

Transparency of Food Prices (TRANSFOP) Project Annual Conference



Seventh Framework Programme



Toulouse

31st January – 1st February 2013

ABSTRACTS LISTING

“Nonlinearities in the Slovenian apple price transmission”

Islam Hassouneh (CREDA, Barcelona), Teresa Serra (CREDA, Barcelona), Stefan Bojnec (University of Primorska, Slovenia)

This paper assesses price linkages and patterns of transmission among producer and consumer markets for apple in Slovenia using nonlinear vector error correction models. Nonlinearities are allowed by means of threshold and multivariate local linear regression estimation techniques. Monthly prices over the period 2000-2011 are used in the empirical application. Both techniques provide evidence of non-linearities in price adjustments. Findings suggest that producer and consumer prices tend to increase rather than decrease. Results also indicate that parametric threshold approaches may have difficulties in adequately representing price behavior dynamics.

“Common shocks, uncommon effects: food inflation in the EU”

Tim Lloyd (University of Nottingham), Steve McCorrison (University of Exeter), Wyn Morgan (University of Nottingham) and Evious Zgovu (University of Nottingham)

In this paper, we address why the food price experience varied so markedly throughout the EU against the background of the common exogenous shocks faced by EU Member States. To account for the factors that may influence the different experiences throughout the EU, we explore a single vertical chain (world wheat prices, domestic wheat prices and retail bread prices) while accounting for other macroeconomic factors that may contribute to the overall impact of commodity price shocks on retail food price inflation; specifically, we account for the potential role of exchange rates (not all Member States use the Euro), oil prices and unemployment. Using monthly data from the mid-1990s till the end of 2011, we estimate structural vector autoregressive models (SVARs) for 13 EU Member States to deliver an impulse response and variance decomposition of bread price inflation due to the principal drivers. Results emphasise the importance of the vertical price relationships but also that despite the commonality of shock the outcomes depend on national market characteristics.

“Price transmission under the influence of the pork cycle”

(Stephan Von Cramon-Taubadel and Carsten Holst, University of Göttingen)

An extensive literature finds evidence of asymmetric vertical price transmission (AVPT) on markets for agricultural products. However there is a divide between this empirical literature and the literature that provides theoretical explanations for AVPT. Often it is assumed that AVPT is due to the exercise of market power by actors in the food chain, for example concentrated meat or dairy processing enterprises. But clear proof of a link between market structure and asymmetric price transmission has proven elusive. We attempt to provide proof of such a link by studying price transmission in the pork chain in Germany. Our analysis is based on weekly data from 1990 to 2011 and is based on the idea that the relative market power of the participants in the pork chain varies across the different phases of the pork cycle. When pork prices are cyclically falling, the oversupply of slaughter pigs strengthens the negotiating position of processors relative to producers; when pork prices are cyclically increasing, producers are in a relatively stronger position. We explore different means of measuring the pork cycle, and we use non-linear vector error correction techniques to measure variations in the asymmetry of vertical price transmission in the course of the pork cycle.

“Price transmission in vertically coordinated industries”

Anneleen Vandeplas (LICOS, KU Leuven)

This paper presents a theoretical framework for the analysis of price transmission in vertically coordinated food supply chains. We explicitly account for contract-specific investments, factor market imperfections, and imperfect contract enforcement institutions – as can be observed in many food chains in the EU as elsewhere (developed, developing and transition markets). We analyze how exogenous shocks in consumer prices are transmitted through the vertically coordinated supply chain to producer-level prices. We first show that price transmission depends on the nature of investments and transaction costs in the supply chain – with important conceptual differences between for example search costs, training costs, monitoring costs, and input costs. Next, we show that, contrary to conventional thinking, weaker price transmission from consumer to producer prices does not necessarily imply a welfare loss for suppliers of agricultural products in this context.

“Cost pass-through in differentiated product markets: a disaggregated study for milk and butter”

Thore Holm, Jens-Peter Loy and Carsten Steinhagen (University of Kiel)

Asymmetric cost pass through is often interpreted as an indication of market power. Since 2007 milk markets worldwide have been in turmoil. Price adjustments have been closely monitored by the public and antitrust agencies in the EU. In this paper pass through between wholesale and retail prices for differentiated dairy products is analysed from 2005 to 2008. Results indicate asymmetric cost pass through that varies between brands and outlets. The starting hypothesis, that asymmetric cost pass through is used more by stronger brands, has to be rejected. Thus market power appears to be no major cause for asymmetric pass through.

