Taxing AI?
Monopoly, Search Frictions, and Optimal Policy

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Abstract

Should the government tax or subsidize artificial intelligence (AI) production? We address this question in a model featuring monopolistic AI supply, substitutability between AI and labor in final goods production, and search frictions that prevent displaced workers from finding immediate reemployment. The optimal policy must therefore balance efficiency gains from AI expansion against the unemployment costs of technological displacement. We characterize this trade-off quantitatively in a calibrated model, finding that fully correcting monopolistic distortions raises AI production dramatically, generating large gains in aggregate output, but requires a substantial increase in tax revenue and a rise in the unemployment rate. These results imply that the optimal policy prescribes a level of AI production strictly between the laissez-faire outcome and the constrained-efficient allocation of a social planner. The appropriate policy instrument — subsidy or tax — depends critically on the relative magnitudes of the monopoly distortion and the search friction.

Keywords: Artificial intelligence; monopoly; search frictions; optimal taxation
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