

Technological Change, Firm Heterogeneity and Wage Inequality

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Abstract:

We argue that skill-biased technological change not only affects wage gaps between skill groups, but also increases wage inequality within skill groups, across workers in different firms. Building on a heterogeneous firm framework with labor market frictions, we show that an industry-wide skill-biased technological change shock will increase between-firm wage inequality within the industry through four main channels: changes in the skill wage premium (as in traditional models of technological change); increased employment concentration in more productive firms; increased wage dispersion between firms for workers of the same skill type; and increased dispersion in the skill mix that firms employ, due to more sorting of skilled workers into more productive firms. Importantly, a simultaneous increase in the supply of skilled workers does not offset the technology-induced rise in inequality. Using rich administrative matched employer-employee data from Germany, we provide empirical evidence of establishment-level adjustments that are in line with the predictions of the model. We further document that industries with more technological adoption exhibit particularly pronounced adjustment patterns along the dimensions highlighted by the model.