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### **Conference Paper**

The Link between Italian Agri-food Districts and PDO, PGI and TSG products.

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#### Introduction

Italy has been the stage-set of an extraordinary industrialization and development model. This development led the outdated post - world war II - Italian economy to be, today, one of most developed country in the world. In this context many small and medium enterprises were interested, over the years, by an aggregation process on territorial basis that transformed them in industrial districts.

But in recent years there is an ongoing debate on the industrial model ability to survive and develop, the nature of the industrial model is call into question.

Some scholars have argued critically that the Italian industrial model is outdated, it is unable to react to the contemporary world changes (De Cecco, 2000).

There are many new challenges that the enterprises, including the districts' enterprises, have to face: the globalization process, the economic crisis, the appearance of new markets and violent competition, the opening of new production chains.

Those traps did not compromise the trust of the majority of scholars (Murat and Paba, 2005; Signorini and Omiccioli, 2005; Guelpa and Micelli, 2007) about the survival of the district model about the survival of the district model: "some structural changes, new perspectives derived from the use of new technologies, represent a survive chance and develop for the future". (Guelpa and Micelli, 2007).

There are some questions that, until now, are still without answers: how Italian production system can face these new changes? What changes are necessary to win the modern world challenges? How the Italian agri-food districts are responding to the new scenario?

Our hypothesis is that if there is a possible development, it will be represented by the link between a certain typology of agri-food districts and typical and quality certified food productions, today regulated by the European Union trough the Controlled Designation of Origin and the Protected Geographical Indication.

"The agri-food districts, thanks to the strong linkages with the wine and food culture and to the food regional traditions variety, generally have the characteristics of "typical" and "quality", that make the products don't imitable and reproducible" (Brasili and Fanfani, 2010). The importance of the linkage is shown by the positive performance of PDO and PGI productions in the last years, most of all in the export, with better result than low quality food productions (Edison Foundation, 2009; Ismea, 2010).

"The industrial districts distinguished by standardized production, are still losing market shares to advantage of industrial districts with more flexible and complex organization, devoted to production marked by high quality and a strong linkage with the territory" (Foresti and Micelli, 2007).

These typologies of production are very important in the food transformation industry, in particular into the agri-food districts. The latter are interested to typical quality productions related to a specific territory, but this attitude don't have to be confused with a generic productive "localism".

Since a very long time, the large-scale retail trade is very interested to the return of the quality production linked to a specific territory and is implementing many commercial initiative to emphasize traditional products linked to a territory.

Our objective is to analyze the changes that, currently, are involving the Italian agro-food districts of quality.

The linkages between agro-food districts and quality productions represent the right way to revitalize the districts that, like Becattini wrote, "are social machines to production" (Becattini, 1999).

We will verify the strategies of the agri-food districts to react to the difficult contemporary economic trend, we will wonder about the persistence of positive externalities, distinctive element of the districts, external to the enterprise but internal to the industrial districts. From the Signorini's pioneering study (1994) to the Fabiani and Pellegrini's ones (1998), these externalities are defined like "districts effect". In Brasili and Ricci Maccarini's (2001) and in Brasili and Fanfani' (2010) studies, we can find a specific analysis concerning the agro-food sector: in those papers was measured "the districts effect" for some typical production like Parma Ham, San Daniele Ham and Parmigiano Reggiano.

### 2. The agri-food districts in the Italian socio-economic context

## 2.1 The agri-food districts and the economic crisis

In 2009, in the middle of the economic crisis, the comparison between the districts' enterprises and the no-districts' enterprises underlined, for the first time, a worse economic performance for the latter than for the former.

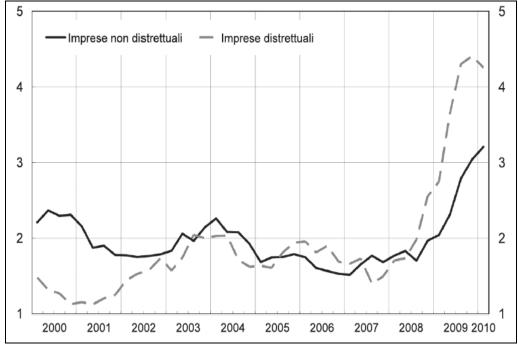
"The districts' enterprises got to the crisis without the protection of the "district effect", now are seeming exposed to recession, because of an effect of sectorial composition" (Iuzzolino and Micucci, 2010), so the specialization appear now fundamental.

Into the districts' areas we are observing an enterprises polarization, with a growth of distance from between the best enterprises, with a consistent sales proceeds (+9,8% in 2009), and the worst ones that registered very low sales proceeds (-48% in 2009).

