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# Parma PDO Ham in pork production chain and in Parma economy[1]

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**Abstract.** Prosciutto di Parma DOP (Parma PDO Ham) is the main product of Italian cold cuts and is produced in the province of Parma. The verification of compliance with its guidelines is implemented by Istituto Parma Quality (IPQ), that together with Istituto Nord Est Qualità (INEQ) operates a monitoring on compliance requirements of the most part of Italian PDO and PGI cold cuts production. In the production area there are 181 production plants where 9 milions of PDO Ham are produced every year and the 71% of factory and the 80% of Parma PDO Ham production is concentrated in four municipal districts in the foothills of the province of Parma. Among the major economic and financial aspects it is to consider production difficulties related to the duration of financial cycle because long maturing period and because of long terms of payment required by large retail chains. Analyzing a sample of firms it emerges the improving technology level and the management strategies with the aim to differentiate production (Parma Grosso ham production), and pre-sliced ham production. These strategies make it possible to generate positive cash flows to serve indebtedness and to reward equityholders.

**Keywords.** Parma PDO Ham – Pork production chain – Cash flow analysis – Parma economy.

***Le Jambon de Parme AOP dans la chaîne de production porcine et dans l'économie de Parme***

***Résumé.*** *Le Prosciutto di Parma DOP (Jambon de Parme AOP), produit dans la province de Parme, est le produit le plus important de la charcuterie italienne. Le contrôle du respect du cahier des charges est assuré par l'Istituto Parma Qualità (IPQ), qui, avec l'Istituto Nord-Est Qualità (INEQ), surveille la conformité de l'origine d'une grande partie des AOP et IGP de la charcuterie italienne. Dans le domaine de la production il y a 181 installations qui produisent 9 millions de jambons AOP par an; sur le territoire des quatre municipalités de la province de Parme au pied de la colline sont situés 70% des établissements de fabrication et 80% de la production de Prosciutto di Parma DOP. Parmi les principales difficultés économiques et financières du secteur se trouve la durée du cycle de financement dû à la longue période de maturation et aux longs termes de paiement de la distribution. L'analyse de l'échantillon d'entreprises enquêtées montre la stratégie visant à améliorer la technologie et le processus de gestion, et aussi la variation de la production (production de jambon Parma Grosso), et la production de jambon pré-tranché. Ces stratégies permettent de générer des flux de trésorerie positifs pour payer la dette et de récompenser les détenteurs du capital-risque.*

***Mots-clés.*** *Jambon de Parme AOP – Chaîne de production du porc – Flux de trésorerie – Économie de Parme.*

## I – Introduction

In the province of Parma there is an important production chain related to processing of pork meat to produce Prosciutto di Parma DOP (Parma PDO Ham): in the province could be considered others cold cuts productions as Culatello di Zibello DOP, Salame di Felino, Spalla Cotta di San Secondo Parmense, Coppa di Parma, and other productions as not marked hams, with less weight and lower period of maturing. In general, in Italy the pig sector is characterized

[1]The work, although the result of a joint reflection, was prepared as follows: Giuseppe Bonazzi wrote paragraphs 1, 2, 4, 7, Mattia Iotti wrote paragraphs 3, 5, 6.

