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ECONOMIC ANALYSIS IN MERGER INVESTIGATIONS – Contribution from the United Kingdom

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This contribution is submitted by the United Kingdom under Session III of the Global Forum on Competition to be held on 7-10 December 2020.

More documentation related to this discussion can be found at: oe.cd/mergerinv.

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Economic Analysis in Merger Investigations

- Contribution from the United Kingdom –

1. Introduction

1. There is a continued need for strong and effective merger enforcement in order to safeguard competition, prevent anti-competitive mergers, and protect consumers. Economics plays a central role in effective merger enforcement, as it provides the conceptual framework to assess merger effects. Additionally, effective merger enforcement relies on the merger assessment being firmly rooted in evidence. Economic analysis is often key in interpreting this evidence.
2. This submission by the Competition and Markets Authority (CMA) discusses the role of economists and economic analysis in merger investigations. While this, importantly, covers how CMA economists develop frameworks to assess merger effects, this submission does not aim to provide an extensive overview of these economic frameworks. Instead, it focuses on the following two themes:
 - a the approach to economic analysis and evidence gathering, including a discussion of the circumstances that affect when different types of evidence might be relevant, and how economic thinking informs that decision; and
 - b the wider contribution of economists at the CMA in developing the toolkit used for assessing mergers.
3. The CMA has recently published its revised Merger Assessment Guidelines for consultation. These guidelines cover many of the issues mentioned in this submission.¹

2. The role of economists in CMA merger investigations

4. Economists play a central role in the assessment of the effects of a given merger, but they also contribute to other areas, such as supporting the CMA's remedies team address any competition concerns found in a merger investigation.
5. Economists are embedded in merger case teams and are involved from the very beginning of cases, working closely with other members of the case team and the decision makers.
6. At the outset, economists assess how competition in a given industry or market works and what the key parameters of competition are. This underpins the economic analysis of merger investigations and may include considering the levels of the supply chain at which the merger firms operate; how the merger firms interact with each other and with their rivals; how customers approach their purchasing decision; how firms win and retain customers; and any long-run dynamics in the relevant sectors.
7. Economists formulate theories of harm and determine the economic framework within which the CMA assesses the effects of the merger and whether or not it could lead to a substantial lessening of competition (SLC). In this regard, economists ensure that the

¹ See <https://www.gov.uk/government/consultations/updates-to-the-cmas-merger-assessment-guidelines-cma129>

economic framework appropriately takes into account the particular characteristics of the market, and that the underlying economic theories that are applied align with the way the market in question works in practice. This process also involves considering how well-suited an established framework is to a given case and, if necessary, providing adjustments to this framework.

8. Economists develop an evidence-gathering strategy to inform the assessment of the identified theories of harm. In particular, economists play a key role in deciding which evidence to collect, how such evidence is assessed and which analysis to conduct, ensuring that evidence is considered within the chosen economic framework. In undertaking the assessment, economists do not only conduct and interpret quantitative analysis; they also make a valuable contribution in collecting and interpreting more qualitative evidence such as internal documents and views from third parties.

9. Moreover, economists play an important role in considering the available evidence in the round. The CMA often takes into account a range of different evidence and economists contribute to assessing the strength of different pieces of evidence and the appropriate weight that should be attached to them. This is done on a case by case basis, as there is no set hierarchy between different pieces of evidence. For example, while the CMA may place substantial weight on a tender analysis in some cases, such analysis may carry less weight in other cases, eg where the CMA has concerns about the quality and/or coverage of the data.

10. Finally, it is important that even complex economic analysis is communicated clearly and effectively. Economists at the CMA are expected to present and draft economic analysis in a way that is accessible to a broad audience.

3. Approach to evidence gathering

11. Merger assessment is inevitably case specific and must take account of the particular transaction and the markets being analysed. The remainder of this section describes some of the considerations of how the CMA decides what evidence to gather. It also includes a discussion of the types of evidence that are commonly employed in the CMA's merger investigations.