“Retailer Heterogeneity and Price Dynamics: Scanner Data Evidence from UK Food Retailing”

Tim Lloyd (University of Nottingham), Steve McCorrison (University of Exeter), Wyn Morgan (University of Nottingham), Eva Poen (University of Exeter) and Eviou Zgovu (University of Nottingham)

This paper contributes to recent research on price dynamics using micro-price data sets. We emphasize a previously neglected aspect, the role of retailer heterogeneity. Our key findings are: (i) the frequency of price adjustment and the implied duration of prices varies considerably across retailers; (ii) price promotions (sales) also vary across retailers with some retailers seldom using sales, while for others sales are a common feature of pricing; (iii) the duration of reference prices is at most 26 weeks but the duration of reference prices is around 16 weeks for some retailers; (iv) branded products have shorter durations than private label products; (v) decomposition analysis suggests price adjustment is evenly split between sales and reference prices but, for some retailers, reference prices are the main source of price changes; (vi) there is low correlation between the frequency of price and costs changes across both products and retailers. Taken together, while confirming the significance of price stickiness after accounting for sales, price dynamics vary considerably across retailers. In turn, retailer heterogeneity has important implications for interpreting aggregate price dynamics in both theoretical and empirical research.

“Vertical Integration and Foreclosure in Multilateral Relations”

Volker Nocke (University of Mannheim) and Patrick Rey (TSE)

We develop a model of multilateral relations between upstream manufacturers that produce differentiated goods and downstream retailers that sell these goods on to consumers. Contract offers and acceptance decisions are private information to the contracting parties. We show that vertical integration between a manufacturer and a retailer leads to the foreclosure of rival manufacturers from access to the integrated retailer, at the detriment of consumers. Moreover, we show that firms have an incentive to integrate vertically.

“Buyer power from joint listing decision”

Stéphane Caprice (TSE-INRA) and Patrick Rey (TSE)

We show that collective bargaining can enhance retailers buying power vis-à-vis their suppliers. We consider a model of vertically related markets, in which an upstream leader faces a competitive fringe of less efficient suppliers and negotiates secretly with several firms that compete in a downstream market. We allow downstream firms to join forces in negotiating with suppliers, by creating a buyer group which selects suppliers on behalf of its members: each group member can then veto the upstream leader's offer, in which case all group members turn to the fringe suppliers. Transforming individual listing decisions into a joint listing decision makes delisting less harmful for a group member; this, in turn enhances the group members' bargaining position at the expense of the upstream leader. We also show that this additional buyer power can have an ambiguous impact on the upstream leader's incentives to invest.

“An analysis of asymmetric consumer price responses and asymmetric cost pass-through in the French coffee market”

Céline Bonnet (TSE-INRA) and Sofia Berto Villas-Boas (UC Berkeley)

The occurrence of asymmetric price transmission has important welfare and, hence, policy implications. The contribution of the present paper is to estimate in a structural model and then propose a formal framework to investigate one possible cause of asymmetric price transmission in the markets. In particular, we highlight the possible role of asymmetries in demand as causes of asymmetric firm price transmission of upstream cost shocks into retail prices consumers observe. The approach consists of two steps, where in the first we estimate a demand model allowing for the possibility of asymmetric demand price sensitivities and using consumers' actual purchase data and price variation in the French Coffee Market. In the second step, we account for the structure of this industry, and in particular the horizontal and vertical interactions between manufacturers and retailers. From estimates of consumers' demand on the French Coffee Market, we are able to recover price cost margins and estimated marginal costs from a supply model as in Bonnet and Dubois (2010). Thanks to simulations of cost shocks, we estimate cost pass-through and by implementing positive and negative cost shock simulations, we will test the asymmetry of cost pass-through. The results suggest that a positive cost shock is more transmitted than a negative one.

“Mergers and Acquisitions in the EU Food Sector”

Nils Herger (Study Centre Gernzensee, Berne), Yan Huang and Steve McCorrison, (University of Exeter)

In this presentation, we outline the direction of our research on mergers and acquisitions in the EU food sector. One of the key features of our research involves the use of firm-level data on merger and acquisition deals in the food sector (and more generally) covering the EU (as well as other countries). With firm level data, we have the potential to ask a broad number of questions including the form acquisitions take (i.e. identify horizontal from vertical acquisitions), whether domestic acquisitions are ‘different’ from cross-border acquisitions, and what are the main drivers of acquisition activity. In this presentation, we outline three main avenues for this research which will be completed in the forthcoming months: first, the process in which we characterise different types of acquisition activity; second, to explore if and how alternative forms of acquisitions may be driven by different factors (in exploring this we will present some concurrent work by Herger and McCorrison using the full sample of cross-border acquisitions); third, we outline how-using firm level data-we can identify who-buys-who in the food industry and how this will likely influence the interpretation of mergers and acquisitions in the EU food sector.