by the herd of swine heavy pig (weight of 160 ± 10 kg) as particular animal that is bred to produce pigs to be processed for typical Italian cold cuts products, especially the typical ham (PDO ham); for these hams are used fresh legs of pigs born, raised and slaughtered in a defined area; these pigs must have quality characteristics defined by specific production rules. According to ISTAT data, the Italian production of pigs in 2009 consists of 12,922,000 animals, of which 8,707,362 are to produce PDO (IPQ-INEQ data) cold cuts. The slaughtered animals are 13,593,774 of which 671,774 came from foreign countries. The consumption of pork, in Italy, is 37.68 kg per capita in 2009 so the rate of self-supply in Italy was 68.9%. Genetic selection operates with two separate addresses: for the cold cuts production, it is used Italian Large White (LWI), Italian Landrance (LI) and Italian Duroc (DI) even for production of meat for butcher is used race Petrain (P). It was conducted an important activity for the conservation of native pig breeds, to protecte genetic types as Cinta Senese, Mora Romagnola, Nero siciliano, Casertana, Apulo-Calabrese and Sarda. This selection has given the availability of animals with proper genetic definition and with clear breed characteristics for commercial enhancement. The breeding program for the heavy pig is based on the rearing of offspring of boars Italian Duroc and Large White sows for Italian Landrance. The selection objectives are to achieve an efficient conversion of feed, lower losses in livestock, no defects at slaughterhouse to increase production efficiency, plain carcass composition in order to improve meat quality for producing PDO hams and matured meats. The consumption of cured meats in Italy in 2009 was 1.1745 million tons; the ham is the first cold cuts for consumption in Italy, with 280.6 thousand tons, then we have cooked ham, with 275.8 thousand tonnes, Mortadella, with 173.9 thousand tons, and Salame, with 110,4 thousand tonnes. In the Italian cold cuts has an important role in the protected products: in Italy production of cold cuts recognized with PDO and PGI are 33, with a higher concentration in northern regions. In 2009 there were 8,680,611 slaughtered pigs certificates PDO, 17,361,222 available thigh for PDO production, 14,550,654 thighs started to PDO production, of which 9,429,462 for the PDO Prosciutto di Parma and 2,521,213 for the PDO Prosciutto San Daniele.

## II – The PDO chain

The European Community, considering that production, processing and distribution of agricultural products and foodstuffs play an important role in the Community, has implemented a strategy of diversification of farm production in order to achieve a better balance between supply and demand in the markets. Therefore, Reg. (EC) No 510/2006 of 20 March 2006 regulates the protection of geographical indications and designations of origin for agricultural products and foodstuffs. The verification of compliance with specifications (Article 11) shall be performed before selling the product on the market by one or more competent agency and / or one or more control agency within the meaning of art. 2 of Reg (EC) No 882/2004 that operates as a product certification institution. The certification agency of products act in compliance with European standard EN 45011 or ISO / IEC Guide 65. The Istituto Parma Qualità (IPQ), joined with the Istituto Nord Est Qualità (INEQ) has implemented a system that provides control and compliance requirements for origin of raw materials and production process upstream in the chain. In this system of rules and controls, the farms must put the firm code and the month of birth code on both legs, in order to have the slaughter of animals with at least nine months of life; in this way it is possible within thirty days after the birth of the pig to exclude animals born outside the territory of origin. The transfer of animals between farms should be documented so it could be easier the control issued by IPQ and INEQ, even having the pigs supply control. In 2008, the herds for PDO production were 4,819 in 11 regions of central and northern Italy. The highest concentration of farms is 1,936 farms in Lombardia, then we have Piemonte (970) and Emilia Romagna (926), so that 79.5% of herds is located in these three regions. For the distribution of pigs per genotype, on 2008 data, there is the prevalence of pigs from hybrid verro, representing 67.2% of the total, followed by of mixed blood of pigs boars of other breeds with 19.1% value.

The card is also sent to IPQ-INEQ that monitor and insert the data in the respective database. The slaughterhouse must fill out a document for each day of production with a list of all lots of animals received and the number of pigs slaughtered, codes of origin and origin. Moreover, the slaughterhouse puts on each thigh a stamp of approval attesting to the code compliance of origin, provenance and quality.

Slaughterhouses active in this system in Italy (year 2008) are 121 and have slaughtered more than 9 million pigs, the largest number of slaughterhouses has in Lombardia (38), Emilia Romagna (27) and Piemonte (18). All slaughterhouses are inspected at least once a year to control information in the slaughterhouses document that must be prepared every day and of which a sample is detected as for the incoming streams of live pigs and outflows of raw material. This procedure, associated to a selection, allows the exclusion of the fresh pork legs not suitable for production and to keep down the final index of non-compliance. It is to note that slaughtered pigs must be accompanied by a document indicating the code of the firm of origin, the number of pigs, the genetic type and destination.