3.1. How the CMA decides what evidence to gather

12. The CMA employs a flexible and case-specific approach to deciding what evidence to gather in its merger investigations. In particular, the CMA considers each merger with due regard to the particular circumstances of the case, including the theories of harm being investigated, the nature of competition in the market, the information available and the time constraints applicable to the case. In deciding upon its approach to evidence gathering, the CMA aims to select the approach that leads to a robust assessment in the most efficient way. This implies that for different cases, significantly different approaches can be employed. Taking the use of market definition and market shares as an example:

- a In some cases, the most important competitive constraints are clear-cut, and, although firms may be differentiated, the degree of differentiation is limited. In such circumstances, it is possible to clearly define a market and market shares may be useful evidence. Substantial further analysis may add little incremental value, although this depends, for example, on whether current market shares reflect the strength of the competitive constraints going forward.

- b In contrast, there are other cases that involve more differentiated markets where the CMA is mainly concerned with identifying the closest alternatives for the merger firms' customers, which may be different from the products that achieve the greatest sales across a wider body of customers.
13. Although the CMA assesses its case based on its own facts, there are common principles that guide the CMA's decision-making process with respect to its evidence gathering strategy. At the outset, the CMA looks at which types of analysis can inform the theories of harm in a given case and put the CMA in a position to answer the relevant questions. In deciding whether to conduct the identified analyses, the CMA weighs the benefits of conducting a given analysis against the resources required for this analysis as well as the risks associated with it. This involves considering various aspects relating to
- a the feasibility of conducting a given analysis;
 - b the incremental value of the analysis; and
 - c the required resources.
14. The CMA's thinking on these may evolve as the enquiry progresses and as the CMA receives representations from the merger firms and third parties.
15. The **feasibility** of conducting a given analysis depends on the availability of suitable data and/or other pieces of evidence, as well as the CMA's ability to obtain these. In this respect, the CMA may conduct data calls with the merger firms and third parties to understand which data is available. Feasibility also depends on the time required to collect the data and analyse it. In particular, it may not be feasible to conduct certain types of analysis within the CMA's statutory deadlines for merger investigations. For example, the merger timetable provides only a short window of time for survey-taking in phase 1 of the merger process, such that it is relatively unusual for the CMA to conduct a survey at this stage.
16. With respect to the **incremental value** of an analysis, it is important to understand how well an analysis can be expected to answer the relevant question(s). One aspect of this relates to the scope of the analysis. For example, limitations to data availability may mean that an analysis of closeness of competition can only cover certain firms – in which case it may only partially answer the question of which constraints the merger firms face, at least as a standalone piece of analysis. Another aspect relates to the robustness of an analysis (including eg whether sensitivity checks can be implemented). Moreover, it is necessary to take into account the risk of potential issues in implementing an analysis. For example, an analysis may be very valuable if it can be implemented as foreseen, but issues in implementation (eg in terms of data issues) may ultimately mean that the analysis cannot be completed and hence does not offer the expected evidentiary value.
17. Additionally, the incremental value of an analysis depends significantly on the extent to which other types of evidence can speak towards the same topic, and the quality of these other types of evidence. An analysis may be particularly beneficial where few other pieces of evidence exist or where other evidence is ambiguous. In contrast, if relatively simple analysis of readily available evidence is sufficiently strong to conclude on whether an SLC is likely to arise, conducting substantial additional, more sophisticated analysis that speaks towards the same issue may provide limited incremental value.
18. The **required resources** for a given analysis that the CMA takes into account primarily relate to staff needed to collect and to analyse the data, given that the CMA needs to effectively allocate its staff resources across all of its projects. Additional considerations may include monetary costs incurred by the CMA, such as the costs of engaging a market research agency to commission a survey. While the CMA may further take into account the

effort required on the side of the merger firms or other market participants, this is unlikely to be decisive in instances where the CMA considers certain data and/or other pieces of evidence to be key for its assessment.

19. Importantly, and as discussed in the section on developing the toolkit below, the evidence the CMA uses and the weights it attaches to different types of evidence evolve over time with the CMA's decisional practice.

3.2. Types of evidence and analysis

20. The CMA has utilised a wide range of different types of evidence and analysis in its merger investigations. Some of the commonly employed assessments are set out below, alongside a discussion of the circumstances that affect when these different types of evidence might be relevant, how economic thinking informs that decision and examples of cases where they have been used.