“Food price inflation in the dairy sector: the role of retailers’ strategies”

Elena Castellari, Daniele Moro, Paolo Scokoi and Claudio Soregaroli (UNICATT, Italy)

According to Eurostat, after a period of relatively low consumer prices during the 90’s, at the beginning of 2000 the European Union has been affected by an increasing consumer price inflation of about 2% per year. In 2008 the consumer price inflation sharply increased to 3.7%. In 2009, following a decline on food prices, inflation rate stood at 1% to again accelerate the increase in 2010 (2%) and 2011 (3.1%). Variation in food and energy prices seems to be the main reason driving the fluctuation of price inflation rates. Among all different aspects able to influence food prices, retailer strategies can have a central role in determining the food prices faced by consumers. Through store and chain marketing strategies retailers are able to somehow influence consumer decisions when choosing among different alternatives.

The computation of the standard Consumer Price Index (CPI) carried out by many official statistical agencies does not account for the potential effect of retailers’ marketing strategies. Using high frequency scanner data, the researcher can incorporate the actual consumer purchasing behavior in the computation of the CPI. Moreover, this approach brings some advantages given by the availability of price and quantities of all goods allowing the construction of superlative weighted price indexes (Haan and van der Grient, 2011). At the same time, some potential negative implications arise from using scanner data for CPI estimation. In particular, the high volatility of prices and quantity due to sales would generate drift on the CPI estimation generating “price and quantity bouncing” bias (Haan and van der Grient, 2011). The most recent literature has focused on analyzing the different approaches to the computation of price indexes and on establishing the effect of time and store aggregation as well as drift bias on inflation measurement. Ivanic et al. (2011) show the aggregation issue becomes relevant when using high frequency scanner data to estimate price changes through the computation of the CPI. Evidence of a “price bouncing” bias, when estimating price indexes, has also been found by Haan and van der Grient (2011) using Dutch high frequency data. Similarly, Nakamura et al. (2010) comparing price indexes calculated using all prices and only with “regular prices”, without sales, confirm the presence of chain drift problem when using US scanner data.

Nakamura et al. (2010) analysis suggests that “averaging within chains will ameliorate the chain drift problem” although it cannot be the sole solution. A more promising approach seems to be the use of drift-free multilateral index method as proposed by Ivanic et al. (2011). To overcome the chain drift bias problem induced by computing the CPI with fixed based and chained index, these authors propose the use of a multilateral index, the GEKS index. The authors show how the conventional superlative indexes, even calculated at a level of aggregation that seems to minimize the drift bias, “show a troubling degree of volatility when high-frequency data are used” (Ivanic et al. 2011). Differently, the GEKS index provides drift-free estimates. Haan and van der Grient (2011) in their empirical tests confirmed the superiority of GEKS indexes with respect to the Dutch method when dealing with supermarket scanner data.

Using the drift-free CPI estimate proposed by Ivanic et al. (2011), we wish to identify how the strategies adopted by different retail chains along store formats can influence consumer purchasing power. We use high frequency data for eight different products from 400 points of sales during the 156 weeks from January 2009 to January 2012. The points of sales are all located in Italy and they belong to fourteen different retail chains. Each of the fourteen retail chains can have different store formats (hypermarkets, supermarkets and superettes) for a total of 33 chain-format combinations observed.

After computing the GEKS index for each product and chain-format combination along the 156 weeks, we use a three-way ECM estimator (see Davies, 2002) to capture the unobservables due to chain, time and format variation. Moreover, for each product of our dataset, we estimate the effect on CPI due to observed retailer strategies such as promotional activities, private label presence, retailer assortment, private labels shelf depth.

Preliminary results show that the incidence of promotional activities and the market share of private labels have a positive role in restraining price increases. Promotional activities on national brands seem to be the most effective in moderating the price rise compared to promotions on private labels. Moreover, a high private label presence in different market segments, within the same product, reflects a relatively higher price index. The effect due to the intensity of assortment is mixed depending on the product category analyzed.