The fresh raw material arrives at the cold cuts production firm with the stamp of identification and self-certification of slaughter, with a copy of the document issued by the slaughterhouse. The production firm, for each delivery, analyzes the conformity of raw material and mark in an official register all description and identification elements of the product. The raw material is then initiated for processing considering that during the whole process production firm has to ensure that "ID cards and descriptive production package"; IPQ and INEQ include these data in their database and check all the documents produced for each lot of production. It is the responsibility of IPQ and INEQ to check all the quality standards of the cured product by testing and verifying the minimum maturing period, the absence of morphological, technical and taste defects. After these procedures, PDO certification mark is applied to product and it could be marked on the product label.

## III – Parma PDO Ham

The Parma Ham is the most important production of Italian cold cuts sector. In 1963, 63 producers founded Parma Ham Consortium (Consorzio del Prosciutto di Parma) that today represents 164 processing firm. The Consorzio del Prosciutto di Parma manages and protects production rules, is responsible for economic policy management in the sector, supervises and ensures the respect of laws and regulations such as the protection of the name "Prosciutto di Parma" and its brand; Consorzio del Prosciutto di Parma is also the guide of trade policies and has the role to enhance the product, conducting advertising actions and fairs to assist firms.

Parma PDO Ham according to EEC Regulation 2081/92 (now Regulation EC 510/06) is produced observing production regulations issued by the Consorzio del Prosciutto di Parma, so Parma PDO Ham is obtained by processing thighs of heavy pig that must be older than 9 months of age, weighing over 150 kg that must be slaughtered "healthy, rested and fasted for at least 15 hours", as per the specification rules.

The pig must be reared in the territory of 10 regions of northern and central Italy but the production process must be done in one part of the province of Parma between the Via Emilia, at a distance of at least 5 km from here, from north, by the river Enza, to the east, and by the river Stirone, from the west. Towards the south we have a limit of production that is an altitude above sea level exceeding 900 meters. in addition to the Consorzio del Prosciutto di Parma, Istituto Parma Qualità (IPQ) conducts necessary checks on the ham as "third and independent part". IPQ performs the functions of control over the ham from 1998 and the activity is performed through unified services control together with Istituto Nord Est Qualità (INEQ) that is this agency involved in Prosciutto di San Daniele PDO control, under a system of division of control activities in the sector of the PDO.

As regards the breakdown by size classes of manufacturing, based on the hams established to production of Parma PDO Ham, there is a concentration of production in a small number of firms (Table 1); with a total production analyzed of 9,429,642 hams processed in 181 plants, with an average production of 52,096 hams per plant, 58.85% of production is concentrated in 25.41% manufacturing plants that are characterized for an annual production of more than 100,000 hams. Manufacturing plants with less than 25,000 hams per year produced 5.62% of the hams, involving 34.25% of plants; moreover it is to note that the plants up to 1,000 pieces per year of production are 8.84% of the total (0.08% of production), while the plants up to 10,000 pieces per year of production are the 22.10% of the total, with only 1,14% of the number of Parma Ham in 2009.

**Table 1. Production plant per rank size (2009)**

| Production plant per rank size | Hams (no.) | Hams (%) | Production plants (no.) | Production plants (%) |
|---|---|---|---|---|
| 0 – 1,000 | 7,652 | 0.08 | 16 | 8.84 |
| 1,001 – 10,000 | 136,870 | 1.45 | 24 | 13.26 |
| 10,001 – 25,000 | 384,970 | 4.08 | 22 | 12.15 |
| 25,001 – 50,000 | 2,067,900 | 21.93 | 53 | 29.28 |
| 50,001 – 75,000 | 1,282,433 | 13.60 | 20 | 11.05 |
| 75,001 – 100,000 | 2,161,614 | 22.92 | 25 | 13.81 |
| 100,001 – 200,000 | 2,316,990 | 24.57 | 17 | 9.39 |
| > 200,000 | 1,071,033 | 11.36 | 4 | 2.21 |
| Total | 9,429,462 | 100.00% | 181 | 100.00 |

Source: IPQ.

