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Private label market power: evidence from Italian dairy retailing

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Introduction

The Italian retail sector is the main channel for food purchases in the country, with a market share of 72% in 2012. Although concentration of the sector is steadily increasing, with a CR5 of around 40% its degree is lower than in other EU member states, where the 5 largest retailers commonly account for more than 80% of turnover. Nevertheless, a significant degree of bargaining power towards food processors has been ascertained for Italian retailers by antitrust authorities (Bunte et al. 2011; FederDistribuzione 2012). Moreover, Hirsch and Gschwandtner (2013) show for the EU food sector that retailer concentration negatively influences the degree and stability of profitability in the food processing industry.

Besides the increasing concentration -e.g. due to the establishment of purchasing groups- the growing share of private labels has contributed to the power imbalances between producers and retailers. Originally introduced as low quality substitutes for higher quality brands quality improvements have completely changed consumers' perception of private labels (Ward et al. 2002, Sckokai and Soregaroli 2008). As a consequence the market share of private labels in Italy is steadily increasing. The contribution to total Italian food retail sales amounted to 18% in 2013 with an increasing trend. In 2014 private labels for the first time accounted for more than 20% of food retail sales in Italy (Viviano et al. 2012, Fontana 2014).

Private labels have completely changed the role of retailers within today's food supply chains as retailers now also take the role of producers. This development has a significant impact on the retailer-manufacturer relationship and in particular on relative bargaining power. Despite an already highly competitive and saturated food processing industry (e.g. Hirsch and Gschwandtner, 2013) processors today have to face additional competition from retailers, which are now at the same time direct competitors and customers. Moreover, the dependency of retailers on manufacturers' high quality brands has decreased which in turn implies that retailers' margins on branded products also benefit from the introduction of private labels. Competitive advantages coming along with the introduction of private labels also arise due to the fact that private labels' costs related to marketing and advertising activities are usually spread over a broad range of products ensuring high margins. Moreover, private labels are unique to each retailer and thus usually not affected by direct price competition (Bunte et al. 2011, Bontemps et al. 2005, Steiner 2004).

Despite higher competitive pressure private label introduction can also be beneficial for manufacturers in cases where unused capacities can be utilized for private label production, leading to higher revenues. Moreover, low margins related to private label production can be offset by savings on marketing and promotional activities (Viviano et al. 2012).

As regards the impact of private label penetration on consumers' surplus lower prices and an increasing range of available products have a beneficial effect. However, in the long run negative effects may occur as market power and returns of branded products are reduced implying that fewer resources are available for innovation activities. This in turn can decrease the available range of high quality brands. (Bunte et al. 2011)

In order to evaluate the market power (i.e. the ability of retailers to charge mark-ups above marginal costs) of private label products in contrast to national and regional brands we apply the demand model introduced by Berry, Levinsohn, and Pakes (1995) (BLP) to 2005-2008 milk purchase data of the Italian fluid milk sector in Torino, a large representative Italian county with a significant penetration of private labels. The fluid milk sector was chosen as milk constitutes a product with a high penetration in daily Italian household consumption. Moreover, this sector is characterized by a significant share of private labels which contribute up to 23.1% to Italian drinking milk sales (Sckokai 2013). Finally, a high level of differentiation allows to assess whether the market power of national and local brands as well as private labels varies by product type (Seccia et al. 2010).

The remainder of the article is structured as follows. First we provide an overview of the Italian retail sector with a focus on the milk segment. We then summarize previous empirical literature that focuses on the relationship between private labels and retailer market power. Subsequently we introduce a theoretical model of milk demand which is followed by the econometric strategy. We then describe the milk purchase data used to derive own- and cross-price elasticities for the considered milk products. This is followed by the presentation of the BLP results. Finally some conclusions and implications are drawn.

Italian milk retailing

We first provide some general information on the Italian retail sector and subsequently turn our attention to the characteristics of the milk sector. Here the focus shall be on the available range of drinking milk products and their relevance.

The Italian retail sector

With a contribution of 72% to total sales of fresh and pre-packed food products in 2012 the Italian retail sector is the most important channel for food purchases in the country (FederDistribuzione 2012). The consolidation process in the Italian retail sector has started in the first decade of the twenty-first century and thus lags behind other EU countries such as Germany or the UK where the process had already progressed in the 90's (Viviano et al. 2012).

