

Working Papers &  
Publications

Activities

Meetings

Data

People

About

## Learning by Doing in a Multi-Product Manufacturing Environment: Product Variety, Customizations, and Overlapping Product Generations

Carolyn D. Egelman, Dennis Epple, Linda Argote, Erica R.H. Fuchs

NBER Working Paper No. 19674

Issued in November 2013

NBER Program(s): [PR](#)

Extending research on organizational learning to multi-product environments is of particular importance given that the vast majority of products are manufactured in such environments. We investigate learning in a multi-product facility drawing on exceptionally rich data for a manufacturing firm that is a leading producer of high technology components. Weekly data for 10 years from the firm's production and human resource tracking systems are augmented by surveys of managers and engineers and by extensive first-hand observation. We find that productivity improves when multiple generations of the firm's primary product family are produced concurrently, reflecting the firm's ability to augment and transfer knowledge from older to newer product generations. No significant transfer of knowledge is evident between the primary product family and other products. Productivity is, however, decreased when the production facility is faced with extensive within-product buyer-specific customizations. We develop the implications of these findings for theory and practice.



This paper is available as [PDF \(404 K\)](#) or [via email](#).

[Acknowledgments](#)

Machine-readable bibliographic record - [MARC](#), [RIS](#), [BibTeX](#)