The consumption of Parma PDO Ham is done for 79% on domestic market and 21% in foreign markets; 2,046,495 hams are exported in 2009 (12,662 tonnes) with an estimated turnover of 181 million euro. In the foreign markets France and the United States prevail, but the European market accounts for 75.05% of exports, while the American continent is 21.30% of exports, of which 18.81% in the USA alone; exports to other states are modest, except Japan, that accounts for 4.28% of exports, approximately 87 thousand hams in 2008. In recent years there has been an increase in consumption of Parma ham sliced and packaged in boxes for sale in the refrigerated counter. During the period 2005/2009 the increase in the number of meats sliced was equal to 83.2%, from 627,344 to 1,149,574 and the relative packages production increased from 30.885 million of 2005 to 54.796 milion of 2009. The slicing process performed in the production chain make easier the consumption process, particularly in foreign markets where the process of slicing made at the store or directly from the consumer is not always carried out with the necessary expertise, thus penalizing the sale to final consumer. With regard to market, Parma sliced ham, with a total production of 6,010,930 kg of food (1,865,490 kg for domestic consumption, up to 31.03%, and 4,145,440 kg, 68.97%, for export) confirms the presence of foreign demand for a product with a high level of service. Even with respect to exports of sliced Parma PDO Ham, there is a concentration of demand in some foreign markets, so the top 5 export destination markets are Britain, France, Belgium, Germany and the USA; these markets generate 79.41% exports (49.12% for the first two target markets). Even if the sliced product is concentrated in European market, that consumes 86.55% of exports, is also of relevance the USA market for the sliced product (8.83% of the export market for sliced), so other target markets are, on 2008 data, of marginal importance.

## IV – Prosciutto di Parma DOP in the local socio-economic system

The activities related to agriculture, processing industry and related services are important in the socio-economic system in the province of Parma. The food industry is the first industry in the province, with 2008 sales of 7,500 million euro, 36.6% of total industrial sales in the province, deriving € 973 million from exports. The turnover of the mechanical food plant industry is the third largest industrial sector of the province, behind the general mechanical industry, with a level of 2,200 million euro as per 10.7% of total industry turnover. The sectors of the food and plant for food, taken together, amounted to 47.3% of the industry turnover of the province.

Within the food sector with the highest turnover is the sector of pasta, bread, pastries, frozen foods and related products, as per including the presence of some large companies, that is, in 2008, 3,000 million euro turnover (40.0% of provincial revenues in the food industry and to 14.6% of industry turnover in general). The meat preserved industry generates 900 million euro turnover in 2008 (25.3% of sales in the food industry and 9.3% of industry sales in general). The province of Parma is characterized by a important meat processing activities so the local socio-economic system is therefore characterized by the presence of a large number of firms in processing pork meat for the production of cold cuts. As for the meat processing industry, based on data made available by the Registry of firms at the Chamber of Commerce of Parma, updated at August 2010, are operating 446 businesses and 143 local units of enterprises operating in the meat processing industry in the province of Parma (10.13 main activity code according to the classification ATECO 2007), as for a total of 589 units in the sector in the province of Parma. The firms involved in the sector give job to 4,399 staff employees and 322 independent operators, for a total of 4,721 person. The municipalities in the province with greater presence of these firms are Langhirano (123 companies, 41 local units, 1,140 staff employees and 72 independent operators), Lesignano de' Bagni (38 companies, 10 local units, 352 staff employees, 18 independent operators) Felino (35 companies, 17 local units, 634 staff employees, 44 independent operators), Sala Baganza (26 firms, 17 local units, 609 staff employees, 19 independent operators). The municipality of Parma has 38 companies, 10 local units, 366 staff employees and 21 independent operators.

