



## Briefing: Commission must block Bayer-Monsanto merger, says UCL legal study

New research led by Ioannis Lianos, Professor of Global Competition Law and Public Policy and Director of the Centre for Law, Economics and Society (CLES) at University College London (UCL),<sup>1</sup> concludes that even on a narrow reading of EU competition law, the merger between US-based agro-chemical and biotech company Monsanto and German 'life science' company Bayer should not be permitted.

The legal study sets out **five main reasons** why EU competition law requires that the merger be blocked.<sup>2</sup>

**1. High market concentration:** The existing market context is incredibly concentrated at a global level. The last two decades have seen a global consolidation of the agricultural chemical, crop seeds and biotechnology industries. If the Bayer-Monsanto merger is approved, just three corporations will own and sell about 64% of the world's pesticides/herbicides, and 60% of the world's patented seeds. In the US, where genetically modified (GM) seeds dominate, the seed markets concentration is even higher. In Europe, where GM faces fierce public resistance, the seeds market concentration is still high for certain areas and products (e.g. 5 companies control 95% of the EU vegetable seed market). Following the DuPont-Dow and ChemChina-Syngenta merger approvals, *neither of which included any specific conditions relating to the seeds market*, market concentration will increase even further. Thus, the Bayer-Monsanto merger would occur in a market context of *even weaker* competition.

**2. Entrenched market power:** The combination of the patents and plant variety intellectual property (IP) rights' portfolios of the two companies "may lead to entrenched market power". Bayer holds 206 patents and Monsanto 119 on transgenic plant traits in the EU, while Monsanto monopolises the US market with 96% of patented cotton traits. The companies' germplasm and genome libraries may give a merged Bayer-Monsanto a competitive edge in gene-editing technologies, "entrenching their leading position in agricultural biotechnology", and affecting incentives for would-be market entrants. The risk of "anticompetitive collusion" between the leading agro-chemical corporations is increased by the significant links the firms have, such as cross-licensing agreements, joint ventures, and other R&D strategic alliances. There would be "high risks of collusion" in a three-competitors market.

**3. Increased prices for farmers:** It is predicted that the merger would "undoubtedly" raise costs and reduce the choice of seeds for farmers, with "considerable effects" on the viability of smallholder farming. The risk of collusive pricing is higher when there are fewer market players, and many of the same institutional investors hold large blocks of shares in both Monsanto and Bayer, *and* some of their competitors, which may be a "factor facilitating collusion". It is, concludes Professor Lianos, farmers who "will pay the price of an increase in concentration in this sector", pushed into a "take it or leave it" position.

<sup>1</sup> Lianos, Ioannis with Katalevsky, Dmitry, *Merger Activity in the Factors of Production Segments of the Food Value Chain: A Critical Assessment of the Bayer/Monsanto merger*, Centre for Law, Economics and Society (CLES), University College London (UCL), Policy Paper Series: 1/2017, ISBN 978-1-910801-13-0

<sup>2</sup> The Commission assesses if the merger could significantly impede competition, re. prices, output and innovation.

**4. Locking farmers in:** Bayer and Monsanto have been expanding into “digital farming”, developing their own IT platforms for the lucrative data-driven “smart agriculture” market. Monsanto’s subsidiary the Climate Corporation is active in “precision farming” (using sensors to collect information from soil, and satellite images to show crop growth progress)<sup>3</sup> and high-tech weather prediction. Sold as a way to improve crop yields, the effect is to lock farmers in to the company’s value chain, making them technologically dependent, as Monsanto owns or controls the data generated. Similarly, Bayer’s “digital farming” unit is active in soil analytics and decision support tools for farmers, such as pest and disease models. They aim to shift from being firms that simply produce agricultural inputs, to being one-stop-shop platforms providing farmers an inclusive package of *services*, guiding all the interlocked decisions they make each year. This would expand “farmers’ economic and technological dependence... ..[on] global seed and agro-chem platforms for most of the inputs necessary for agricultural production.”

Combining Monsanto and Bayer’s forays into “digital farming” would set a future merged company up to position itself as a fully-integrated service provider. An offer that once accepted is virtually impossible for farmers to get out of, being dependent on the company for all inputs, down to the very data on their own soils and crops. The merger thus has bigger implications for the control of food and farming; open systems with interoperable technology, or closed platforms with proprietary technologies designed not to work with rivals’ products. If the merger goes ahead, farmers would become dependent on three mega-corporations for all important decisions, “ceasing effectively to operate as independent economic actors.”