"The differences between the 2 hubs consists in the variety of implemented strategies: the growth of enterprises with better sales had pointed not only to the production quality and the label affirmation, but had invested on the direct control of the channels of distribution" (Ricciardi, 2010).

Analyzing the credits values it's possible to see an evident decline of districts' enterprises and a strong credit distress.

Fig. 1 Flow credit distress (percentages)

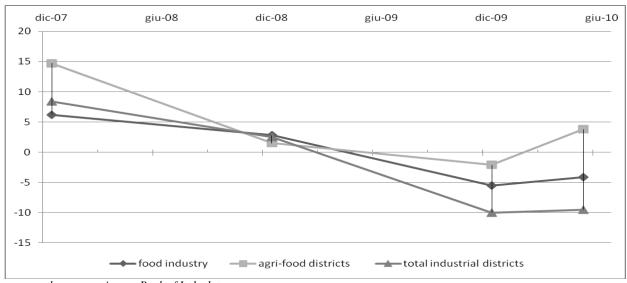


Source: "II° Rapporto sui distretti, 2010.

Analyzing the credit, particularly the agro-food credit, seems very interesting to compare the districts' enterprises require of credit with the no-districts' enterprises one.

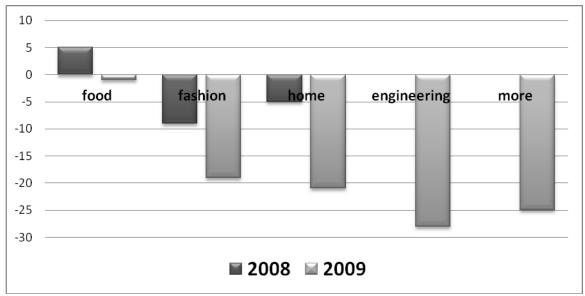
The agro-food districts examined, during the crisis' years, appear characterized by a dynamic of credit request better than the no-districts' ones and the other parts of the "district environment".

Fig. 2 Comparison of the dynamics of bank lending between food industry, agri-food districts and total industrial districts (percentage change over twelve months)



Source: author processing on Bank of Italy data

In this critical scenario there are some positive elements linked to the agri-food sector, thanks to its countercyclical characteristic. It's possible to observe this phenomenon analyzing the sector sales data.



Fig, 3 Evolution of the sales proceeds of the districts (% change in sales, median values)

Source: author processing on Intesa-Sanpaolo Bank data

In the actual reorganization process of districts there are some very interesting elements like the growth of the dimension of the districts enterprises (comparing with the national media), the increase of the opening of the production chain, the growth of the relationship between the production phase and the logistic and marketing ones, a little reduction of the productive specialization that help the enterprises to diversify and to raise the supply and the appearance of leader enterprises (Guelpa and Micelli, 2007; Corò, 2007; Brasili and Fanfani, 2009). Those ones very often are medium/large enterprises well-known in the national and international markets, responsible of a polycentric system of production network.

There are 2 tendencies with an important role in the agri-food system:

- 1) the reduction of the delocalization, accompanied by the rediscovery of the territory, understood like local network of quality sub-supply, with bigger competence and reliability than external structures, cheaper but not very efficient. We think that these phenomena will gain importance in the future.
- 2) the districts' areas effort to look for new markets for their products. This effort is responsible of some effects on the production quality, with a significant influence on the productive process trough the introduction of technological innovations specific for the growth of the quality and the respect of the environment.

"In the last years the change consists not only in the tendency to develop and improve the Made in Italy products, but also in a better collocation of these ones, particularly in the international markets" (Unioncamere, 2010).

Increased market share in countries outside Europe

Move target market to high end

Communication investments to strengthen the brand

Increased market share in Europe

Increased market share in Italy

Improving technological equipment company

Price restraint

Development and improvement of products

0 10 20 30 40 50 60 70

**Fig. 4 Strategic objectives declared by enterprises of the district for 2011** (values % of total enterprises; possibility of multiple responses)

Source: author processing on Unioncamere data

In an Unioncamere survey on the SMEs it is possible to see that product development and improvement was in 2011 an important objective for 62,8% of the entrepreneurs, for 43% was more important technologic improvement.

In the agri-food sector we have noted 2 important enterpreneurs' answers: "move the market target in the direction of a higher target" (23,9%), "investment in communication for the label strengthening" (27,9%). These data could be referable to the strength that many production consortiums of PDO and PGI are implementing, in particular, in the international market (Fig.4).

The Italian districts have the possibility to overcome and to react to these changes, also with many differences between the manufacturing sectors. The agri-food districts' position have positive characteristics but require coherent strategies and agri-food production specificity improvement.

