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## Technology, Offshoring and the Rise of Non-Routine Jobs\*

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**Abstract**

This paper documents the growing share of non-routine jobs in the labor force of thirty-seven advanced and emerging countries over the period 1999-2007. To examine the role of offshoring and technological change in driving this labor market development, we develop a task-based model of production in global value chains and propose a decomposition of changes in occupational labor demand. In the setup of the model, technological change affects the total number of workers with a certain occupation throughout the production chain, while task relocation consists of a shift in occupational labor demand from one location to another. For the empirical implementation we combine harmonized cross-country occupations data with world input-output tables. The results of our decomposition suggest that technological change increased the number of non-routine relative to routine occupations in all countries. The effect of task relocation is less strong, and works in the same direction for advanced countries such as Germany and the United States but in the opposite direction for emerging countries such as China and Poland.

*Keywords:* Global value chains, trade, technology, tasks, occupations

*JEL:* D57, F16, F66, J21, O33

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