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## **The Effect of Technology Growth on Money Supply and Demand: A Cointegration Approach**

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Poster Presentation 14

**THE EFFECT OF TECHNOLOGY GROWTH ON MONEY SUPPLY  
AND DEMAND: A COINTEGRATION APPROACH**

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The 1990's have been a prosperous decade economically, characterized by notable surges in technological innovation and adaptation. Certain economic historians, Mokyr in particular, believe we are experiencing growth that is parallel to that of the Industrial Revolution, which places late 20th century America at the forefront of a new "Technological Revolution." (1996). Only time will dictate the accuracy of that designation. However, there is no doubt that substantial technological development has had a profound impact on U.S. economic evolution over the last 10-15 years. More specifically, significant technology growth has placed the nation's monetary structure at a dynamic crossroads. New purchase and payment methods have developed that are eclipsing older, more paper based forms

The purpose of this paper is to analyze the significance of the effects current payment technologies have had on money supply and demand. Specific attention will be given to M1 and M2 stocks, M1 and M2 velocities, the Fed Funds Rate and National Income, and how their interaction with each other has been affected by technology expansion. Using the 1980 ATM and EFT debut as a proxy for current technological development in a cointegration test model, it is hypothesized that current payment technologies have allowed for a more cohesive interaction between these variables through a reduction in transaction costs.