3.2.1. Shares of supply

21. The level and stability of shares of supply can contribute to the competitive assessment of mergers. In particular, a high combined share of supply and/or a large increment may provide an indication that a merger is more likely to raise competition concerns. Additionally, the evolution of shares of supply can be indicative of how effective competition is, with high and stable market shares over time potentially indicating that firms in the market face limited competition and that barriers to entry and expansion are high.

22. Economists consider the precise characteristics and circumstances of a market, and the merger firms, to determine how insightful market shares are likely to be in a given case. As noted above, shares of supply may be more relevant when the degree of differentiation between firms is more limited (see paragraph 12). In addition, shares of supply are likely to be less relevant in markets characterised by large and infrequent tenders, or in dynamic markets where firms compete by introducing new and innovative products.

23. The CMA does not apply market share or concentration thresholds in a mechanistic way. The CMA may employ market shares to provide an initial filter in cases where the number of overlaps is particularly high. In particular, filtering can be a way for the CMA to run a case efficiently, and market shares are potentially a good way to do this.

24. Examples where the CMA has employed filtering include the following cases:

- a In *Stonegate/Ei*,² the CMA investigated a merger between two UK pub companies. Stonegate operates more than 765 pubs across the UK and Ei operates over 4,000 resulting in potentially hundreds of local overlaps. In order to assess which local overlaps were potentially problematic, the CMA used a filtering methodology on the basis of market shares. In this case, the CMA sought to identify areas where the merger firms' combined share of supply exceeded 35% with an increment of more than 5% as a primary filter. This led to the CMA identifying 83 pubs where *prima facie* competition concerns may arise.
- b In *McGraw Hill/Cengage*,³ the CMA investigated a merger between two suppliers of higher education textbooks. The CMA assessed the merger using separate

² See case page for the *Stonegate/Ei* merger: <https://www.gov.uk/cma-cases/stonegate-pub-company-ei-group-plc-merger-inquiry>

³ See case page for the *McGraw Hill/Cengage* merger: <https://www.gov.uk/cma-cases/mcgraw-hill-education-cengage-learning-holdings-merger-inquiry>

product frames of reference for the supply of higher education titles for individual courses, eg fluid dynamics in mechanical engineering. In this case, the CMA used a filter to identify courses where the merger firms had a combined share of supply of more than 30% with a ‘material increment’.⁴ Of the 53 courses identified that way, the CMA considered that the merger gave rise to *prima facie* competition concerns in 42 courses, in light of the combined share of supply exceeding 40%.

3.2.2. Third-party views

25. The CMA may collect views from a range of different third parties, including customers, competitors and, in some cases, other entities including specialist industry regulators such as Ofcom or Ofgem, and industry groups. Economists take into account the circumstances of the merger in question to assess what range and number of third parties to target, and what information to seek from them.

26. Customer views can give insights into a number of aspects of the CMA’s assessment of merger effects, including in particular closeness of competition. The CMA may gather customer views in a more quantitative way by conducting a survey (discussed further below) or through a more qualitative approach.

27. The value of customer views and the ease of gathering them is likely to depend on a number of factors. For example, customer views are likely to be particularly valuable where customers are well-informed and there are few other sources of evidence that speak towards the same issue. By the same token, it is likely to be easier to gather customer views where customers are highly concentrated and/or where good contact information is available.

28. *Tobii/Smartbox*⁵ is an example of a recent CMA merger investigation where information from customers was valuable.

- a The merger firms’ sales (of products to help people with complex speech and language needs) were largely made to organisations that made purchasing decisions on behalf of end-users. These customers raised concerns about the merger, identified the main competitors in the market and indicated that the merging parties were close competitors. The CMA also gathered evidence from these organisations to estimate what proportion of any lost sales of one of the merger firms would be recaptured by the other merger firm. These ‘diversion ratios’ also indicated that the merger firms were close competitors.
 - b In this case, a large proportion of the merging firms’ products were bought by a small number of large, expert buyers that purchased the products on a regular basis with good knowledge of the options available to them. It was therefore possible to approach all these customers directly with a structured diversion question, without resorting to a process of survey sampling and statistical inference. For the same reasons, the qualitative evidence from these customers was also valuable.
29. Insights can also be gained from competitors. In particular, their views may help the CMA’s understanding of the functioning of the market, the set of firms active in the industry and their relative closeness of competition as well as plans for entry and expansion.

