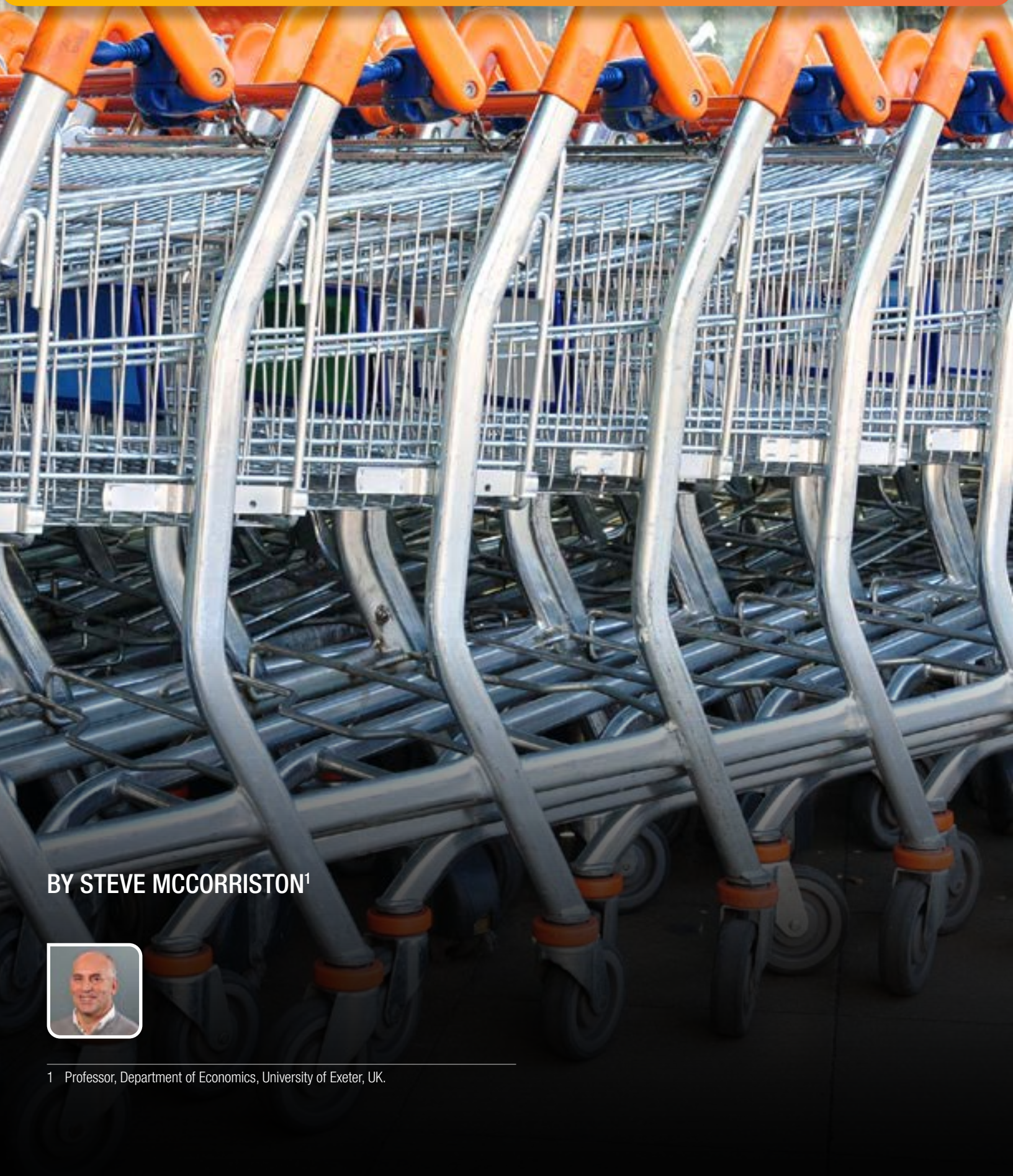
PASS-THROUGH AND COMPETITION IN THE FOOD SECTOR: NEW DATA, NEW INSIGHTS, REMAINING QUESTIONS



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Pass-Through and Competition in the Food Sector: New Data, New Insights, Remaining Questions

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Current pressures on food supply chains are associated with higher food prices but the extent of the pass-through to consumers will depend on how competition in the retail food sector. This contribution summarizes insights from recent research, a key feature of which is the use of large data on prices across retail food chains which forms the basis for a better understanding of competition in this sector. In addition to the focus on consumers, the contribution also points to concerns about how the retail sector may impact on suppliers with weak bargaining power a t the other end of the food supply chain.