### 2.2 The districts' export dynamic strategy after the economic crisis.

2009 economic crisis put a strain on the international economic system, with a reduction of the international GDP of 0,6%, particularly there was a reduction onhe international market (-11%). In the international context, the Italian performance was very negative for (-5%) and industrial production (-18,5%).

The negative performance is highly correlated with a consistent reduction of the Italian export that, in 2009, reduced more than 20%.

Most of all, the industrial districts had difficulties in exports, losing their competitiveness, as the entire manufacturing sector.

At the end of 2011, the economic crisis reached the highest and worst level for the Italian economy (with recessionary prediction), the data of the 2<sup>nd</sup> quarter of 2011 (Fig.5) show positive values and should not damage the rising of the export. (Fig.6).

Fig. 5 Quarterly percentage change of the Italian GDP at market prices

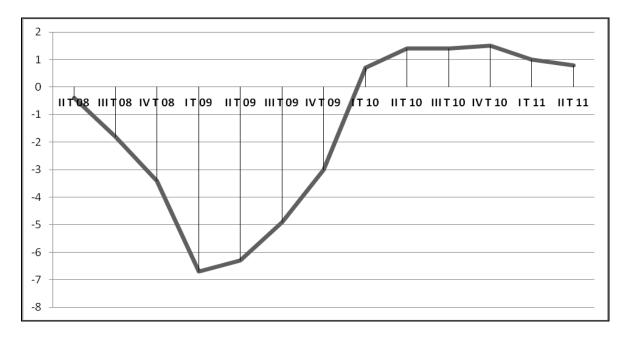
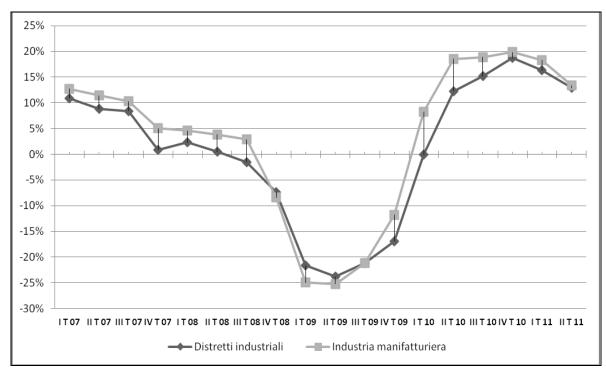


Fig. 6 Industrial districts and manufacturing industry export trends (% variation)



Source: author processing on Istat data

The contribute of the SMEs, hearth of the district model, to the Italian export is bigger than the contribute of the manufacturing enterprises. The presence of many SME in the agri-food Italian industry is responsible for the high number of typical and quality products.

In the new millennium, at least almost 65% of exports came from SME's production. But the little size of the enterprises entails, also, several problems: little capacity to create economies of scales, external direct investment from Italian agri-food industry to other countries is very low, there is still today a lot of foreign investment toward Italian agri-food sector.

"The increasing number of these mini-multinationals, characterized by flexible participation in the enterprises, the collaboration between the enterprises, could represent a very interesting way in the internationalization process" (Brasili and Fanfani, 2008). In the last 10 years there has been the growth of new markets for the districts' export, these represented an important element for the districts' profits, reduced in the traditional markets. Countries like India, China, Brazil represent today new important buyers and the Italian districts are attempting to penetrate in these markets. In these markets it is possible to see the biggest export growth since 2008 (Fig.7). The Russian market, considered like an emerging market, does not come out of economic crisis. As for the traditional market, represented by EU15, Swiss and U.S.A, we can observe very contrasting data. France, Germany, Swiss and Canada rise the 2008's level of export, on the other side Spain and UK are characterized by weak consumption (Fig.7). In the summer of 2011 there was a worsening in the European economical condition, leading to larger public debts and stock markets downfall in the Euro area, in the last month, it's possible that there will be repercussion in the export but, today, it is very difficult to understand how much time it will be necessary to return to pre-crisis level of export (Intesa-San Paolo, 2011).

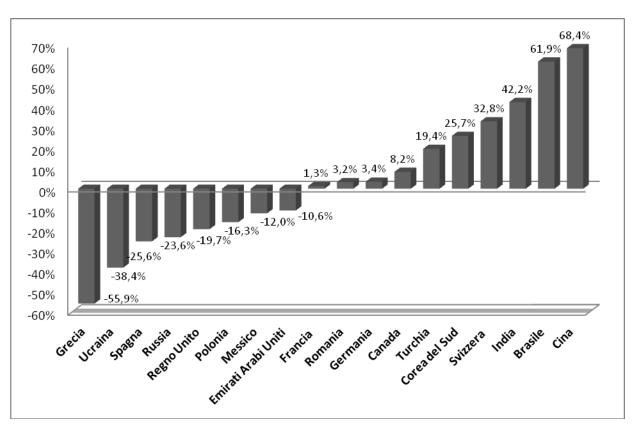


Fig. 7 Districts export variation on 2011 2<sup>nd</sup> quarter (% variation compare to 2008 2<sup>nd</sup> Q.)

