

Digitalean at Work: Varieties of Lean Models in Digital Automotive Factories in Italy

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A growing literature on the impact of new technologies on the transformation of the work process is emerging, that stresses the role of the combination of technological and organisational changes as drivers of transformation in terms of human-machine relationship. While comparison across countries starts to be undertaken, relatively less attention has been devoted to study how heterogeneity unfolds within the same sector of activity. By analysing the case of the automotive sector in Italy, this paper aims at filling the existing gap in the literature, addressing the existence of a varieties of lean-oriented organisational models inside however a common trend of digitisation across factories.

Hereby, leveraging on the results of two field-work analyses conducted under a collaboration with the Fondazione Sabattini and the metal workers trade union FIOM in the period 2016-2018, we are able to put together an ensemble of automotive assembly plants marked by processes of technological and organisational transformation. Our research design allows to address different sources of heterogeneity: within-sector, within-firm, and across products.

According to our results, first, differently from an archetypal total lean model, a structural tension between leanness in the production system and leanness in the organisation of the work process exists in all studied workplaces. Second, far from an ideal type of a pure digital factory, strong forms of within-sector and within-firm heterogeneity, in terms of digitisation processes, is found. Finally, what workers do in terms of the final assembled products mediates both technological and organisational readiness, enacting more or less manifested forms of attachment/refusal of workers' vis-à-vis corporate identity.

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