

# AI-enabled price discrimination

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### English Summary

The rise of business models based on the collection and processing of Big Data allows undertakings to offer customers different prices for the same goods at precisely the same time. This technique is called “AI-enabled price discrimination”. From an economic perspective, AI-enabled price discrimination is not always undesirable. In digital markets, it can increase static efficiency, and in some market conditions, it can promote dynamic efficiency and boost consumer welfare. However, if AI-enabled price discrimination is conducted by dominant undertakings, it may create exclusionary and/or exploitative effects. It may also trigger fairness concerns *vis-à-vis* consumers (customers) and/or competitors. Since the protection of competition on the merits and consumer welfare are the objectives of competition law in the EU and China, it makes sense to call for competition law intervention.

Price discrimination is explicitly mentioned as an abuse of dominance in Article 102 (c) TFEU in the EU, while Article 22 (1) of the Anti-monopoly Law challenges the discriminatory treatment engaged in by a dominant undertaking in China. It, therefore, raises the question as to whether and under which circumstances (AI-enabled) price discrimination should be considered as an infringement of competition law and how to address it. To answer this question, this thesis delves into the economic rationale and technical mechanism of AI-enabled price discrimination in digital markets, compares the legal consequences of (AI-enabled) price discrimination under the EU and Chinese competition law (and beyond) in theory and in practice, evaluates whether current legal regimes can effectively tackle concerns caused by anti-competitive and welfare-reducing AI-enabled price discrimination, and provides policy suggestions to the two jurisdictions for considering (AI-enabled) price discrimination as an infringement of competition law (and beyond).

Both the EU and China have established comprehensive legal regimes to tackle anticompetitive and welfare-reducing AI-enabled price discrimination, at least on paper. Furthermore, the EU and China both have dual competition law enforcement systems in a decentralized model to deter and punish infringements related to abuse of dominance. The competition law enforcement system plays its role *ex-post* and imposes legal liabilities to terminate and deter a possible abuse of dominance. However, this thesis finds that the enforcement systems of the EU and China do not seem to be optimal because of (1) the inadequate deterrence created by the *ex-post* assessment model, the few choices of sanctions (only fines) and the low fines on paper and in practice; (2) potential error costs in private and public enforcement; and (3) high administrative costs to detect and punish infringement on enforcers as well as information costs, litigation costs and human resources expenses on undertakings and victims.

Considering that AI-enabled price discrimination involves three phases, including (1) collection and processing of consumer data, (2) prediction of consumer’s willingness to pay, and (3) the application of discriminatory pricing, rules beyond competition law

can step in as a complement to tackle welfare-reducing AI-enabled price discrimination. More specifically, this includes rules on data protection, consumer protection and the protection of fair competition in the EU and China. In the digital era, legislative changes and active enforcement of rules beyond competition law demonstrate the regulatory attitudes of the EU and China to address concerns caused by wrong-doings including AI-enabled price discrimination. Close cooperation between competent authorities (i.e. data protection authorities and/or consumer protection authorities) during the enforcement of rules related to AI-enabled price discrimination seems important, as it is likely to contribute to achieving the goal of optimal deterrence.