Source: author processing on Istat data

### 3. Certified quality productions in the Italian and the European contexts

# 3.1 Agri-food districts' international trade

The situation of agri-food international trade (agriculture and food industry) is characterized by a structural deficit, which amounts to about 7 billion Euros per year in the last decade. In particular, export rose from about 16 billion Euros in 1999 to over 27 billion Euros in 2010, with a slight improvement of its relative position on Italy's total export. ISTAT data (2011) register a drop of manufacturing industry's export of over 28% compared with 2008 data, while food industry's export decrease has been of about 6%. This shows that the food sector is the strongest for the manufacturing industry in international markets competition (fig.10). Export of the food industry in 2009 reached 8.5% of total Italian export and this level was maintained in 2010.

Import of the food sector has increased from 23 billion Euros of 1999 to over 36 billion Euros of 2010. An increase of over 23 billion Euros (21.6%) of food industry's import has been registered between 2009 and 2010, which corresponds to 13% of the whole Italian import flow.

Fig. 8 Italy: agri-food Import-Export (millions of Euros) and % of total.

	Import	Export	Import %	Export %
1999	23.034	15.692	11,1%	7,1%
2000	25.068	16.886	9,7%	6,5%
2001	25.922	18.219	9,8%	6,7%
2002	26.054	19.138	10,0%	7,1%
2003	26.620	18.999	10,1%	7,2%
2004	27.282	19.449	9,6%	6,8%
2005	28.043	20.571	9,1%	6,9%
2006	30.187	22.198	8,6%	6,7%
2007	31.856	24.141	8,5%	6,6%
2008	33.145	26.241	8,7%	7,1%
2009	29.969	24.542	10,1%	8,4%
2010	36.443	27.792	12,8%	8,6%
% Variation 2010/2009	+ 21,6%	+ 13,2%		

Source: author processing on Istat data

Fig. 9 % Trend of agri-food export compared to total national export  $\,$ 

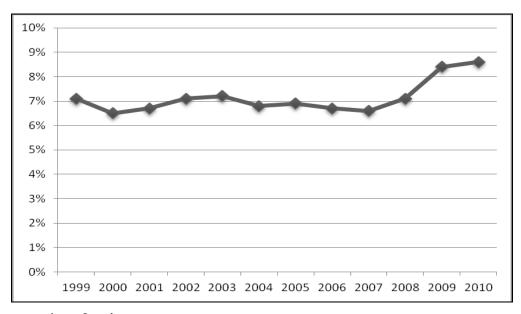
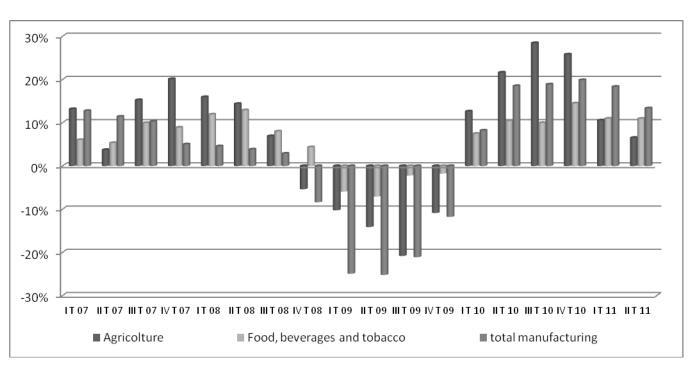


Fig. 10 Agri-food export trend (% variation)



Source: author processing on Istat data

Agri-food sector has had a constant export increase since 2011. This rise demonstrates the overcoming of 2009 crisis: in 2010 agri-food districts' export value was higher than in 2008. Last available data are related to 2<sup>nd</sup> quarter of 2011 and show a significant growth of the 8.8%. The

major contribution to this growth comes from the wine sector, followed by fruit and vegetables, pasta and confectionery, and then meat (fig. 11).

-30,8% Conserve 14.3% Oils Dairy 36.0% Meat and sausages Pasta and sweets Fruit and Vegetables Wines -40% -20% 0% 20% 40% 60% 80% 100%

Fig. 11 Agri-food export value trend (2<sup>nd</sup> Q 2011 on 2<sup>nd</sup> Q 2010)

Source: author processing on Istat data

The 15 EU countries are the main attractors of agri-food districts' export, as shown in figure 12. Export to those countries and to the USA and Canada is almost 75% of total export, representing the traditional market for agri-food districts' productions.