**5. Reduced competition and innovation:** The emergence of platforms like a merged Bayer-Monsanto, which act as integrated technology-traits-seeds-chemicals-digital farming platforms, would mean that new entrants into the market would need to simultaneously enter multiple segments of the value chain in order to compete with these one-stop shops. But the costs of doing so may be prohibitively high for SMEs and start-ups, which would instead be obliged to sell or license their technology to a merged Bayer-Monsanto corporation, allowing it to control the direction of technological change. Monsanto’s dominant position in several traits would also give the merged company the incentive and ability to foreclose even global competitors by locking in farmers to its value chains.

This *de facto* market barrier “may stifle disruptive innovation, if in the absence of the merger, firms were able to enter one or two segments of the market.” In addition, the pro-merger argument that higher profits from market consolidation will mean more money invested in agricultural research is undermined by recent studies showing that “large firms prefer to retain earnings and distribute them to shareholders and the management rather than invest them in R&D”.

The merger would bring together two companies that are direct competitors in some areas, thereby removing competition and the incentive to innovate. Both companies compete in the seeds sector, for example, in cottonseed and soybeans, but the danger is perhaps clearest in agrichemicals. Monsanto’s global best-seller, the glyphosate herbicide Roundup – recently classified by the World Health Organization as “probably carcinogenic to humans” – faces its main competition in Bayer’s Liberty herbicides. If the competitors join, the incentive to sell or develop safer alternatives to glyphosate is lost. Even if Bayer sells Liberty (to get round these competition concerns, and win approval for the merger), this would *not* effectively address the problem, as the UCL study explains:

*“The divested assets need to be acquired by third parties without that acquisition raising competition concerns, something that may be difficult in the context of the Bayer-Monsanto merger as it would be difficult to find a viable competitor outside the three market leaders.”*

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3 Soil info and satellite images are analysed using Big Data algorithms, in order to plan/adjust in real-time the need for inputs.

In other words, the market is already so concentrated that divesting particular products will *not* address the merger's negative effects on future competition in the seeds markets, nor on overall innovation. If the merger is approved, the three mega-corporations that would dominate the market would control large patent portfolios, well-known brands, and an increasingly dependent customer base, and so "would maintain their ability to conquer back market shares and expand in any segment of the agricultural value chain." Bayer-Monsanto would create "a significant impediment to effective competition".

The study also makes the legal case for Competition Commissioner Vestager broadening her investigation to include negative impacts on the climate and biodiversity.

**Bad for biodiversity and climate:** A decision so critical to the future "control of the global food value chains" cannot justifiably ignore the wider social and ecological costs. And the merger would have profound implications, making farmers less able and likely to farm sustainably: *"Investment in seed saving and seed diversity, rather than standardisation of traits, or in non-agro-chemical pest management approaches constitutes a business model that farmers may be less likely to choose, if they are forced to take their advice from the same agro-chem giants."*

Quantities of agricultural inputs like petrochemical-based herbicides and pesticides used by farmers can be expected to increase with the creation an oligopoly of agro-chemical giants that have a "material bias" in promoting a high-input, high-tech, intensive monoculture model. This would have negative impacts on biodiversity, climate, and health.

As agriculture becomes "increasingly commoditised", with critical decisions and inputs outsourced to 'agriculture solutions' giants, farmers will increasingly lose control of seed materials, which "will have devastating effects on local varieties and non-standardised agricultural products".

These findings confirm our fears: at a time of rapid biodiversity loss and urgent need for seed and crop diversity to make our food systems more resilient to climate change, the Bayer-Monsanto merger is a recipe for disaster. This is particularly the case given the political clout that a merged Bayer-Monsanto corporation would have – drowning out alternative voices speaking for agro-ecological farming practices that boost wildlife rather than destroy it.

**The CLES@UCL study urges "the Commission to take action and to block the merger". Whether viewed through a narrow competition lens, or a wider scope of social and environmental costs, the Commission has a legal obligation to reject the Bayer-Monsanto merger.**