I. INTRODUCTION

In recent months, we have witnessed considerable pressure on food chains across many countries, these pressures emanating from a number of sources, both domestic and international. COVID-19 has had an obvious impact, most notably through logistics and labor shortages. Simultaneously, world commodity prices have increased; between September 2020 and 2021, the FAO food price index has increased by over 30 per cent. These changes have been reflected in higher domestic retail food prices, with food inflation exceeding headline inflation with particularly high food inflation recorded in developing and emerging economies. With these shocks to the food sector, attention turns to the functioning of food chains and how these shocks impact on consumers, an issue of particular concern to politicians given the regressive nature of higher food prices. But aside from the macroeconomic context, concerns also arise with respect to how competition in the food chain determines the pass-through of shocks. However, making progress on understanding the link between the pass-through and competition also provides important insights into competition issues in food retailing.

Competition in food retailing is complex: given the multi-product offerings that characterize food retailing and the vertically-related nature of food chains, competition is not solely related to horizontal issues (e.g. relating to prices across retail chains) but also how interactions between suppliers at other stages of the food chain can impact on competition between retail chains. This is not only an issue that is a challenge to anti-trust authorities but also to researchers who aim to provide insights into these issues.

In this article, we discuss some recent developments that shed new light on the link between pass-through and competition, referring to recent research involving retail price data from several countries. The research discussed is necessarily selective, the main thread relating to the recent use of large data sets that have been employed to provide new insights into how retail chains compete and pass-through commodity price shocks. We also extend the discussion to "state-of-the-art" models of multi-category, multi-chain models that go beyond studies that focus on price behavior in individual food categories. The research we comment on relates to data from the U.S., UK, France, and Germany.

Finally, some remaining issues are highlighted relating to the potential impact of retail food chains that deserve further attention from researchers, i.e. the impact on small scale suppliers including farmers at the other end of the food supply chain, an issue that will likely come to the fore as current pressures on supply chains weaken and lower commodity prices return.

II. CONTEXT

Although the drivers that are causing current pressures on supply chains are different, addressing competition issues in the food sector was one of the outcomes of the commodity crises of 2007-08 and 2011. The OECD Competition Forum addressed a wide range of issues covering seller power, consolidation, the entry of discounters, buyer alliances, buyer power and price transmission. These wide-ranging concerns have also challenged researchers addressing competition in the food sector but with no clear consensus about the potential harm related to high levels of concentration or the exercise of buyer power. In the context of developing and emerging economies, the entry and growth of retail food chains that has been recently experienced widens the concerns regarding competition that has been experienced in developed countries.

Within this context, the issue of pass-through and competition has been a continuing theme among researchers. As a broad rule-of-thumb, when markets are oligopolistic, pass-through can be less than what you would expect with competitive markets, the main mechanism for this relating to how firms adjust their mark-ups as costs change. With less than perfect price transmission, this may benefit consumers when higher costs lead to increases in retail prices; but part of the concern about competition is that cost decreases are not passed through thus harming consumers. Given the underlying volatility in commodity markets (what goes up comes back down, at least to some extent), part of the concern relating to food prices relates to this asymmetric effect (or the "rockets and feathers" phenomenon). Recent analysis of price transmission can also provide new insights into competition in the retail food sector.

III. MEASURING PASS-THROUGH

At one level, measuring pass-through in the food sector is both straightforward but lacking insights necessary to shed light on competition issues. Economists have employed a range of empirical methods to relate changes at one end of the food chain (or, in some cases, world market prices) to retail prices at the other. Yet, the use of aggregate (market level and monthly) data precludes detailed insights: "low" price transmission may infer the lack of competition in the food chain as is often claimed but cannot be substantiated. Moreover, aggregate data obscures details that reflect the complexity of food retailing including differences between branded products and private labels, the importance of vertical control in

the food supply chain and differences in price adjustment across retail food chains. But access in recent years to scanner data (i.e. the prices of individual food items that are scanned at the check-out) provides the opportunity for more detail about pass-through and, in turn, how retail food chains compete. Together with the use of developments in quantitative methods, more sophisticated characterizations of competition in the food sector are beginning to emerge. We comment on some of these new insights below.

IV. BRANDED PRODUCTS VERSUS PRIVATE LABELS

Supermarket shelves offer wide choices of food products and an extensive array of alternatives even within food categories. As part of this array, there are branded products (supplied by often dominant food manufacturers) and private labels. Private labels are becoming increasingly important in food retailing with the proliferation of private labels being particularly high in European countries, most notably the UK. While initially, private labels were associated with more "value-end" food, they now encompass high-quality offerings at least on a par-or sometimes exceeding-branded products. What does the increasing proliferation tell us about competition in food retailing?