As for Parma PDO Ham production for the year 2009, out of 181 factories in the municipality of Langhirano were processed 4,032,198 hams, representing 42.76% of the total, in 79 plants, equal to 43.65% of the total. In the first four areas of production (Langhirano, Lesignano de Bagni, Sala Baganza and Felino) it has been done the 80,28% of production (Table 2).

**Table 2. Production plant per municipality (2009)**

| Municipality | Production plants (no.) | Production plants (%) | Hams (no.) | Hams (%) |
|---|---|---|---|---|
| Langhirano | 79 | 43.65 | 4,032,198 | 42.76 |
| Lesignano de' Bagni | 22 | 12.15 | 1,480,612 | 15.70 |
| Sala Baganza | 16 | 8.84 | 1,134,104 | 12.03 |
| Felino | 12 | 6.63 | 922,619 | 9.78 |
| Others | 52 | 28.73 | 1,859,929 | 19.72 |
| Total | 181 | 100.00 | 9,429,462 | 100.00 |

Source: IPQ / Unione Parmense degli Industriali.

The development of the meat processing sector has encouraged the local employment and the creation of firms active in related production of meats, including craft processing services, production control activities, construction of facilities and machinery activities for meat processing, industrial activities and building, warehousing, as well as study and research

activities involved in meat processing process. In the province of Parma there are the University of Parma with the Faculty of Agriculture, Degree in Food Science and Technology, Veterinary Medicine, Economics and Engineering, particularly focusing on applied research in the meat processing industry. There are also the Experimental Station for the Food processing and preservation (Stazione Sperimentale Industria Conserve Alimentari, as SSICA) as a public applied research center with the purpose of scientific progress in the areas of the Italian canning fruits, vegetables, meats and fish. In Parma there is also the the European Food Safety Authority (EFSA) headquarter, as the European Union agency aiming to control food safety and other agencies involved in supply chain control as Istituto Parma Qualità (IPQ).

## V – Economic and financial firm data in the Parma PDO Ham industry

In the area of Parma, ham firms often have difficulties relating to the duration of the financial cycle, because the firms require large investments in start-up activity (Bonazzi *et al*., 2007), for the acquisition of industrial buildings, plants and equipments. This necessity is inherent with the typical production of ham, which requires large volumes for processing and maturation, and then expanding the need for capital equipment. In addition, the cycle of maturation of the pork leg causes a further expansion of capital requirements in order to sustain the cycle of working capital. Finally, given the sales channel frequently used by firms in the sector for market access, namely large-scale distribution (GDO), there is an increase in average day extension of credits (even this aspect of the financial dynamic improve capital requirement for processing firms). This situation quite often expands the duration of financial cycle in which, even in the face of positive profitability, it is to note unsustainable situations in terms of generating cash flow (unlevered free cash flow) available for debt service; it then becomes important in the sector (Bonazzi *et al*., 2007) a strategy to contain costs of production, even realizing investments in technologies that could reduce processing cost of raw materials (such as the activities of boning and greasing ham). In order to evaluate these investments, it is possible to use methods of assessment based on values deriving from accounting data (Roi, Roe, Rod), integrating these with assessment methodologies based on cash flow analysis (Npv, Irr, Pbpa), and methodologies to evaluate the business cycle as sustainable (Dscr, Adscr, Llcr). The Parma PDO compartment expresses case of differentiation strategy in production firms; In fact (Bonazzi *et al*., 2008) there are firms able to diversify its production by having attention to raw material quality also working with a large size choice of pork legs. These firms have production of Parma PDO Ham Parma of high category level, weighing over 9.0 kg (24 maturing months). In this way, firms even with higher production costs for raw materials could be able to obtain on the market a selling price higher than production costs.