⁴ In this case, the CMA considered a material increment to be above 5% where the combined share of supply is between 30 and 40%, while an increment below 5% could be material where the combined share of supply is above 40%.

⁵ See case page for the *Tobii/Smartbox* merger: <https://www.gov.uk/cma-cases/tobii-ab-smartbox-assistive-technology-limited-and-sensory-software-international-ltd-merger-inquiry#final-report>

However, competitors may have an interest in the outcome of the CMA's investigation.⁶ Factors that could affect the evidentiary weight that the CMA is likely to attach to competitors' submissions therefore include to what extent they are supported by or consistent with other evidence such as data or internal documents that were generated prior to the period in which those firms were aware of the merger.

3.2.3. Internal documents

30. Internal documents can constitute an important part of the economic evidence gathering process. Internal documents can both inform the framework for the assessment and provide stand-alone evidence on questions such as closeness of competition. They can be particularly valuable in providing evidence for aspects of the case for which other sources of evidence may be limited, for example establishing the counterfactual and predicting future market dynamics.

31. Internal documents may provide insights on the key market characteristics and firms' incentives, which can help to formulate theories of harm and understand how firms compete. Internal documents may show which metrics related to competitive interaction firms are considering in their regular course of business and thereby shape how the CMA conducts its own quantitative analysis.

32. Internal documents are an area where different professions on a case team work closely together. For example, while the CMA's Legal Service advises on the fair interpretation of documents, economists can play an important role both in considering what internal documents to request and then in interpreting them from an economic perspective. Further, economists are well placed to identify evidence gaps which internal documents may fill, judge where internal documents are likely to provide significant value, and check to what extent they are coherent with other pieces of evidence.

33. In terms of processing internal documents, the CMA's Data, Technology and Analytics team has been working on streamlining the document acquisition and review process. The work of the team will help the CMA leverage its e-discovery software platform by using an automated document acquisition pipeline as well as additional analytical tools, which include representative keywords extraction and automated tagging.

34. In *Amazon/Deliveroo*,⁷ the CMA relied on internal documents to assess the incentives of Amazon, which operated a restaurant delivery service called Amazon Restaurants in the UK until 2018, to re-enter the restaurant delivery market absent the merger. In particular, Amazon's internal documents showed that it had a strong and continued interest in online restaurant platforms, which it could include in Amazon Prime and which might provide logistical capabilities that it could deploy elsewhere in its business. Overall, the CMA concluded that Amazon was a potential entrant that was likely to re-enter the supply of online restaurant platforms in the UK. However, the CMA did not find it sufficiently likely that Amazon's 16% stake in Deliveroo would have a material impact on Amazon's incentives to re-enter, or a material impact on Amazon's incentives to compete with Deliveroo in the event of re-entry, such as to result in a likely substantial reduction in potential competition.

⁶ The interest of competitors in the outcome of the CMA's investigation may be complex. Competitors may have an incentive for the merger to be approved eg if they anticipate that the merger would result in a reduction in competition. However, competitors may also have an incentive for the CMA to find competition concerns, eg if they themselves have plans to acquire the target, if, in the case of vertical mergers, they hope for commitments to be put in place or if they believe that the merger gives rise to significant efficiencies.

⁷ See case page for the *Amazon/Deliveroo* merger: <https://www.gov.uk/cma-cases/amazon-deliveroo-merger-inquiry>

3.2.4. Tender analysis

35. In markets where firms compete by bidding for customer tenders, economists may identify tender analysis as an important tool for assessing competitive dynamics. In particular, a tender analysis may allow for a detailed assessment of the closeness of competition between the merger firms and with their competitors:

- a The key insight that can be gained from tender analysis is, dependent on the type of the tendering process, who a bidding firm lost to or who the runner up to the winning firm was (or more generally, who else submitted a bid in the tender).
- b Additionally, the data used in tender analysis may allow for a switching analysis. In particular, if customers repeat tenders over time, as is for example often the case for the supply of goods to supermarkets, it is possible to assess between which firms customers switch.