Even though the biggest part of Italian agri-food export is destined to the EU, USA and Canada, an analysis of the markets of emerging countries shows a strong interest towards *Made in Italy* production, also for agri-food typical products. "Analysis of directions of commercial flows of Italian agri-food districts stress changes of the geography of districts firms' export: although the privileged markets are the traditional ones (especially EU countries), export growth profile seems to be more dynamic" (Intesa-San Paolo, 2011). New markets intense dynamics are evidenced by the quarterly export data of Italian agri-food districts, that in the 2<sup>nd</sup> quarter of 2011 registered an increase of 17.5%, definitely bigger than the percentage of +7.2% registered by the export to the traditional markets.

Tab. 1 Traditional markets vs emerging markets of agri-food districts

	% Var. compared to 2011 2 <sup>nd</sup> Quarter	% Var. compared to 2008 1 <sup>st</sup> Quarter
Traditional		
markets	7,2%	7,0%
Emerging markets	17,5%	20,2%
Total	8,8%	9,0%

Source: author processing on Intesa-Sanpaolo Bank data

Altri 1,8% Medio Oriente Centro-sud America Asia centro orientale 12,8% Nord America Altri UE Europa centro orientale **UE15** 0% 10% 20% 30% 40% 50% 60% 70%

Fig. 12 Geographic distribution of Agri-food export ratio on 2<sup>nd</sup> Q 2011 (% value in thousand euro)

Export data variations during the 2<sup>nd</sup> quarter of 2011 show a strengthen of export flows to emerging countries' markets, which is led by the dynamic Eastern Europe countries (+28.6%) and South-Eastern Asia Countries (+17.6%), as shown in figure 13.

Export flows to traditional markets are positive too: export to EU countries increased by 8% and flows to North America registered a 5.8% growth. Export to China strongly increased too: there is a 38% growth between the second quarter of 2010 and the same period of 2011; regarding Eastern Europe data, export to Romania is emerging, with an increase between 2010 and 2011 by 63%, mainly due to the strong presence of Romanian citizens in Italy, which promote Italian agri-food productions in their homeland. Trades to traditional destinations shows an important increase to Germany (+8%), France (+10%), United Kingdom (+7%) and United States (+7%): this is a clear appreciations of Italian agri-food typical productions. Moreover, the Euro appreciation on the Dollar could lead to better export performances to the United States.

Totale -4.40% Medio Oriente 3.80% Centro-sud America 17,60% Asia centro orientale 5,80% Nord America Altri Europa 28.60% Europa centro orientale **UE15** 0% 20% -5% 5% 10% 15% 25% 30%

Figura 13 Geographic distribution of agri-food export value trend on 2<sup>nd</sup> Q 2011

## 3.2 PDO, PGI and TSG products' market share in Italy

Geographical and quality certification of agri-food productions is highly appreciated by Italian consumers and the market share of those quality products has constantly increased over last years. A consistent growth is also registered in the number of typologies of certified products: in 2011 Italian legislation certifies the existence of 235 PDO, PGI and TSG products. This is the highest value compared to the other EU countries: Italy is followed by France (187 certified productions), Spain (154), Portugal (116) and Greece (93). Those five countries produce 79% of the whole EU certified quality productions. In 2011, Italy produces 145 PDO typologies and 88 PGIs, 16 more than the previous year.

Italian certified products are mainly fruit and vegetables (37%), *extravergine* olive oils (19%), cheese (18%) and meat-based productions (16%); other sectors, such as bread and confectionery, fresh meat, vinegar and saffron cover the remaining 10% of quality productions. Italian certifications are more related to principal productive sectors than other European countries productions, in particular in fruit and vegetables sector (37% of Italian certifications are related to this sector, where the EU mean percentage is 26%).

Tab. 2 Number of PDO, PGI and TSG for country, 01/12/2011

Nation	PDO and PGI
Italy	235
France	187
Spain	154

Total	<u>1058</u>
Other	145
Austria	14
Czech Republic	31
Germany	82
Greece	93
Portugal	116

Source: author processing on Commission européenne - Agriculture et développement rural data

bakery products; meat; 3
other products; 12
Preparations of meat; 34
oils and fats; 40
cheese; 44
vegetables and cereals; 94

Fig. 14 PDO, PGI and TSG Italian products, 01/12/2011

Source: author processing on Commission européenne - Agriculture et développement rural data

Last ISTAT report (2010) on quality productions registered 86290 operators in PDO, PGI and STG productions sector, with an increase of 3.04% compared to 2009. 92.6% of those operators are employed in production, 5.7% in processing and the last 1.7% is employed in both production and processing sectors (figure. 15). Compared to 2008, there is an increase in producers (+2109 farm, 2.6%) and processors (+509 firms). The total cultivated surface for PDO, PGI and STG productions is 147.537 ha, (+8637 ha, 6.2% compared to 2008 values), more than 100 certified vegetal typologies are produced. Firms involved in certified productions manage 47085 cattle farms, which serve as a basis for 76 quality certified productions.