Thus, the Italian retail sector is characterized by a relatively low level of concentration. While 3 firm concentration ratios have exceeded 50% in most EU countries in 2012 (e.g. 53% in Spain, 54% in France, and 61% in Germany and the UK) the respective value for Italy is with 35% significantly lower (FederDistribuzione 2012).

Despite relatively low concentration Italian retailers possess a relevant degree of market power towards producers which has recently also been investigated by antitrust authorities. In particular three strategic characteristics that lead to retailers' market power exist: purchasing groups, trade spending, and private labels. Purchasing groups first appeared in the 1990's as a consequence of a too fragmented retail sector to countervail producer market power. Purchasing groups are defined by agreements among retailers to increase bargaining power towards processors via demand concentration and collective negotiations with suppliers (AGCM 2013). In Italy the market share of the seven largest purchasing groups is 78% indicating significant consolidation (FederDistribuzione 2012, AGCM 2013). Trade spending refers to payments that retailers claim from processors in order to sell and promote their products. Trade spending practices have gained considerable attention in the last decades and have become an important tool for retailers to increase bargaining power and profit margins (Bunte et al. 2011). Although, according to 2013 IRI Infoscandata the share of private labels in Italian retail was with 18.4% significantly lower than in other EU countries such as Germany (34.3%), France (36.0%), Spain (42.8%) and the UK (51.1%) an increasing trend can be observed (Viviano et al. 2012, Fontana 2014).

The fluid milk sector was chosen for the present analysis as milk constitutes a product with a high penetration in daily Italian household consumption. Average per capita consumption of milk in Italy equals 56 litres (Adnkronos 2014). Moreover, this sector is characterized by a significant share of private labels which contribute up to 23.1% to Italian drinking milk sales (Sckokai 2013).

Characteristics of the Italian milk market

The Italian fluid milk market consists of two main categories, *fresh* milk and UHT milk. *Fresh* milk is obtained through the so called "High Temperature, Short Time" (HTST) technique. The main advantage of this procedure is that it leads to a safe product without significantly affecting nutritional value or taste. However, the average shelf life of this milk type is with 5 days relatively low. In contrast, UHT milk is exposed to a much higher temperature with the advantage that shelf life is extended to 6 to 9 months. However, the main drawback of the UHT treatment is that it negatively affects both the nutritional properties and the taste of milk, which

has usually resulted in a lower price per unit of UHT milk compared to refrigerated milk (Gonano 2013).

The Italian milk sector is also differentiated by fat content ranging from whole milk with a minimum fat content of 3.5%, semi-skimmed milk with a fat percentage between 1.5 and 1.7% to skimmed milk with an average fat content of 0.1%.

As regards milk brands, the two national leaders are Granarolo and Parmalat (Castellari 2009). According to IRI Infoscan, in 2012, together they accounted for 46% and 51% of total *fresh* and UHT milk sales, respectively. However, a strong heterogeneity of milk products throughout the country is caused through the presence of a large number of local brands, often deriving from municipal milk plants. According to IRI Infoscan local producers accounted for 36% of total sales in the *fresh* milk segment and for 32.2% in the UHT category in 2012. Similar to the entire retail sector, the share of private labels in the milk sector is increasing. In 2013, the private labels' share in the *fresh* milk segment was equal to 17.8%, while in the UHT category it reached 23.1% (Sckokai 2013, Centrale del Latte di Torino 2013).

Empirical evidence on private labels and retailer market power

Increasing market shares of private labels have stimulated extensive literature on the effects of their introduction on market power of food chain actors in diverse countries and product categories.

According to general economic theory, competitive pressure due to the introduction of a new product should lead incumbent firms to decrease their prices, in order to maintain their market shares (Ward et al. 2002). Accordingly, while studying the market dynamics triggered by private label entry in the US breakfast cereals market, Chintagunta et al. (2002) found that this event led to a decrease in the price of the leading industry brands. In contrast, Ward et al. (2002), studying 32 US food and beverage industries, found a positive relationship between national brand prices and private label market shares implying that growth of private label share in a food category caused an increase in respective branded product prices. Pauwels and Srinivasan (2004) measuring the effects of store brand entry on the performance of retailers, based on scanner data from a large US supermarket chain found that retail chains generate high unit margins with private label products. Meza and Sudhir (2010) analyzed cereal sales data of Dominicks' grocery stores during 1989-1991. A peculiar feature of this retail chain is that it used an imitation strategy for its private labels, meaning that private labels' characteristics were very similar to those of leading brands. The results provide evidence for an increase in retailers' bargaining power, demonstrated by lower prices obtained from suppliers. Vickner et al. (2000)