36. In order to conduct a tender analysis, the CMA will typically request detailed information from the merger firms. This includes information on the nature of the tendering process, which tenders they bid for, the value of these tenders, relevant characteristics such as if a certain type of product was specified, whether they won the contract (or where relevant, whether they were shortlisted) and any information they hold on other participants. If the customer is re-tendering, the CMA would also ask which firms originally held the contract. The CMA may further try to supplement the merger firms' data with information from customers and/or competitors.

37. In *Prosafe/Floatel*,⁸ a merger between two firms supplying offshore accommodation support vessels, the CMA undertook a tender analysis, collecting not only information on tenders from suppliers, but also from customers. By combining the different data sources, the CMA was able to gain a more complete picture of the competitive dynamics of particular tenders, including insights into the customers' requirements, the competitors that submitted a bid, and how customers ranked them. The tender analysis was central to understanding the closeness of competition between the merger firms and the competitive constraints posed by other market participants. In particular, the analysis showed that the merger firms were the main head-to-head rivals in the market. Through coupling the tender analysis with an understanding of wider market conditions, the CMA was further able to demonstrate that, pre-merger, this head-to-head competition in an environment of excess capacity led to benefits for customers through lower prices.

3.2.5. Surveys

38. Surveys make a valuable contribution to the CMA's evidence base in understanding the preferences and behaviours of customers. The idea is that a sample of customers can complete a survey questionnaire and, if the survey has been designed and conducted to a high standard, particularly regarding the representativeness of the sample, then robust inferences can be made about the population of customers from which the sample was drawn. Economists work with the CMA's Statistics and Market Research team to assess when surveys are an appropriate and useful tool to employ for a given merger inquiry.

39. In May 2018 the CMA published guidance on 'Good Practice in the Design and Presentation of Survey Evidence in Merger Cases'. This document, among other things, sets out the principles of how the CMA assesses survey evidence and the evidential weight to give it – with these principles informing the CMA's decisions on undertaking surveys.

⁸ See case page for the *Prosafe/Floatel* merger: <https://www.gov.uk/cma-cases/prosafe-se-floatel-international-limited-merger-inquiry>

40. While the content of the survey questionnaire is tailored specifically to meet the evidential needs of the case, the key type of evidence that is typically gathered through surveys relates to closeness of competition, ie the extent to which the merger firms are close substitutes for each other, and therefore constrained by each other (and by other alternatives), as measured by a suite of hypothetical diversion questions.

41. Under one common approach, each surveyed customer is asked to think about their most recent purchase from one of the merger firms and then asked what they would have done if the price of the purchased product/service had gone up by a certain specified amount (or, alternatively, what they would have done if the firm's offering was not available). The results provide a quantified distribution of next-best options that are free of assumptions about market definition and implicitly take into account customers' preferences and the attractiveness and characteristics of firms' differentiated offerings. Results can be used to estimate diversion ratios, ie the extent to which sales lost as a result of a deterioration of a merger firm's offering, such as a small price rise, are recaptured as a result of the merger. Diversion ratios are relevant to the CMA's competitive assessment in its own right but can also be combined with margins to estimate upward price pressure indices (such as GUPPIs or vGUPPIs), and the survey dataset can be used additionally as an input into econometric analyses.

42. In addition to questions on diversion, there are a number of other question 'topics' that are common to many merger surveys, including:

- a Demography – characteristics of customers and the extent to which they are similar or different between the customer bases of the two merger firms;
- b Geography – travel times and distances travelled by customers to help define the geography of markets in cases with a local theory of harm; and
- c Choice attributes – the extent to which different aspects of the merger firms' offerings, eg price, location, range, are determinants of consumer choice.

43. The CMA has a long-standing history of using surveys as part of the evidence base. On average, the CMA has conducted about five customer surveys per year in merger cases since its inception in 2014, although COVID-19 has resulted in fewer surveys in 2020 as the logistics of survey taking and difficulties associated with changed consumer behaviour in many markets during this period have presented particular challenges.