Producers are more present in cheese (32.432 firms with 35.486 cattle farms), oil (19.891 firms on 98.901 ha) and fruit, vegetal and cereal sectors (16.499 firms on 47.636 ha). Processing firms are 10.066 (+670 firms, 7.1%, compared to 2009) and operates in cheese (1.699 firms), oil (1.641 firms) and meat (949 firms) sectors. There is a consolidation of certified quality productions in Southern Italy's regions, although the most important producers of PDO, PGI and TSG are located in northern regions (tab. 3).

100.000 86.110 90.000 83.492 81.775 81.482 80.000 68.220 70.000 59.938 60.396 60.000 50.000 40.000 30.000 20.000 10.000 0 2004 2005 2006 2007 2008 2009 2010

Fig 15 PDO, PGI and TSG Italian operator, 31 December 2004 – 2010 (in thousand)

Source: author processing on Istat data

Tab. 3 PDO, PGI and TSG Italian operators - 31 December 2009 e 2010 (surface in ha and area)

		Pro	oducers (	1)				Farms				Surf	ace		
AREA			Comp.	Var.				Comp.	Var.				Comp.	Var.	
	2009	2010	%	assolute	%	2009	2010	%	assolute	%	2009	2010	%	assolute	%
Nord	37.209	38.096	47,9	887	2,4	25.440	25.489	54,1	49	0,2	38.379,75	39.583,10	26,8	1.203,35	3,1
Centro	18.098	18.391	23,1	293	1,6	4.657	4.341	9,2	-316	-6,8	65.176,61	67.171,80	45,5	1.995,19	3,1
Mezzogiorno	22.120	23.049	29,0	929	4,2	17.194	17.255	36,7	61	0,4	35.343,83	40.782,18	27,7	5.438,35	15,4
ITALIA	77.427	79.536	100,0	2.109	2,7	47.291	47.085	100,0	-206	-0,4	138.900,19	147.537,08	100,0	8.636,89	6,2
		Pro	cessors	(2)			Proces	sing stru	ctures			Operat	ors (3)		
AREA			Comp.	Var.				Comp.	Var.				Comp.	Var.	
	2009	2010	%	assolute	%	2009	2010	%	assolute	%	2009	2010	%	assolute	%
Nord	2.931	3.094	47,1	163	5,6	4.287	4.475	44,4	188	4,4	39.666	40.604	48,0	938	2,4
						2.733	2.906	28,9	173	6,3	19.137	19.551	23,1	414	2,2
Centro	1.580	1.698	25,8	118	7,5	2.733	2.900	20,5	170	0,0	10.101	13.001	20,1	717	۷,۷
Centro Mezzogiorno	1.580 1.554	1.698 1.782	25,8 27,1	118 228	7,5 14,7	2.733	2.685	26,7	309	13,0	23.317	24.432	28,9	1.115	4,8

- (1) One farmer can manage one or more farms .
- (2) One processor can perform multiple processing activities
- (3) One operator can operate both in production and processing

Almost 90% of the total income of certified quality productions, which amounts to 5,318 billion Euros is obtained by northern Italian regions (tab. 4). The final value of those PDO, PGI and TSG productions amounts to 9.4 billion Euros, and a share of 7.5 billions is related to internal market. Regional data show that Emilia Romagna produces 41% of total turnover (2.175 billion Euros), followed by Lombardia (1.325 billion Euros, 25%) and Friuli Venezia Giulia (350 million Euros, 6.6%), as shown in figure 16.

Those results are due to the presence in those regions of strong productions, such as Parma ham, Parmigiano-Reggiano cheese, Grana Padano cheese and San Daniele ham, that lead their specific income ranking. First 10 certified products belong to main considered categories, in particular fruit and vegetables.

