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Generative platform architectures and their power to structure markets

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Generative platform architectures and their power to structure markets the central role of artificial intelligence

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Our intention, is to analyze the process of developing a dominant generative platform design. Our research approach mobilizes several fundamental concepts relating to technical infrastructures as well as to platform ecosystems. The stake of this technico-economic perspective is to enrich the reading grid of the platforms in their dimension of generative infrastructure as well as that of the new market mechanisms that they create. Our ambition is to analyse the place and role of artificial intelligence (AI) technologies, in their structuring dimension of technological designs and also of the associated platform markets.

In the field of platform economics, the works published in information systems management in recent years point to a dominant model (dominant design) of platform technical infrastructure. They refer on the notion of assembly, to that of Boudreau and Hagiu (2009). More recently, to that of De Reuver et al. (2018) on the issues of connectivity. The concept of “design” here refers to a combination of technical components that form the substrate of the technical platform infrastructure (De Reuver et al., 2018). The nature and form of the components that are interconnected form different technological designs (Lusch and Nambisan, 2015; de Reuver et al., 2018). In this reading of an infrastructure as an assembly, recent artificial intelligence (AI) technologies emerge as a central lever for building platform infrastructure designs (de Reuver et al., 2017; Kiron and Schrage, 2019). In their proposed research agenda, De Reuver et al. also highlight the challenge of analyzing the effects of platform infrastructure interconnectivity on market mechanisms, i.e., their power to transform them. Our intention, in this research, is to put into perspective the elements of this "dominant design" of platform as well as the market mechanisms that it drives.

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