## VI – The sample of firms

The analysis of annual accounts (year 2008) of a sample of 40 firms in the area of Parma Ham is conducted by analyzing the balance sheet and income statement, on the basis of data made available by the local Chamber of Commerce. The analysis of profitability of business management is performed having the analysis of annual economic accounts (Ferrero, *et al*., 2005). The annual accounts analysis considers the data presented in the table required by law (Andrei *et al*., 2006), in patterns defined by the European Union, in accordance with the Fourth EU Directive, in order to make the different firms data comparable even if deriving from different European countries (Andrei *et al*., 2006). It is therefore useful to analyze the annual accounts data according to reclassification exposure schemes (Iotti, 2009) that aggregate data to increase provided information level, marking additional capital and profit margins (Ceccacci *et al*., 2008). The reclassification of the income statement using the value-added scheme (Bonazzi *et al*., 2005) is:

$$(1) \qquad S \pm \Delta I - C_e = VA - C_w = EBITDA - (D + A) = EBIT \pm I \pm V \pm E \pm T = \Pi$$

In (1) S is sales, I is the stock (inventory), $C_e$ is external costs, VA is value added, $C_w$ is the cost of labour, EBITDA is earnings before interest, taxes, amortization, and depreciation, D is depreciation, A is amortization, EBIT is earnings before interest and taxes, I is interest, V is revaluations and depreciation, E is extraordinary income or expenses, T is income tax, $\Pi$ is profit. The reclassification of the balance sheet (Ceccacci *et al*., 2008) is conducted according to liquidity level:

$$(2) \qquad TA = \alpha WC_t + FA = \alpha WC_c + \alpha WC_i + \alpha WC_{ar} + FA$$

In (2) TA is total asset, $\alpha WC_t$ is total investment in working capital, $\alpha WC_i$ is working capital in inventories, $\alpha WC_C$ is working capital in cash, $\alpha WC_{ar}$ is working capital in account receivables, FA is fixed assets. Reclassification of balance sheet liabilities is conducted according to the origin of sources of capital:

$$(3) \qquad TS = E + D = E + \beta WC_t + DF_s + DF_l$$

In (3) TS total liabilities and shareholders equity, E is equity, D is total debt, $\beta WC_t$ is total working capital liabilities, $DF_s$ is short-term liabilities, borrowings (due within 12 months), $DF_l$ is a medium/long term financial debt (duration 12 months). The difference between $\alpha WC_t$ and $\beta WC_t$ is net working capital (NWC). The firm income considers the accrual basis (Andrei *et al*., 2006) and expresses the moment of creation of value so the income statement is not dependent by the generation of cash flow from operations. It is therefore useful to consider the annual account because this document could be useful to analyze different sources of cash flows (Shireves *et al*., 2000). To quantify the cash flows could be used an indirect approach, through the cash flows statement (Brealey *et al*., 2003) in order to calculate unlevered free cash flow and free cash flow to equity:

$$(4) \qquad EBIT + D + A \mp T = CF + \Delta^{\mp} NWC = OCF + \Delta^{\mp} FA = UFCF - DS = FCFE$$