also estimated retailer market power and pricing behavior, focusing on the frozen vegetable market. They found that private labels were strategically positioned at a lower price than national brands and that they increased retailers' profitability, due to a wider price-cost margin caused by a decrease in marginal costs. In accordance, Ailawadi and Harlam (2014) provide evidence for the fact that retailers are able to get higher percentage margins from private labels than from national brands, in particular in segments with a strong presence of national brands.

Focusing on private label strategy, Draganska et al. (2010) observed that the positioning of private labels, rather than their market share, played an important role in determining retailers' performances. In fact, the strategy of positioning private labels very close to national brands in the qualitative space induced an increase in retailers' bargaining power and margins. Similarly, Sayman et al. (2002) and Richards et al. (2007) confirmed that the closer private labels are to branded products in terms of qualitative features, the higher the bargaining power of retailers, who can obtain lower wholesale prices and a higher share of the total margin.

Other studies have estimated differences between private labels and brands with respect to market power based on demand models such as the Linear Almost Ideal Demand System or the BLP approach. For example, Cotterill et al. (2000) analyzed the demand for 125 product categories in 59 geographical markets using the Linear Almost Ideal Demand System, and price reaction equations obtained under this specification. They found that cross-price elasticities were asymmetric, since branded products' price cuts appeared more effective in stealing shares from private labels than the opposite. However, the higher the private label share in a category, the more national brands became sensitive to private labels' price changes, due to increased competition. In a recent study Lopez et al. (2015) apply the BLP model to the US carbonated softdrinks market. The resulting own- and cross-price elasticities indicate that consumers are strongly brand loyal. Lopez et al. (2015) extend the BLP framework by focusing on spillover effects of advertising. They show that brand advertising as well as spillover effects of advertising from other brands of the same company have a strong impact on demand. Moreover, competitors' advertising negatively impacts on demand for branded products while a similar effect for private labels cannot be detected. Lopez and Lopez (2009) apply a BLP model with consumer characteristics to milk sales data of supermarkets in the Boston area. They find that milk prices are elastic at the individual brand level while cross-price elasticities are low for speciality milk. Based on Lerner indexes private labels have the highest percent markups indicating a high degree of market power. We add to this literature by providing evidence of private label market power in Italian dairy retailing using the BLP model.

Methodology

Demand can either be modeled on the product space or the characteristic space. The most frequently applied product space approach is the Almost Ideal Demand System model proposed by Deaton and Muellbauer (1980). This model is based on a system of equations which describe demand for a specific product as a function of its own price and the prices of other products. The drawback of this approach is the large number of parameters to be estimated. The characteristic space approach in turn assumes that products are defined based on their characteristics and that consumers choose one unit of the product that constitutes the combination of characteristics with the highest utility. We employ the BLP model by Berry et al. (1995), a characteristic space approach that allows to account for the endogeneity of prices (Nevo 2000; Lopez and Lopez 2009). The BLP model is based on the following utility function for consumer i and product j :

$$U_{ij} = \pi_j + \mu_{ij} + \varepsilon_{ij} \quad (1).$$

$\pi_j = \alpha p_j + \beta x_j$ is mean utility of product j where p_j is the price of j and x_j a vector of observed product characteristics. $\mu_{ij} = \lambda D_i p_j + \delta D_i x_j + \omega V_i p_j + \gamma V_i x_j$ reflects deviations from mean utility that are caused by heterogeneity in observed (D_i) and unobserved (V_i) sociodemographic consumer characteristics. D_i and V_i are assumed to be $N(0,1)$ with densities $h(D)$ and $g(V)$, respectively. Thus, the probability that product j is chosen is equal to:

$$P_j(p, x, \alpha, \beta, \lambda, \delta, \omega, \gamma) = \int \int \int I\{(D_i, V_i, \varepsilon_{ij}) : U_{ij} \geq U_{ik} \ \forall k = 0, \dots, J\} dH(D) dG(V) dF(\varepsilon) \quad (2).$$

