montes
Carne Barrosã	Beef from an autochthonous breed in the Barroso region
Carne de bovino dos lameiros de Barroso	Beef from cattle raised in the marshes of the Barroso region

Carne Maronesa	Beef from an autochthonous breed in the mountain region of Marão
Carne Mirandesa	Beef from an autochthonous breed in the Miranda do Douro region
Cordeiro Bragançano	Lamb from the region of Bragança
Linguiça de Vinhais	Sausage from Vinhais
Mel da Terra Quente	Honey from the central part of Trás-os-Montes called "Terra Quente" due to its Mediterranean Climate (quente = hot)
Mel do Barroso	Honey from the Barroso Region
Mel do Parque de Montesinho	Honey from Montesinho Park
Presunto de Barroso	Ham from the Barroso region
Queijo de cabra Transmontano	Goat milk cheese from Trás-os-Montes
Queijo Terrincho	Terrincho cheese
Salpicão de Vinhais	A thick type of sausage from Vinhais