

Essays on automation and labor markets

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Impact paragraph

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Regarding scientific impact, this thesis advances the understanding of the consequences of technology and labor market in several ways. Firstly, when analyzing the potential compensation mechanisms of automation, this thesis underscores the role of institutions, which has often been overlooked. It examines the role of non-standard employment as a potential buffer against negative effects and finds that this approach does not seem promising. Secondly, it examines the potential links between robots and AI and wage inequality. Given that AI is diffusing at a rapid pace, it is crucial to count on empirical evidence of the potential implications. This thesis finds that occupations more exposed to AI are the ones where there is higher inequality and indicates two scenarios that may unfold as a consequence of a broader expansion of this technology. Finally, it combines literature on labor markets and technology life cycles and identifies that labor market impact depends on different technologies’ maturity phases and underscores significant short-run effects that are mitigated in the long-term.

Regarding societal impact, this thesis offers valuable insights for policymakers aiming to craft responses to the challenges posed by rapidly evolving technologies that reshape the labor market. Specifically, chapter 2 argues that labor market flexibilization, particularly through non-standard employment, is not effective in preventing worker displacement. In contrast, education and retraining policies are crucial for assisting workers in navigating technological changes. Furthermore, the thesis has broader societal implications as it identifies potential ways that an emerging technology, such as AI, can influence inequality. While AI adoption is not yet widespread, its rapid development

raises societal concerns about its broader impact. Based on the findings from chapter 3, we argue that AI has the potential to either increase or decrease inequality, depending on two prevailing scenarios. Further, results from chapter 4 also emphasize the relevance of short-term impacts of technology in labor markets. This highlights the need for timely policy responses that can adapt to these changes effectively.