44. In *Sainsbury's/Asda*,⁹ the CMA extensively used surveys as part of the evidence base, with three different surveys being commissioned, covering in total more than 60,000 of the merger firms' customers: an exit survey of grocery customers of the merger firms' supermarkets; an exit survey of customers at the merger firms' petrol filling stations; and an online survey of the merger firms' online grocery customers. The findings of these surveys provided wide-ranging evidence from consumer perspectives and datasets of the exit surveys were also used as inputs into models of local competition. These, in turn, were used to estimate GUPPIs at both local and national levels.

3.2.6. Econometric analysis

45. Econometric analysis can provide important quantitative insights. The CMA has a team of econometricians that work with case team economists to identify and carry out econometric analysis. Additionally, the CMA often receives econometric analysis that is

⁹ See case page for the *Sainsbury's/Asda* merger: <https://www.gov.uk/cma-cases/j-sainsbury-plc-asda-group-ltd-merger-inquiry>

submitted by the merger firms. The CMA rigorously tests such analysis to determine the evidentiary weight that should be placed upon it.

46. While econometric analysis is more time consuming and hence often more suitable for phase 2 merger investigations, it may also be employed in phase 1. Examples of more common types of econometric work that can make important contributions to a merger investigation, depending on data availability, are set out below.

47. The CMA may use performance concentration analysis in retail merger cases. Such analysis is used to test how the performance of a retail store is affected by the level of competition in its local area, which can help to establish geographic markets and to identify the relevant competitor set(s). Specifically, the CMA relies on entry and exit analysis to assess whether and how the entry and exit (ie closure or sale to another brand) of competitors' stores affect the merger firms' sales or price (or other measures of performance such as quality or range). The more customers consider an opening or closing store a good substitute to the merger firms' stores, the larger the impact of the entry or exit of the competitor on the merger firms' sales or price at those stores. The analysis allows the CMA to compare the relative strength of the constraint exerted by competitors of different brands, sizes and distances, and thereby provides evidence around the relevant geographic market and the relative strength of competitors belonging to different categories of brand and size. The CMA has frequently used this approach in merger inquiries, including in *Sainsbury's/Asda* (with respect to supermarkets and petrol stations)¹⁰ and *Ladbrokes/Coral* (with respect to betting shops).¹¹

48. Further complex quantitative approaches that the CMA has employed in merger cases include switching analysis (eg in health-care mergers), which is used to establish the closeness of competition by assessing customer switching behaviour. Additionally, the CMA has infrequently used demand estimation in mergers. For example, in *Celesio/Sainsbury's*,¹² the CMA used a nested logit estimation in relation to market definition in the pharmacy sector. Recently, the CMA has used a random coefficients model for a conjoint survey analysis in *Amazon/Deliveroo*.¹³ For this approach, survey respondents are asked about their choice in response to a hypothetical change in the characteristics, including the price, of a product. The random coefficients model is then used to determine the weights consumers attach to different product attributes in their choice of a product.

4. Developing the toolkit

49. While the CMA's role and the legal tests remain the same, the toolkit that the CMA uses to assess mergers is continuously evolving to reflect the specific features of the markets that it is required to assess. Additionally, learnings from past experience in merger investigations and adjacent instruments, such as market investigations, impact the way evidence is gathered, analysed and interpreted. Economists play a significant role in this process of continually updating the CMA's toolkit.

¹⁰ See case page for the *Sainsbury's/Asda* merger: <https://www.gov.uk/cma-cases/j-sainsbury-plc-asda-group-ltd-merger-inquiry>

¹¹ See case page for the *Ladbrokes/Coral* merger: <https://www.gov.uk/cma-cases/ladbrokes-coral-group-merger-inquiry>

¹² See case page for the *Celesio/Sainsbury's* merger: <https://www.gov.uk/cma-cases/celesio-sainsbury-s-pharmacy-business-merger-inquiry>

¹³ See case page for the *Amazon/Deliveroo* merger: <https://www.gov.uk/cma-cases/amazon-deliveroo-merger-inquiry>

50. A key example of change in the UK economy that has required the CMA to develop its analytical toolkit has been the increasing prominence of digital services and technology products. These kinds of markets are often characterised by high levels of innovation, and by particular economic features (such as two-sidedness, network effects, and potential or dynamic competition) that are less commonly an important feature of competition in more traditional markets.

