Digital Competition's Input to the Competition and Markets Authority on AI Partnerships

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The Amazon/Anthropic partnership, Microsoft/MistralAI partnership, and Microsoft/InflectionAI arrangement are unlikely to meet UK merger review criteria; if reviewed, there are no theories of harm likely to negatively impact competition in the UK.

1 Introduction

The UK Competition and Markets Authority (CMA) is inviting input on AI partnerships and other agreements as part of its continued monitoring of the AI sector. In this context, the CMA is closely examining the *Amazon/Anthropic* non-exclusive partnership, *Microsoft/MistralAI* non-exclusive partnership, and *Microsoft/InflectionAI* non-exclusive arrangement to determine whether they satisfy the requirements for a merger review in the UK. If they do so, the CMA intends to assess the impact of these partnerships and arrangements on competition in the UK[1].

This submission aims to provide input into these partnerships and arrangements. It initially analyses whether they meet the criteria for a merger review in the UK. Subsequently, it delves into the potential impacts of these deals on competition.

2 Criteria for a Merger Review

Under the UK merger control regime, two primary conditions must be satisfied for a merger review (Section 23 of the UK Enterprise Act 2002). First, two enterprises must cease to be distinct (the "integration" threshold). Second, the parties involved must satisfy quantitative thresholds within the UK (the " UK nexus" threshold).

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[1] Competition and Markets Authority, CMA Seeks Views on AI Partnerships and Other Arrangements, 24 April 2024 (accessed 30 April 2024). Available at: https://www.gov.uk/government/news/cma-seeks-views-on-ai-partnerships-and-other-arrangements

2.1   The Integration Threshold

The integration threshold aims to determine whether two or more enterprises have ceased to be distinct entities. This encompasses three main alternative situations (Section 26 of the UK Enterprise Act 2002): controlling interest (legal control), control of policy (de facto control), or material influence. On the one hand, controlling interest pertains to legal control acquired through majority voting rights. On the other hand, de facto control and material influence relate to policy control gained through the ability to influence policy decisions (material influence) or to unilaterally determine a company's policy (de facto control), including thanks to minority shareholding. The UK merger control regime neither specifies specific thresholds for de facto control or material influence nor defines the term "policy." In practice, "policy" refers to the competitive conduct of the business, its strategic direction, and commercial objectives[2] Consequently, the CMA holds broad discretion in determining whether a transaction meets the integration threshold on a case-by-case basis.

2.1.1   Amazon/Anthropic Partnership

Amazon and Anthropic established a non-exclusive strategic partnership on 25 September 2023 to advance generative AI[3]. Under this collaboration, Amazon assumes the role of the primary cloud provider for developing Anthropic models on its cloud infrastructure, AWS, and proprietary AI accelerator chips, AWS Trainium and Inferentia chips. Additionally, Amazon makes Anthropic models available on its cloud services for model distribution, Amazon Bedrock. Amazon has invested $4 billion and holds a minority ownership in Anthropic. Notably, this partnership is non-exclusive, meaning that Anthropic models remain available on other cloud providers, including Google, which reportedly invested $2 billion in the company[4]. Customers can also access Anthropic models from Anthropic's own website[5]. Microsoft Cloud

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[2] Nigel Parr et al, Merger Control Laws and Regulations United Kingdom 2024, *ICLG*, 4 December 2023 (accessed 30 April 2024). Available at: https://iclg.com/practice-areas/merger-control-laws-and-regulations/united-kingdom *See* also, Competition and Markets Authority, Mergers: Guidance on the CMA's jurisdiction and procedure, 25 April 2024.