As consumers choose one unit of the good that provides the highest utility the probability that j is chosen (P_j) equals j 's market share (S_j). (2) can be solved using the algorithm proposed by Nevo (2000) which minimizes the differences between observed and estimated market shares using GMM. The estimated parameters of (2) can be used to derive own- and cross-price elasticities of demand for each j (Lopez and Lopez 2009, Berry et al. 1995):

$$\eta_{jk} = \frac{\partial S_j}{\partial p_k} \frac{p_k}{S_j} = \begin{cases} \frac{P_i}{\eta_j} \int \int \alpha_i S_{ij} (1 - \alpha_{ij}) \alpha H(D) \alpha G(V) & \text{for } j = k \\ \frac{P_k}{S_j} \int \int S_{ik} \alpha H(D) dG(V) & \text{otherwise} \end{cases} \quad (3).$$

The GMM estimator uses instruments to account for endogeneity of product prices which arises as a consequence of potential correlation of retail prices and observed and unobserved product characteristics. We employ instrumental variables to deal with the endogeneity bias caused by prices. First a supply shifter calculated as the ratio of total sales volume and the total number of units sold is used. Moreover, an Hausman instrumental variable represented by the prices of the same milk products at the same time in another comparable region, Cuneo, is employed. It can be assumed that prices of the same goods in different regions are correlated, because of common marginal costs. In turn, demand for goods in one city is not correlated with the prices of the same goods in another city, since demand depends on the market evaluation of each product which varies across regions (Nevo 2000). Furthermore we add a set of optimal Chamberlain (1987) instruments to enable estimation of random coefficients and to increase estimation efficiency (Lopez et al. 2015, Vincent 2015).

Similar to Lopez et al. (2015) for simplicity and tractability, we omit sociodemographic consumer characteristics in the estimation of (2) and interpret deviations from mean utility as idiosyncratic random errors. All estimations were conducted using the `blp` command in Stata 13.1 (Vincent 2015).

Data

The estimation is based on milk sales data collected by Information Resource Inc. (IRI) Infoscan, provided by the University of Connecticut. The data includes monthly observations for the period 2005-2008. Besides three leading national brands the data include a large number of small regional brands. Hence, focusing on the national level makes the analysis impracticable due to the large number of regional products to consider. In turn, excluding regional brands likely biases the estimation as local producers usually rely on a great reputation and consumers' loyalty associated with a certain degree of market power that could even exceed the one of national brands or private labels. Thus, to provide a more reliable estimate of private label market power in a differentiated market, we focus on Torino, a large representative Italian county with a significant penetration of private labels. This allows us to compare the market

power of national and regional brands with the one of private labels while ensuring that the results are transferable to other Italian regions.

Based on Lopez and Lopez (2009) we define five product characteristics that are relevant for consumers' purchase decision: price, fat content (0.3% skimmed milk, 1.7% reduced fat milk, 3.5% whole milk), heat treatment (UHT or refrigerated *fresh* milk), promotional activities and manufacturer. Regarding manufacturers, we include the three leading Italian national brands, Granarolo, Parmalat and Gruppo Fattorie Italia, the most important local brand, Centrale del Latte di Torino, and private labels. Those product characteristics lead to five milk segments and 15 milk types that contribute 72.9% (30.0% national brands; 23.5% local brand; 19.4% private labels) to total fluid milk sales of the analysed market (cf. Table 1). To allow for the possibility that consumers do not chose any of the 15 products the remaining 27.1% are defined as an outside good with utility zero. The outside good is composed by those milk types not produced by the five included brand types as well as products with a too low market share of <0.5%.

For all products j market shares (S_j 's) are calculated as the ratio of j 's sales to total milk sales in the county. Prices are calculated for each j as the quotient of sales value to sales volume. The fat content, heat treatment as well as the manufacturer are captured via dummy variables while promotional activities are calculated for each product as the volume of sales taking place under promotional activities divided by the total volume of sales.

Table 1 contains descriptive statistics with respect to the market share, € price per litre, and amount of sales taking place under promotional activity for the 15 products. It appears that private labels have relevant market shares in the UHT segment -particularly in the reduced fat UHT segment-, while their market shares in the *fresh* segment are lower than 0.5%. This implies that private labels are not present in the *fresh* milk segment. Furthermore, Table 1 illustrates the importance of the local brand Centrale del Latte di Torino which holds relevant market shares in four of the five categories. As regards national brands Parmalat is mainly active in the UHT segment while Granarolo has relevant shares in the reduced fat segment only. Gruppo Fattorie Italia in turn has relevant shares in all segments except UHT skimmed milk and fresh reduced fat.