In (4) CF is cash flow, OCF is operating cash flow, UFCF is unlevered free cash flow, FCFE is the cash flow available for shareholders (free cash flow). CF is EBIT corrected with costs that do not cause an outflow of money (D + A) and the impact of income taxes (T), OCF quantifies the absorption of net working capital (NWC) and has, in the case of Parma ham firms, a particular importance for the impact of investments in maturing inventories (hams); UFCF is determined as the sum of OCF and the absorption of capital resulting from investments in fixed assets (FA), as to say that UFCF is the cash flow available for debt service (DS, debt service, defined as DS = K + I, where K is the principal and I is the cost of debt, as interest). FCFE is the cash flow available for equityholders. Income analysis of 40 firms sample in the 2008 shows that S varies from a minimum of € 1,654,000 to a maximum of € 52,177,000, having that the average sales are € 13,093,000. In the sample, 32 firms generate profits ($\Pi$>0) and 8 generate losses ($\Pi$ <0); The average ratio $\Pi$/S in the sample is 3.62% with a minimum net income/sales ratio of -17.46% and a maximum value of 13.21%, the average Roe of the sample is equal to 2.34%, with a minimum value of -27.09% and a maximum value of 23.83%. The average Roa of the sample is equal to 10.98% with a minimum value of -0.06% and a maximum value of 12.31%. The average Ros in the sample is equal to 12.18% with a minimum value of -0.10% and a maximum value of 17.91%. The average capital turnover in the sample is equal to 0.721, with a minimum value of 0.166 and a maximum value of 1.221, the sample firms are characterized by high capital intensity (as turnover <1). Average ICR is equal to 121.90% with a

minimum of -1.62% and a maximum of 560.51%. The analysis of the balance sheet shows an average TA of EUR 25.781 million to 2.861 minimum and € 68.214 maximum, average $\alpha WC_t$ / TA is 63,21% and FA / TA è 36,39%; $\alpha WC_i$ / TA is 41,96%. The other components of working capital ($\alpha WC_c$ + $\alpha WC_{ar}$) / TA, is 21.25%. The analysis around the sources of capital in the sample shows, on average, that L is 5.314 and DER is 4.314 having that in the sample, on average, firms use high debt level to finance their investments so that D = 4.314E. In order to quantify the sources of liquidity, analyzing the creation of cash flow, data show a situation where average CF is 1.512 million euro, no negative value of CF, OCF average is 0.211 million euro, 11 cases of OCF negative on 40 firms; the average UFCF is -1.430 million €, with 19 cases of negative UFCF on 40 firms; average FCFE is -1.582 million €, with 23 cases of negative FCFE on 40 firms. The analysis shows that the sample firms have difficulty in generating a positive cash flow to serve debt (UFCF) and to distribute dividends to shareholders (FCFE). In particular, working capital has a substantial effect on the absorption of liquidity (0 cases of negative CF and 11 cases of negative OCF).

## VII – Conclusions

Parma PDO Ham is the main product of cold cuts designation of origin in Italy at the level of production. The pork meat processing sector assumes importance in the economy of the province of Parma. The animals preserves sector shows that the turnover generated in the province of Parma, in 2008, is equal to 1,900 million euro, as 25.3% of sales in the food industry and 9.3% of the industry in general. In total of the Parma province, in respect of the meat processing industry, are involved 446 firms and others 143 local units, as for a total of 589 productive units, operate in the local industry, activating directly a total of 4,721 worker. Among the municipalities in the province, Langhirano, Lesignano de' Bagni, Sala Baganza and Felino could be considered territories with an increased level of activity. In those municipalities, with regard to the Parma PDO Ham, are concentrated 71.27% of firm and 80.28% of Parma PDO Ham production. Indeed, firms in the sector are characterized by significant fixed capital investment which should add significant capital equipment needed to support the cycle of maturing along with the long delays of payment required by large retail chains. So the analysis carried out on the sample of firms included in the study shows that there is difficulty in creating financial flows (UFCF) sufficient to support debt service (DS); in fact only firms with high size level of turnover, or production differentiation (as production of Parma Grosso) are able to generate not only profit for the shareholders, but also cash to ensure the sustainability of the business cycle, and the ability to distribute dividends or profits reinvestment to ensure discretionary investments (FCFE).

It emerges therefore that firms adopting strategies aiming to improve technological process to reduce production cost, even increasing profitability and positive cash flow generating capacity to support debt service and to reward equityholders. In addition, higher profit margins can be guaranteed by product differentiation (Parma Grosso) even having a greater focus on the goodwill of the product to the consumer by improving annexed services to the good, as the pre-slicing service that has been shown to have large spaces both on domestic and foreign markets.

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