[3] Amazon, Amazon and Anthropic Announce Strategic Collaboration to Advance GenAI, *Amazon*, 25 September 2023 (accessed 30 April 2024). Available at: https://press.aboutamazon.com/2023/9/amazon-and-anthropic-announce-strategic-collaboration-to-advance-generative-ai

[4] Lizette Chapman, Katie Roof and Julia Love, Google Bets $2 Billion on AI Startup Anthropic, Inks Cloud Deal, *Bloomberg*, 27 October 2023 (accessed 30 April 2024). Available at: https://www.bloomberg.com/news/articles/2023-10-27/google-to-invest-2-billion-in-ai-startup-anthropic-wsjsays

[5] Anthropic, Build with the Claude API (accessed 7 May 2024). Available at: https://console.anthropic.com/login?returnTo=%2F%3F

customers can also connect to Anthropic models through an Application Programming Interface (API)[6]. Besides, media reports indicate that Anthropic also runs on AI accelerator chips from Google to train its models and opts for a multi-cloud approach[7].

Based on publicly available information, Amazon does not possess a controlling interest in Anthropic due to its lack of majority ownership. Furthermore, while Amazon holds a minority stake, the partnership does not appear to grant Amazon the ability to control or influence Anthropic's policy, given its non-exclusive nature, which permits Anthropic to be available on alternative cloud providers and its own website for development and deployment.

2.1.2 Microsoft/MistralAI Partnership

Microsoft and MistralAI forged a non-exclusive strategic partnership on 26 February 2024 to introduce MistralAI models on Microsoft Azure. Within this collaboration, Microsoft assumes the role of a cloud provider for developing and deploying MistralAI models on its cloud infrastructure, Microsoft Azure supercomputer, and cloud services for model distribution, Microsoft Azure Studio[8]. Additionally, Microsoft reportedly invested $16 million via a convertible note in MistralAI, which will convert into equity of less than 1 per cent in the next funding round[9]. Notably, this partnership is non-exclusive, meaning that MistralAI models remain accessible on other cloud providers, including Amazon, IBM, and Google.

Based on publicly available information, Microsoft does not possess a controlling interest in MistralAI as it lacks majority ownership. Furthermore, the partnership does not appear to grant Microsoft the ability to control or influence MistralAI's policy, given its non-exclusive nature, which permits MistralAI to opt for alternative cloud providers.

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[6] Microsoft, Anthropic Connector (accessed 30 April 2024). Available at: https://learn.microsoft.com/en-us/connectors/anthropicip/

[7] Julia Love and Matt Day, AI Startup Anthropic to Use Google Chips in Expanded Partnership, *Bloomberg*, 8 November 2023 (accessed 7 May 2024). Available at: https://www.bloomberg.com/news/articles/2023-11-08/ai-startup-anthropic-to-use-google-chips-in-expanded-partnership

[8] Eric Boyd, Microsoft and Mistral AI Announce New Partnership to Accelerate AI Innovation and Introduce Mistral Large First on Azure, *Microsoft Blog*, 26 February 2024 (accessed 1st May 2024). Available at: https://azure.microsoft.com/en-us/blog/microsoft-and-mistral-ai-announce-new-partnership-to-accelerate-ai-innovation-and-introduce-mistral-large-first-on-azure/

[9] Romain Dillet, Microsoft Made a $16M Investment in Mistral AI, *Tech Crunch*, 27 February 2024 (accessed 7 May 2024). Available at: https://techcrunch.com/2024/02/27/microsoft-made-a-16-million-investment-in-mistral-ai/

2.1.3 Microsoft/InflectionAI Arrangement

Microsoft hired most staff members from InflectionAI on 19 March 2024, including the founder and co-founder, who now work in the Microsoft AI consumer division[10]. Additionally, Microsoft became a non-exclusive cloud provider for deploying InflectionAI models on its cloud services for model distribution, Microsoft Azure Studio. InflectionAI has declared the availability of its models on other cloud providers in the future and has shifted its focus towards deploying solutions for businesses. The company continues to operate and has appointed a new CEO[11]. Furthermore, media reports indicate that Microsoft has acquired non-exclusive licenses to InflectionAI's intellectual property rights, granting Microsoft the ability to use them to develop its own products and services without IP risks[12].

Based on publicly available information, Microsoft does not possess a controlling interest in InflectionAI due to its lack of majority ownership. Furthermore, the arrangement does not appear to grant Microsoft the ability to control or influence InflectionAI's policy, especially considering the appointment of a new CEO and the company's continued activity, which permits InflectionAI to opt for alternative cloud providers.