If markets are not competitive, firms can charge mark-ups and how these mark-ups change in the face of cost changes will determine the level of pass-through. But in the context of the food sector, the issue of double marginalization may arise i.e. if the food manufacturing sector is highly concentrated, there will be mark-ups at this stage of the food chain which will add to the mark-ups applied in the highly-concentrated retail food sector. But private labels can circumvent this double marginalization issue; as retail food chains have control over the supply of products that appear on the supermarket shelf, there is a single (not double) mark-up associated with private labels.

In recent research, it has been shown that the impact of cost changes to retail food prices will differ between the branded and private label products. But the link between product type and pass-through is potentially ambiguous as there is both a horizontal and vertical effect associated with private labels. On the one hand, the horizontal effect potentially weakens competition in the retail sector as the increasing pervasiveness of private labels may increase market shares of retail chains; on the other, private labels deal with the double marginalization issue and ameliorates the double mark-up issue which represents a pro-competitive effect. The former (horizontal) influence will serve to reduce price transmission, the other (the vertical effect) will increase it. What influence dominates is an empirical issue.

Recent research uses scanner data to measure the extent of price transmission. Employing data on bar-coded food items for a major retail food chain in the U.S., the authors find that private label products have higher levels of pass-through compared with branded food products; in other words, the vertical effect that diminishes double marginalization dominates the horizontal (increasing market share) effect. The implication arising from the higher pass-through to consumer prices suggests that the growing influence of retail chains over different stages of the food chain may be good for consumers. In a second part of their analysis involving competition among retail food chains in a specific location (Los Angeles), the authors confirm the higher pass-through of cost changes for private label products.

But a recent study of food retailing in the UK, using data for branded products for orange juice and coffee, comes to the opposite conclusion. What is different about the data used in this study is that the researchers match data for the identical food products across all major retail food chains in the UK. More directly, they account for how prices across competing retailers influence price transmission in specific chains, their control for competition across retail chains being more explicit than that allowed for in the U.S. study. They find that private label products have lower price transmission compared with national brands; if they do not account for the competitive influence of competing retail chains, their results would be consistent with the results for the U.S. This suggests that accounting explicitly for price competition across retail chains has an important bearing on the results. In sum, these results for the UK would imply more concern with the market share increasing effect associated with private labels. Moreover, they show that the pass-through varies significantly across retail chains; there is no single measure of pass-through and the variation in pass-through varies more across retail chains than it does across product type.

In short, there is no consensus on the insights relating to how different types of products relate to competition in retail food chains; at best, the link between pass-through, competition and product type seems to be context-specific.

V. ASYMMETRIC PRICE CHANGES

An issue associated with price changes at the retail sector is that price changes are asymmetric. Given that world commodity prices are noted for their underlying volatility (i.e. raw commodity prices go up as well as down), the concern is that cost increases are passed through (at least in part) to consumers but that cost decreases are not, or at least are not passed through to the same extent as the cost rise. While this issue has been of interest to economists for some time, recent research has again used detailed data to explore this issue. Asymmetric price transmis-

sion potentially harms consumers as it implies that retailers benefit at the expense of consumers as margins increase as costs fall, with price decreases not being commensurate with the change in costs.

Employing data for the retail coffee sector in France, researchers have confirmed that asymmetric price transmission exists. Moreover, the degree of asymmetric pass-through depends on the magnitude of the cost shock and that there are differences with respect to private labels and national brands. The underlying reason for the asymmetric price adjustment relates to consumer sensitivities: specifically, the results indicate that consumers are less sensitive to price increases than to decreases which implies more scope to pass-through rising costs. With consumers being less responsive to price increases, the scope for retail chains exercising market power is greater.

A different insight comes with the use of a large data set applied to the dairy sector in Germany. Allowing specifically for the timing of price adjustment, this study addresses the "rockets and feathers" phenomenon. However, the authors conclude that market power is unlikely to be the cause of asymmetric price adjustment. The more likely cause is so-called "menu costs" associated with changing prices.

VI. FURTHER INSIGHTS

Insights relating to competition across retail food chains has taken a significant step forward involving recent research where data extends beyond individual categories either within or across retail chains to multi-category, multi-chain studies, again with data relating to the U.S. and UK. The main feature of this recent research is that the focus is not on individual food products or product types (branded or private labels) but to shopping baskets and "types" of shoppers. Specifically, retail chains consider price changes involving products that constitute the range of products that shoppers buy in specific food retailers. Retail chains consider that a shopper (particularly a "one stop" shopper) may transfer their shopping basket to another retailer; the price responses of individual products (or product categories) therefore relate to prices both across products in the shopping basket but also simultaneously in the shopping basket in competing retail chains. What does this tell us about competition?

Two recent studies employ "state-of-the-art" methods, and data relating to food categories within a shopping basket both within and across retail chains; but they come to opposite conclusions about the implications for competition in a multi-category, multi-chain setting. In the case of the U.S., competition appears to become less intense across retail chains; the research using data for the UK, conclude that competition is more intense.