#### 4. The link between agri-food districts and PDO and PGI productions

### 4.1 Quality agri-food districts

"Quality agri-food districts have an obvious impact on the definition of the model of development of the territory and a significant supply chain integration, characterized by typical productions or certifications" (Brasili 2003). The connection between the agri-food districts and the productions of quality PDO and PGI is quality agri-food district. These realities suffer from a chronic underestimation at the institutional and scientific level. In the few studies that deal with the sector emerging situations that need more attention (Tagliacarne Institute-Unioncamere, 2004). On 18 May 2001 was promulgated the decree entitled "Orientation and modernization of the agricultural sector, in accordance with article 7 of law No. 57, March 5, 2001", which ratifies the birth of the institutional reality of high quality agri-food districts: "quality agri-food districts are local production systems, including interregional, characterized by significant economic presence and interrelation and interdependence of productive agricultural and agri-businesses, certified productions and protected under Community or national legislation, or by traditional or typical" <sup>1</sup>. As sometimes happens, the Decree has not been fully considered by actors who would have the responsibility of creating a regulation framework in this area, as Regions' governments, which should perform the identification of the high quality agri-food districts in their territory, encouraging the same incentive policies. Most of the activities of the regions on the districts, however, have resulted in many cases in incomplete laws. Today there are few quality agri-food districts and, in regions that legislated, the initiative was slowed down<sup>2</sup>. To date, only 8 regions have legislated and identified their quality agri-food districts, for a total of 15 (table 5).

<sup>1</sup> Article 3 of Legislative Decree 228/2001 "Orientation and modernization of the agricultural sector, in accordance with article 7 of law No. 57, March 5, 2001".

<sup>2</sup> For further discussion, refer to M. Sassi: "The legislation on rural districts and agri-food quality: operational guidance and implementation" 2009.

Tab. 5 The districts recognized by Italian regions in rural agriculture.

Region Name	District Name	Law				
Piemonte	- Flower District of Lake	- DGR May 10, 2004, no.				
	Maggiore	18-12449				
	- Agro-industrial district of	- DGR June 18, 2007, no.				
	Rice	35-6184				
	- Horticultural Agro-	- DGR June 18, 2007, no.				
	Industrial District	35-6184				
Friuli – Venezia Giulia	-Agro-industrial district of	- DGR June 24, 2009, no.				
	San Daniele	1427				
Liguria	-DistrictAgricultural	- L.R. November 30, 2001,				
	Horticultural del Ponente	no. 42				
Lombardia	By way of definition.	-February 26, 2010, Decree				
		No. 1757				
		- August 7, 2009 DGR n.				
		10085				
Toscana	-The rural district of	- October 3, 2006, Decree				
	Maremma	No. 4515				
	- Interprovincial Rural	- October 26, 2006, Decree				
	District Flower Lucca-	No. 5002				
	Pistoia					
	-Nursery-Ornamental Rural	-October 26, 2006, Decree				
	District	No. 5001				

### 4.2 Agri-food districts and PDO and PGI productions

The first mapping of the districts of quality is a study conducted in 2004 by the Tagliacarne Institute in cooperation with Unioncamere, "The rural and agri-food districts certified in Italy". The study has shown the conditions that could help identifying a district and in different geographical areas these factors must be simultaneously present:

- the specialization of production (agri-food districts) on a specific task that has a weight on the overall economic activity, in other words the prevalence of a particular productive orientation (which often linked the existence of a typical product, possibly connoted by quality brand or type), and the complementarity with other productions of the area;
- the spatial contiguity of kind-of-activity units (firms) and the presence of a productive compact;
- the decomposition and divisibility of production processes;
- a productive background characterized mainly by small and medium-sized enterprises.

If all these conditions are satisfied, in order to identify the district, it's possible to observe the presence of activity of industrial processing of agricultural products.

In order to define quality agri-food districts it has been considered important to look for a link between some statistical indicators and the foundational concepts of Decree 228/2001 as a

significant economic presence, interdependence of production and the presence of traditional or typical productions.

In continuity with this study we analyzed the nature and consistency of relationship between agrifood districts and PDO and PGI products. The empirical evidence emerged from the data of the Italian Ministry of Agriculture and Tagliacarne Institute study for two different territorial levels.

The first level of analysis has identified only the provinces with quality agri-food districts (QAD) with a market share of more than 10% occupation of the territory. The second level has identified 55 districts where, through recourse to the specialization index of the single district, there were PDO and PGI products<sup>3</sup>. The analysis highlights the hypothesis of a link: 78% of Italian PDO and PGI were born in provinces, headquarters of quality agri-food districts, as well as more than 56% of these products is traceable to a QAD. Considering those assumptions and the positive performance of both agricultural districts (paragraph 2) and production of PDO and PGI (paragraph 3), it is clear that policies which sustain a district framework within PDO and PGI production areas led to positive economic effects.