2.2 The UK Nexus Threshold

The UK nexus threshold aims to determine whether a deal has a local nexus with the UK, considering two main scenarios (Section 23 of the UK Enterprise Act 2002): the deal results in a significant enhancement of market share in the UK or a substantial part of it (the "share of supply" test), or the turnover of the acquired firm in the UK (the "turnover" threshold).

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[10] Satya Nadella, Mustafa Suleyman, DeepMind and Inflection Co-founder, Joins Microsoft to Lead Copilot, *Microsoft Blog*, 19 March 2024 (accessed 30 April 2024). Available at: https://blogs.microsoft.com/blog/2024/03/19/mustafa-suleyman-deepmind-and-inflection-co-founder-joins-microsoft-to-lead-copilot/ *See* also, Krystal Hu and Harshita Mary Varghese, Microsoft Pays Inflection $650 mln in Licensing Deal While Poaching Top Talents, Source Says, *Reuters*, 21 March 2024 (accessed 7 May 2024). Available at: https://www.reuters.com/technology/microsoft-agreed-pay-inflection-650-mln-while-hiring-its-staff-information-2024-03-21/

[11] InflectionAI, The New Inflection: An Important Change to How We'll Work, 19 March 2024 (accessed 7 May 2024). Available at: https://inflection.ai/the-new-inflection

[12] Julie Bort, Here's How Microsoft is Providing a 'Good Outcome' For Inflection AI VCs, As Reid Hoffman Promised, *Tech Crunch*, 21 March 2024 (accessed 7 May 2024). Available at: https://techcrunch.com/2024/03/21/microsoft-inflection-ai-investors-reid-hoffman-bill-gates/

Given the lack of publicly available information related to the UK regarding the mentioned deals, it is challenging to ascertain whether each deal meets the UK nexus threshold. Therefore, this comment does not answer this question.

3 Potential Impacts of the Deals on Competition

The CMA retains the discretion to review each of the aforementioned deals, particularly if it adopts a broad interpretation of material influence, assuming they meet the UK nexus threshold. In such a scenario, drawing from its technical update report on AI foundation models, the CMA would likely explore theories of harm concerning the control of critical inputs for model development at the upstream level and the control of key access points for model deployment at the downstream level[13]. Additionally, the CMA would likely consider various other factors while reviewing these deals.

3.1 Control of Critical Input for Model Development

In its technical update report, the CMA outlines four main inputs for model development: hardware, including AI chips; compute, including cloud services and supercomputers; expertise, involving skilled research scientists/engineers engaged in large-scale systems; and data, used for pre-training, fine-tuning, and retrieval.

If the CMA scrutinises each of the mentioned deals, it would probably evaluate potential theories of harm related to access restriction to critical inputs by assessing factors such as the ability, incentive, and effect of such restrictions (the "input foreclosure" theory of harm).

3.1.1 Amazon/Anthropic Partnership

In the *Amazon/Anthropic* non-exclusive partnership, Amazon provides Anthropic access to its cloud infrastructure, AWS and AWS Trainium and Inferentia chips, and cloud services for model distribution, Amazon Bedrock, to develop and deploy Anthropic models. Notably, Anthropic models remain available on alternative cloud providers, including Google Cloud.

Amazon has the ability and incentive to open its cloud infrastructure and services to model developers. This enhances Amazon AWS's value proposition for cloud customers and allows

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[13] Competition and Markets Authority, AI Foundation Models Technical Update Report, 16 April 2024.

Amazon to recoup its investment in building AI accelerator chips, and cloud infrastructure, including supplying computing resources and cloud services for model distribution.

In this context, Amazon lacks both the ability and the incentive to limit access to its cloud infrastructure, including computing resources, and services for model distribution solely to Anthropic. Amazon already enables developing and deploying various first-party and third-party models on its cloud infrastructure and services. Amazon cloud services for model distribution, Amazon Bedrock, provides access to models such as the Amazon Titan model, Cohere Command and Embed models, AI21 Jurassic models, Meta Llma models, MistralAI models, and StabilityAI models[14]. Amazon's incentive to host third-party models and supply them with computing resources remains strong for the above reasons.