Table 1 further indicates that the average price per litre of private labels is significantly below the average litre prices of branded products while the average price of the local brand, Centrale del Latte di Torino exceeds the average price of the national brands. Moreover, Centrale del Latte di Torino has the highest price per litre in almost all categories where it holds relevant market shares. This is likely due to the fact that smaller local brands can rely on a high

reputation and quality image in the county, which leads to consumer loyalty. The prices charged by the national brands Granarolo, Parmalat and Gruppo Fattorie Italia are rather similar indicating that those brands directly compete with each other in rather saturated segments. As regards non price competition activities Table 1 shows that the share of sales which take place under promotional activities is with 27.67% highest for national brands followed by the local brand with a share of 18.83%. For private labels in contrast the respective share is with 14.56% significantly lower.

Table 1. Descriptive statistics of milk retail sales in Torino, 2005-2008

Product	Mean share (%)	Mean price per litre (€)	Mean promotion (%)
<i>UHT whole milk (3.5%)</i>			
Parmalat	0.761	0.973	21.635
Gruppo Fattorie Italia	0.571	0.934	24.839
Centrale Latte Torino	6.111	0.991	24.159
Private Labels	3.889	0.685	14.051
<i>UHT reduced fat milk (1.7%)</i>			
Granarolo	11.348	0.727	67.437
Parmalat	8.665	0.873	47.063
Gruppo Fattorie Italia	3.066	0.776	43.913
Centrale Latte Torino	11.130	0.851	46.003
Private Labels	13.143	0.550	19.043
<i>UHT skimmed milk (0.1%)</i>			
Parmalat	0.756	1.051	14.254
Centrale Latte Torino	0.852	1.097	4.012
Private Labels	2.323	0.586	10.600
<i>Fresh whole milk (3.5%)</i>			
Gruppo Fattorie Italia	3.226	1.056	1.272
Centrale LatteTorino	5.430	1.092	1.149
<i>Fresh reduced fat milk (1.7%)</i>			
Granarolo	1.612	1.055	1.536
Total sample	72.882		
Outside good	27.118		
National brands	30.004	0.931	27.674
Local brand	23.523	1.007	18.831
Private labels	19.355	0.607	14.563

Note: Calculated based on Information Resource Inc. (IRI) Infoscan data, provided by the University of Connecticut

BLP results

Table 2 shows the coefficients resulting from the estimation of (2). In general, the results appear plausible regarding signs and significances. The majority of product characteristics have a statistically significant impact on demand of milk products. As expected consumers evaluate price increases negatively while the fat content as well as the share of promotional activities are significant drivers of demand. UHT treatment in contrast is negatively evaluated by consumers likely due to its drawbacks regarding nutritional properties and taste. The company dummies indicate that all national brands are valued significantly higher than the base category private labels. Surprisingly, a difference in consumer valuation between the local brand Centrale Latte Torino and private labels cannot be detected.

Table 2. BLP demand estimation results

Variable	Mean utility		Unobservables	
	Coefficient	SE	Coefficient	SE
Price	-6.315***	1.224	5.299***	1.207
Fat	0.101***	0.029	0.000	0.170
UHT	-1.618***	0.129	0.482	0.376
Promotional activity	3.564***	0.488	1.527**	0.631
Granarolo	-2.014**	1.016	2.588**	1.097
Parmalat	-5.183***	1.428	6.091***	1.191
Gruppo Fattorie Italia	-0.959***	0.356	0.000	0.000
Centrale Latte Torino	-0.056	0.542	3.062***	0.722
Constant	4.496***	1.068		
# of obs.	729			

Notes: SE = standard errors; ***p<0.01, **p<0.05, *p<0.1; Brand base category: private labels

Estimated own- and cross-price elasticities (averaged over time) are reported in Table 3. The values can serve to illustrate how consumer substitute milk products as a reaction of price increases. Overall, 225 (15x15) own- and cross-price elasticities were calculated. Due to the difficulties involved with reporting and interpreting the large number of coefficients we focus on a set of nine selected milk products leading to 81 elasticity values. For each of the five segments the leading national brand has been chosen ensuring that each national is included at least once. Moreover, we include the private label in the two segments where it has the highest market share as well as the local brand in those segments where it has a significant contribution. As expected all own-price elasticities are negative and constitute among the highest absolute values in the table while the majority of cross-price elasticities is close to zero. The magnitude

of own price elasticities ranges from -2.975 (Private label UHT whole milk) to -0.497 (Gruppo Fattorie Italia fresh whole milk) while cross price elasticities are generally smaller in absolute values.