51. As a consequence, significant attention has been devoted by economists at the CMA to looking at and developing frameworks that allow for the assessment of interactions between dynamic competitors and the impact of mergers on innovation. For instance, with respect to potential competition, economic analysis at the CMA is being deployed to an increasing extent in the assessment of incentives of firms to enter – and to respond to the threat of future entry by potential rivals. For example, in *Amazon/Deliveroo*,¹⁴ the CMA considered the incentives that Amazon had to re-enter the online restaurant delivery market (see paragraph 34 above).

52. Additionally, the degree of product and process innovation in dynamic markets means that the CMA may need to conduct its assessment in the context of uncertainty and the unavailability of certain types of evidence (such as historical evidence). However, this does not of itself bias the CMA in favour of clearance, and it may instead rely to a greater extent on other types of evidence combined with economic intuitions.

- a In *Roche/Spark*,¹⁵ the CMA considered a merger in the market for treatments for Haemophilia A (a genetic blood disorder), involving important new and pipeline products offered both by the merger firms and other suppliers. In that case, the CMA assessed the potential competition between the merger firms, focusing on forward-looking evidence such as the products' likely characteristics, the number of firms competing to enter the space, expert views on the likely strengths and weaknesses of the parties' products, and expectations about the eligibility of patients to substitute between the treatments of the merger firms.
- b In *Illumina/PacBio*,¹⁶ where innovation in next generation DNA sequencing systems was a crucial aspect of competition between the merger firms, the CMA considered the impact of uncertainty on the assessment of dynamic competition. Despite uncertainty in how the market could develop, the CMA was cognizant that this should not be interpreted as meaning that the merger is unlikely to give rise to competition concerns or that a different standard of proof would apply. Illumina documents considered the likelihood and impact of PacBio's innovation on Illumina's future sales, and concluded they needed to act now to deal with this future threat. Whether or not PacBio's future innovation would eventually materialise, it was deemed a threat to Illumina, and therefore had an impact in driving its current innovation and strategy – something that would be lost post-merger.

53. By the same token, the CMA has needed to adapt the economic frameworks in order to take into account features such as network effects and multi-homing, and their effect on the definition of relevant markets and their implications for competition in such markets.

¹⁴ See case page for the *Amazon/Deliveroo* merger: <https://www.gov.uk/cma-cases/amazon-deliveroo-merger-inquiry>

¹⁵ See case page for the *Roche/Spark* merger: <https://www.gov.uk/cma-cases/roche-holdings-inc-spark-therapeutics-inc-merger-inquiry>

¹⁶ See case page for the *Illumina/PacBio* merger: <https://www.gov.uk/cma-cases/illumina-inc-pacific-biosciences-of-california-inc-merger-inquiry>. Note that this merger was abandoned shortly before the CMA's final decision, so this paper refers only to the findings in the CMA's earlier provisional decision.

Importantly, such developments are an ongoing process, with the CMA continuing to evolve its approach.

54. The increasing prominence of digital services and high-technology products has also required the CMA to evolve the ways in which it seeks to understand the way firms interact and compete, and the kinds of evidence that are likely to be informative to the assessment of likely merger effects.

- a Economists are contributing significantly to the understanding of new products and digital or technology-driven markets. For example, in the CMA's *Google/Looker* merger investigation,¹⁷ the economists worked closely with the CMA's Data, Technology and Analytics team and drew on findings from the CMA's Digital Advertising Market Study to understand the set of products that are provided by Google and Looker. This included developing an understanding of the means by which business intelligence (BI) tools access and analyse data that is stored in data warehouses, and Google's ability to control these. This was an important component in assessing the mechanisms that could be used by Google to foreclose competing BI tools.
- b Economists are advising on the kinds of evidence to gather. Evidence that is typically relied on in more static markets (including in particular historic information) may be less insightful in dynamic markets. It may therefore be necessary to consider a wider range of evidence. For example, the CMA has more closely scrutinised evidence on deal valuation, including when considering losses of actual and potential competition or when seeking to understand the rationale for and synergies of mergers. In *PayPal/iZettle*,¹⁸ the CMA took into account the target's valuation as a means of determining the motivation behind the acquisition. In this case, iZettle was planning an Initial Public Offering (IPO) of its business and the valuation that PayPal placed on the iZettle business was much higher than the proposed IPO valuation. The CMA examined whether this was suggestive of a potential reduction in competition (ie PayPal buying market power), looking at PayPal's valuation and estimates of synergies as set out in its internal documents and deal model, as well as broker comments at the time of the acquisition. The CMA ultimately found that the price that PayPal paid for iZettle appeared justified by commercial valuation and calculations of synergies including sales volumes and cost savings (rather than reflecting a premium justified by the elimination of future competition).