Quality agri-food districts showed a growth trend in supported exports. Positive results with regard to the increase of exports in this period of strong economic crisis are likely (though not exactly identifiable) for many of the typical and quality productions in the sector, such as Prosciutto di Parma and San Daniele, Parmigiano-Reggiano, Grana Padano, Aceto balsamico tradizionale di Modena e Reggio Emilia, cured meats and sausages, formaggio di Fossa and mozzarella, pasta (table 6). Agricultural districts may be less vulnerable or more resistant against competition from emerging economies in the international markets, compared to what happens to other important sectors of the Italian economy such as textiles, clothing and household products (Brasili, Fanfani, 2010).

Tab. 6. Evolution of exports of the main quality agricultural districts

Main quality agri-food districts	Mln of Euros 2010	% variation period last	Variation % to 2008			
		2009	2010	1°Q. 2011	2°Q. 2011	1°Q. 2011
Industria del pomodoro di Nocera	864	1,5	-10,9	-15,8	-13,7	18,7
Ortofrutticolo Romagnolo	494	-15,6	12	11,8	0,8	-6,1
Salumi Modenesi	479	-1,4	16,3	6,3	14,6	19,8
Alimentare Parma	479	4,8	1	1,5	3,7	13,3
Mele Alto Adige	428	-11,1	19,8	37,2	42	29,9
Olivicultura del barese	347	-35,7	26,3	-47,2	65,6	-18,9
Salumi di Parma	235	1,8	16	8,6	10,8	19
Nocciola e frutta piemontese	232	-16,4	9,2	38,2	48,9	10,6
Lattiero-caseario di	199	-1,5	5,9	12	11,7	8,4

<sup>3</sup> Only the productions that have a specialisation index greater than 1 have been taken into consideration within the districts, for a discussion of methodological details, see PHD Aldo Marchese's dissertation (2010) pp. 148-153.

Reggio Emilia						
L'olio di Lucca	193	-12,9	6,6	5,8	19,6	-3,9
L'olio di Firenze	152	-4,8	13	26,9	4,1	16
Mozzarella di bufala campana	144	15,5	11	26,6	22,7	36,2
Distretto del pomodoro Pachino	141	-16	48,8	-12,8	-19,4	1,3
Lattiero-caseario di Parma	139	17,4	40,8	21,5	5,5	46,6
Salumi di Reggio Emilia	120	-2,5	8,8	11	10,9	10,3
Olio umbro	118	-3,3	9,3	33,8	20,2	45,3
Ortofrutticolo Catania	105	5,2	47,7	-0,6	-12,3	86,5
Olivicultura perugina	74	-0,8	11,8	-7,9	-0,3	35,6
Mele del Trentino	54	-28,3	18	29,7	63,4	-1,5
Ortofrutta del foggiano	54	-34,7	2,3	-6,7	-3,8	-28,7
Lattiero-caseario del sassarese	45	-29,2	88,6	-13,1	5,6	42,3

Source: author processing on Intesa-Sanpaolo Bank data

#### Conclusion

The analysis carried out on industrial and agri-food districts shows a clear shift towards firms that rely on "excellence", in terms of quality products. These companies show a greater resistance in terms of turnover and control of foreign markets. A survey of Unioncamere Studies Centre (2010) shows that about 24% companies belonging to the agri-food sector would "move the market toward an higher target range" and about 28% would make "marketing investments to strengthen the brand". These options confirm the will of the food industry to promote brands quality.

During the crisis, especially in 2009, exports of agri-industrial sector decreased by 6%, while the manufacturing industry declined of 24%. In 2011 there has been a significant growth in exports of agri-food districts (that in 2010 had already overcome the 2008 revenue), thanks to strong contributions from the compartments of wine, fruit and vegetables, pasta, sweets and meats. This fact confirms that high specialization in certain quality products is rewarded.

The agri-food districts exports grew more than the food industry as a whole. This fact highlights the importance of being "a system", to find in networking, and not only in the individual firms, the strength to face market turbulences. Italy is the first country in the European Union for the quantity of PDO, PGI and TSG products (235) and also during the crisis the number of companies specialized in this kind of products still increases.

These trends are occurring even in the South of the country, but 90% of the turnover for PDO, PGI and STG products is generated in the North, thus highlighting a new market dualism. Although the 2001 law recognizes the existence of districts, for quality products or traditional ones, it is evident that there is poor attention by the institution on implementing proper measures and policies. The analysis and studies carried out on the agri-food sector have shown a strong two-way link between PDO and PGI products and agri-food districts. These products represent the culture and the traditions of a territory. For these reasons, it is important to strengthen links between quality products and agri-food districts, and this mission can only been fulfilled thanks to stronger promotion towards foreign markets.