Furthermore, Amazon does not have the ability to hinder Anthropic from utilising alternative critical inputs available on other cloud providers. The partnership's non-exclusive nature enables Anthropic to operate on alternative cloud providers to access computing resources and deploy its models. Consequently, even if Anthropic trains and deploys its models on Amazon's AI accelerator chips, it retains the option to leverage alternative cloud infrastructure. Anthropic currently does so by leveraging Google Cloud, utilising Google's AI accelerator chips for model training and deploying its models on Google services for model distribution, Google Vertex AI Studio.

Therefore, without the ability and incentive to restrict access and with the flexibility for Anthropic to use alternative critical inputs on alternative cloud providers, the *Amazon/Anthropic* partnership is unlikely to result in negative competition outcomes. Instead, it facilitates Anthropic's access to necessary inputs for model development and deployment across multiple cloud providers, benefitting a wide range of cloud customers.

3.1.2 *Microsoft/MistralAI Partnership*

In the *Microsoft/MistralAI* non-exclusive partnership, Microsoft provides MistralAI access to its cloud infrastructure, including supercomputers, and cloud services for model distribution, including Microsoft Azure Studio, for developing and deploying MistralAI models. Additionally, MistralAI models are accessible on alternative cloud providers, including Amazon, IBM, and Google.

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[14] Amazon, Amazon Bedrock (accessed 30 April 2024). Available at: https://aws.amazon.com/bedrock/?nc1=h_ls

Similarly to the *Amazon/Anthropic* partnership, Microsoft has the ability and incentive to open its cloud infrastructure and services to attract model developers. This access enhances the value of Microsoft Azure for its cloud customers. It also allows Microsoft to recoup its investments in building cloud infrastructure, including supplying computing resources, and cloud services for model distribution. Furthermore, Microsoft hosts various first-party and third-party models on its cloud services for model distribution[15]. It facilitates application developers' access to all AI models hosted on Microsoft Azure via public APIs. This enables application developers to access models and use them to develop applications on Microsoft and competing providers[16].

Considering these factors and echoing the rationale outlined in the *Amazon/Anthropic* partnership above, the *Microsoft/MistralAI* partnership is unlikely to yield adverse competition outcomes. This is because the ability and incentive to restrict access are absent, coupled with MistralAI's flexibility to use alternative critical inputs available on alternative cloud providers.

3.1.3. *Microsoft/InflectionAI Arrangement*

In the *Microsoft/InflectionAI* arrangement, Microsoft has hired most of InflectionAI's employees and has become a non-exclusive cloud provider for deploying InflectionAI models on its cloud services.

Microsoft lacks both the ability and incentive to prevent former InflectionAI employees from moving to rival firms if they choose to do so. Indeed, most of InflectionAI's staff operates in the United States, where the US Federal Trade Commission recently prohibited non-compete clauses, fostering competition by enabling employees to move to competing entities[17]. Moreover, since 2022, Microsoft has refrained from enforcing non-compete clauses for all but

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[15] Microsoft Azure model Catalog (accessed 1st May 2024). Available at: https://ai.azure.com/explore/models

[16] Brad Smith, Microsoft's AI Access Principles: Our Commitments to Promote Innovation and Competition in the New AI Economy, *Microsoft Blog*, 26 February 2024 (accessed 29 February 2024). Available at: https://blogs.microsoft.com/on-the-issues/2024/02/26/microsoft-ai-access-principles-responsible-mobileworld-congress/

[17] US Federal Trade Commission, FTC Announces Rule Banning Noncompetes, 23 April 2023 (accessed 1st May 2024). Available at: https://www.ftc.gov/news-events/news/press-releases/2024/04/ftc-announces-rule-banning-noncompetes

its most senior employees in the United States[18]. This commitment to employee mobility ensures that Microsoft does not wield monopsony power over former InflectionAI staff.