From Table 3 it can be observed that the fresh milk segment has the lowest own price elasticities which range from -1.422 to -0.497 indicating that those products are the ones with the highest market power in the Italian milk sector. Moreover, the cross price elasticities of fresh milk products and UHT milks undermine the results of the demand function implying that consumers negatively evaluate the UHT process. The respective cross price elasticities reveal that consumers more likely switch among fresh milk products if the price of those products increases instead of substituting for UHT products. An exception is the firm Granarolo where some brand loyalty can be observed as price increases in the Granarolo fresh brand induce some demand increases of the Granarolo UHT brand. The same seems to hold for the local brand Central Latte Torino where 1% price increases of the fresh brand increase demand of the UHT 1.7% fat alternative by 0.506%. The fresh milk segment is also likely affected by similar price changes across its products as cross price elasticities are negative among the three fresh brands. In the UHT segment Granarolo the brand with the highest share and thus establishment as well as the 3.5% fat private label have the lowest own price elasticity. The 1.7% fat UHT private label has a lower own-price elasticity than the brand Parmalat, however it tends to be the case that the local brand inhibits higher market power than the private label indicated by its lower own price elasticities. This indicates that the local brand indeed relies on some consumer reputation compared to the private label and the national brand Parmalat in the UHT segment although the demand function has revealed that it is not in general more positively evaluated than the private label. While the majority of cross price elasticities in the UHT segment is also close to zero we find that there is some substitution between local products as 1% price increases of the local 1.7% fat UHT choice lead to increases of almost 0.6% of the 3.5% fat alternative. Similarly 1% increases in the 3.5% fat local brand increase demand of the skimmed alternative by 0.9%.

Table 3. Average demand elasticities for milk brands and private labels 2005-2008

Products	UHT 3.5%			UHT 1.7%			Fresh 3.5%		Fresh 1.7%
	Parmalat	CLT	Private label	Granarolo	CLT	Private label	GFI	CLT	Granarolo
UHT 3.5%									
Parmalat	-2.725	0.027	0.037	0.071	0.073	0.115	-0.021	-0.001	-0.011
CLT	0.003	-2.308	0.059	0.114	0.917	0.180	-0.020	0.155	-0.005
Private label			-2.975						
UHT 1.7%									
Granarolo	0.007	0.085	0.102	-1.849	0.221	0.341	0.019	0.046	0.074
CLT	0.006	0.597	0.079	0.194	-2.440	0.263	0.013	0.324	0.007
Private label	0.012	0.152	0.266	0.386	0.341	-2.557	0.089	0.095	0.026
Fresh 3.5%									
GFI	-0.004	-0.035	0.055	0.046	0.037	0.188	-0.497	-0.132	-0.102
CLT	0.000	0.160	0.039	0.063	0.506	0.115	-0.076	-1.422	-0.024
Fresh 1.7%									
Granarolo	-0.005	-0.015	0.037	0.350	0.038	0.112	-0.199	-0.083	-0.718

Notes: CLT = Centrale Latte Torino; GFI = Gruppo Fattorie Italia

Conclusions

In this paper we have applied a BLP logit demand model with random coefficients to the Italian fluid milk market during 2005-2008. The estimated demand function indicates that consumers positively evaluate the fat content of milk products as well as promotional activities related to milk sales. In contrast higher prices and UHT treatment have a negative impact on demand. As regards firm affiliation all national brands are more positively evaluated than private labels. Moreover, the results reveal that national as well as local brands in the fresh milk segment have the lowest own-price elasticities and thus the highest market power. This contrast previous results (e.g. Lopez et al. 2015) which find that private labels are the products with the lowest own price elasticities regardless of segment. Although we find that the national brand Parmalat is similarly affected by price increases compared to the private label in the UHT 3.5% fat segment it seems to be the case that the local brand Central Latte Torino inhibits stronger market power in the UHT segment than the private label alternative. Those results are in line with the fact that bargaining power induced by concentration or the introduction of private labels is lower in the Italian retail sector than in other EU member states or the US.

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