55. Even in more traditional industries, economists are developing the toolkit the CMA applies. For instance, with respect to coordinated effects, the CMA has increasingly considered not only price fixing as a mechanism through which firms may coordinate, but also assessing other forms of collusion, such as market division or avoiding launching competing products. For example, in *YPO/Findel*,¹⁹ a merger between two suppliers of educational resources, the CMA assessed coordinated effects by considering a form of market allocation. The CMA also recognises that coordination can be imperfect and that some evidence of competition is not necessarily inconsistent with coordination.

¹⁷ See case page for the *Google/Looker* merger: <https://www.gov.uk/cma-cases/google-llc-looker-data-sciences-inc-merger-inquiry>

¹⁸ See case page for the *PayPal/iZettle* merger: <https://www.gov.uk/cma-cases/paypal-holdings-inc-izettle-ab-merger-inquiry>

¹⁹ See case page for the *YPO/Findel* merger: <https://www.gov.uk/cma-cases/yorkshire-purchasing-findel-education-merger-inquiry>. Note that this merger was abandoned before the CMA's final decision, so this paper refers only to the findings in the CMA's earlier provisional decision.

56. Additionally, the CMA uses learnings from previous experience in order to refine existing frameworks and how evidence is interpreted, in order to better understand competitive dynamics in markets and make better decisions. One example is market definition. Authorities have historically placed great reliance on market definition and the computation of market shares in merger control. While market shares can remain insightful in some circumstances and market definition remains a useful conceptual tool, nowadays case teams typically adopt a more nuanced approach. This includes attaching different levels of importance to the outcomes of market definition exercises depending on the market in question. For example, where there is a greater availability of evidence that speaks directly to the closeness of competition between firms and to firms' incentives, greater weight will be attached to such evidence. As noted above, economists play an important role in advising on the evidentiary weight that should be applied to different pieces of evidence on a case-by-case basis.

57. Finally, the CMA's toolkit to assess mergers does not only get developed through input from economists within the CMA. The CMA's approach to merger cases is also influenced by the learnings from studies published by external economists. In particular, the CMA commissions economic consultancies to conduct studies. Recent examples of this are the ex-post evaluation of merger decisions in the digital sector by the economic consultancy Lear²⁰ and KPMG's ex-post evaluation of entry and expansion in UK merger cases.²¹

5. Conclusion

58. Economists play a central role in CMA merger investigations. They are embedded in merger case teams and are involved from the very beginning of cases. Their contribution includes gaining an understanding of the industry, developing the economic framework within which the CMA assesses the effects of the merger, and leading the approach to gathering and interpreting evidence. The CMA has utilised a wide range of different types of evidence and analysis, and economists drive the process in deciding which evidence to gather on a case-by-case basis.

59. In addition to their direct involvement in cases, economists are key in developing the CMA's toolkit and approach for assessing mergers. Economists have developed approaches for assessing competition in dynamic markets and assessing the constraints between merger firms as potential competitors to each other. They have also led the shift away from approaches which rely upon measures related to a rigid definition of the market to evidence that speaks directly to closeness of competition between firms.

²⁰ See Lear Report, Ex-post Assessment of Merger Control Decisions in Digital Markets (June 2019): <https://www.gov.uk/government/publications/assessment-of-merger-control-decisions-in-digital-markets>

²¹ See KMPG review, Entry and Expansion in UK Merger Cases (April 2017): <https://www.gov.uk/government/publications/evaluation-of-entry-and-expansion-in-uk-merger-cases>