Furthermore, akin to the rationale outlined in both the *Amazon/Anthropic* partnership and the *Microsoft/MistralAI* partnership, Microsoft lacks both the ability and incentive to restrict access solely to InflectionAI or to prevent InflectionAI from leveraging alternative critical inputs available on alternative cloud providers.

3.2   Control of Key Access Points for Model Deployment

In its technical update report, the CMA outlines two pathways for model deployment: downstream fine-tuning of models and user-facing apps.

If the CMA opts to scrutinise each of the mentioned deals, it would probably evaluate potential theories of harm related to model choice restrictions for application developers (the "choice restriction" theory of harm) and the vertical integration of third-party models into proprietary applications (the "vertical integration" theory of harm) by assessing factors such as the ability, incentive, and effect of such restrictions and integration.

3.2.1 Amazon/Anthropic Partnership

In the *Amazon/Anthropic* non-exclusive partnership, Anthropic models are accessible on Amazon cloud services for model distribution, Amazon Bedrock, alongside alternative first-party and third-party models.

Amazon has the ability and incentive to facilitate access to its cloud services, Amazon Bedrock, which offers a range of proprietary and third-party models to attract application developers.

In this context, Amazon lacks both the ability and the incentive to compel application developers to exclusively utilise Anthropic models for model fine-tuning and the development of user-facing apps. Indeed, Amazon allows application developers to choose models that best suit their needs through a neutral choice architecture. Restricting this choice would deter

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[18] Amy Pannoni and Amy Coleman, Microsoft Announces Four New Employee Workforce Initiatives, *Microsoft Blog*, 8 June 2022 (accessed 1st May 2024). Available at: https://blogs.microsoft.com/on-the-issues/2022/06/08/microsoft-announces-four-new-employee-workforce-initiatives/

application developers from utilising Amazon, as they seek access to various models given the range of models for specific use cases, like generating text or images.

Furthermore, applying a "vertical integration" theory of harm to this partnership seems unlikely. Publicly available information does not indicate that Amazon integrates Anthropic models into its flagship products and services. The information only specifies that Amazon developers and engineers can utilise Anthropic models via Amazon Bedrock.

Moreover, application developers desiring to use alternative cloud providers and Anthropic models have the option to do so, as Anthropic models are accessible on alternative cloud platforms, such as Google Cloud.

Consequently, without the ability and incentive to restrict choice and with the flexibility for application developers to use Anthropic models from alternative cloud providers, the *Amazon/Anthropic* partnership is unlikely to result in adverse competition outcomes.

3.2.2 *Microsoft/MistralAI Partnership and Microsoft/InflectionAI Arrangement*

In both the *Microsoft/MistralAI* non-exclusive partnership and *the Microsoft/InflectionAI* non-exclusive arrangement, MistralAI models and InflectionAI models are accessible on Microsoft cloud services for model distribution, Microsoft Azure Studio, alongside alternative first-party and third-party models.

For similar reasons outlined above in the *Amazon/Anthropic* partnership, Microsoft lacks both the ability and the incentive to compel application developers to exclusively utilise MistralAI and InflectionAI models for model fine-tuning and the development of user-facing apps.

Additionally, applying a "vertical integration" theory of harm to the *Microsoft/MistralAI* partnership seems unlikely. Publicly available information does not suggest that Microsoft integrates MistralAI models into its flagship products and services. However, Microsoft has the ability to utilise InflectionAI's property rights in its own products and services. Microsoft also has the incentive to leverage this technology to develop new models and AI-powered applications. At present, there is no indication that Microsoft is leveraging InflectionAI's property rights. If Microsoft were to do so, the impact would depend on which products and services Microsoft uses the property rights. Moreover, any potential negative impact could be mitigated by InflectionAI and third parties' ability to use these property rights due to their non-exclusive licensing nature, as well as competing models and AI-powered applications.

Consequently, without the ability and incentive to restrict choice and the flexibility for application developers to use MistralAI and InflectionAI models from alternative cloud providers, the *Microsoft/MistralAI* partnership and *Microsoft/InflectionAI* arrangement are unlikely to result in adverse competition outcomes.