Using data for the UK retail food sector, the insights from the research indicate that in the context of a multi-category, multi-store setting that more appropriately characterizes competition between chains, "one stop" shoppers are more likely to mitigate the potential for higher prices (i.e. reduce the impact of market power). Specifically, raising the prices of one category in the shopping basket generates the demand complementarities both across categories and across stores. Since a higher price raises the possibility of losing a "one stop" shopper, retail chains must account for this possibility, and it is this mechanism that reduces the exercise of market power. This insight also has implications for anti-trust authorities insofar as they determine which type of shopper (i.e. a "one stop" or "multi-stop") is the focus of attention in determining price setting in the retail food sector.

The results from the U.S. study come to a different conclusion and therefore insights about competition between retail chains. Based on a framework similar to that employed for the UK, the presence of "one stop" shoppers tends to weaken competition between stores. This also provides insights about how retail chains retain shoppers. Practices such as promotions and offers have the purpose of retaining "one stop" shoppers and therefore a wider perspective of competition between retail chains.

Despite these differences, the over-arching outcome from these studies is to highlight the importance of looking beyond individual category pricing, to consider demand complementarities across categories and how retail chains compete given different "types" of shoppers.

VII. SOME REMAINING ISSUES

The context for this discussion of competition issues in the food sector has related to current cost increases associated with supply chain problems and the increase in world commodity prices. The issue of pass-through is important and, in addressing it, recent research has the potential to provide insights about the functioning of food supply chains more generally and competition in food retailing more specifically. Given the complexity of competition in food retailing, the use of more detailed data and more sophisticated methods offers the potential for new insights. But some issues remain unresolved and, arguably, researchers are looking at the wrong end of the supply chain for the effects especially if mark-ups in the retail sector are low; perhaps the burden of the shocks to the food sector will be felt elsewhere.

Rather than the focus being on the pass-through to consumers, to what extent does the pressure on food supply chains relate to "pass-back" to small scale producers and farmers at the other end of the supply chain? Addressing these issues involve their own complexities as the "pass-back" effect may relate not just to prices but involve a wider range of issues associated with unfair trading practices. This is a more challenging issue to address: when we are considering the potential impact on consumers, the focus is principally on determining the extent of retail price changes, the challenge being to have adequate data on retail food prices across retail chains to substantiate this issue. But when it comes to suppliers, the question of which metric to focus on, is less clear.

Firms that are dominant in the food chain can impact on suppliers with relatively weak bargaining power (whether they are farmers or other enterprises in other segments of the food chain) in a number of ways. These include, inter alia, terms of contracts, payment schedules, changing the terms of contracts and so on. Reflecting the concerns at this end of the food chain, in 2019 the European Union issued a directive relating to unfair trading practices. The issue of unfair trading practices had been on the policy agenda for many EU Member States for some time, the issue gathering more momentum around 2015 following declines in agricultural prices and the Russian import ban. In due course, the current pressures on supply chains will ease and world commodity prices drop back; the issue of the impact on suppliers from their weak position in the supply chain may again come to the fore.

In broad terms, the EU's Unfair Trading Practices Directive addresses two categories of unfair trading practices: (i) unilateral action by more dominant firms on weaker participants in the supply chain; and (ii) shifting risks to weaker participants. Specifically, the EU Directive prohibits ten so-called "black" trading practices including late payments, short-term cancellation and unilateral changes to contracts, commercial retaliation by the buyer and transferring risks to suppliers. A further six "grey" unfair practices related to return of unsold products, and payments for promotion and marketing would require the unambiguous agreement between the buyer and seller. Moreover, each EU Member State is obliged to have a dedicated national authority to deal with complaints relating to unfair trading practices and impose penalties. However, substantiating both the extent and impact of unfair trading practices on suppliers in the food chain remains a challenge.

VIII. SUMMARY

This discussion focused around recent pressures on the food supply chain and issues associated with competition in the food retailing sector. A challenge for researchers relates to addressing how competition impacts on consumers; more specifically, how increases in costs emanating from world commodity markets or associated with difficulties in the supply chain are passed-through to consumers. There has been significant progress on this issue in recent years due to the increased availability of large and detailed data sets relating to prices consumers pay for individual food items in supermarket chains.

But this data also allows researchers to provide new insights into competition in food retailing. This is important as competition in food retailing is complex relating to not only "horizontal" issues but also "vertical" issues and how these two dimensions of how the food retailing sector interact. In doing so, we have drawn on recent research using detailed consumer price data for the U.S., UK, France, and Germany. However, how retail food chains impact on consumers is only one side of the coin; addressing the impact of dominant buyers on suppliers in the food chain remains an on-going challenge.

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