3.3 Other Considerations

The CMA would likely assess the degree of influence and alignment between partners and the signal it conveys to future AI partnerships and arrangements.

3.3.1 The Extent of Influence and Alignment Between Parties

Partnerships and arrangements essentially entail cooperation between two or more competing firms, forming a co-opetition framework[19]. This co-opetition facilitates the broad availability of technologies, products, and services. However, the close interdependence between partners, stemming from the necessity for model developers to utilise cloud providers for development and deployment, and the cloud providers' need to host these developers to enhance their appeal to customers, may foster the exchange of sensitive information and impede innovation, thereby increasing the risk of collusion. This might be especially the case when the partners develop competing offerings, such as models or AI-powered applications.

3.3.2 The Signal the CMA Sends to Future AI Partnerships and Arrangements

The CMA is actively monitoring the AI sector to comprehend how competition in foundation models operates. As part of its monitoring efforts, the CMA closely watches partnerships and arrangements between major cloud providers and model developers. Through this scrutiny, the CMA conveys a clear message to economic players in the AI sector, outlining the importance of carefully considering ongoing competition concerns when engaging with other stakeholders.

However, economic actors may interpret this signal as a potential risk factor for future AI partnerships and arrangements. This perception could lead to delays in such partnerships or

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[19] Christophe Carugati, Competition and Cooperation in AI: How Co-Opetition Makes AI Available to All, *Digital Competition*, 11 March 2024 (accessed 1st May 2024). Available at: https://www.digital-competition.com/comment/competition-and-cooperation-in-ai%3A-how-co-opetition-makes-ai-available-to-all

prevent them from happening due to concerns about potential merger or antitrust interventions, especially at a time when model developers need prompt access to flexible and scalable cloud infrastructure and services for model development and deployment.

In light of this context, the CMA should strive to strike a balance between upholding the legitimacy of regulatory intervention and providing legal certainty to economic sectors regarding the potential for intervention. This equilibrium can be achieved through the issuance of guidance, primarily focused on further specifying jurisdictional thresholds for these situations and identifying mitigating factors that can minimise the risk of adverse competition outcomes and harm to consumers. While the CMA competition principles represent an initial step towards the latter, they would benefit from being supplemented with a detailed description of actionable measures to achieve these principles. Given the discretionary nature of the UK merger regime, without such guidance, regulatory intervention increases legal uncertainty and risks for investing in AI companies, particularly those with a local nexus in the UK.

About

Digital Competition

Digital Competition (www.digital-competition.com) is a research and advisory firm. Our mission is to advance open digital and competition policies for better innovation. We inform our members and clients on emerging and global digital and competition issues through impartial, forward-looking analyses, shaping policies that foster innovation for all. This comment did not receive any funding. We received input from Microsoft and Amazon to understand the partnerships and arrangements. However, the comment remains fully independent from their input.

This paper is part of our GenAI and Competition Hub (https://www.digital-competition.com/genaiandcompetitionhub). It strives for responsible GenAI development, ensuring favourable market conditions that benefit all. We leverage expertise and dialogue with stakeholders and competition authorities while maintaining our commitment to open access, full transparency, and impartial advice. Our Hub helps stakeholders and decisionmakers navigate complex and rapid GenAI market and regulatory development. We also nurture the discussion in designing competition policies that deliver favourable market conditions in the context of intense monitoring of GenAI by competition authorities worldwide and the forthcoming 2024 G7 Italian presidency.

We provide research and market studies and invite stakeholders to contribute with relevant input. We also offer private consultations, training sessions, and conferences on GenAI and competition. Contact us to join the Hub and/or for consultation/press inquiries.

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Dr. Christophe Carugati (christophe.carugati@digital-competition.com) is the founder of Digital Competition. He is a renowned and passionate expert on digital and competition issues with a strong reputation for doing impartial, high-quality research. After his PhD in law and economics on Big Data and Competition Law, he is an ex-affiliate fellow at the economic think-tank Bruegel and a lecturer in competition law and economics at Lille University.