

Accounting & Finance PhD Research Topic

Technological Innovation and Asset prices

Principal Supervisor: Dr Deepa Bannigidadmth

Abstract:

In today's knowledge-driven economy, where industries are increasingly defined by rapid technological progress, firms that prioritize innovation stand out as industry leaders. By integrating cutting-edge technologies, these firms improve operational efficiency, lower production costs, enhance product quality, and expand into new markets, ultimately driving short-term profitability and long-term resilience. This project aims to provide a comprehensive analysis of the impact of technological innovation on asset prices, focusing on how firms' investments in innovation influence their market valuation, risk profile, and overall return potential.

Project:

The rapid pace of technological advancements has transformed the corporate landscape and redefined competitive advantage. The intersection of technological innovation and asset pricing has garnered significant attention in the finance and economics literature. Studies show that technological advancements can serve as a catalyst for growth by enhancing productivity and creating new market opportunities. However, while previous research emphasizes the role of innovation in competitive advantage and profitability, fewer studies specifically address the nuanced impact of different types of innovations on asset prices.

Research on asset pricing traditionally considers risk factors such as firm size, industry classification, and market-to-book ratios. However, innovation as a factor remains underexplored in terms of its distinct impact on stock returns. Technological innovation can encompass a broad range of activities, from product and service development to process improvement, each with different implications for a firm's financial performance and risk. For instance, product innovations like Tesla's electric vehicles or Google's machine learning algorithms create new revenue streams and enhance customer value, while process innovations, such as automation in manufacturing, drive cost efficiency and operational agility. However, firms pursuing innovation often face entry barriers, and achieving innovation can be costly.

Additionally, the literature suggests that investor behaviour may vary depending on economic and market conditions. For instance, during periods of economic expansion, investors may be more willing to take risks on high-growth, innovative firms, whereas, during economic downturns, there may be a flight to safety, with investors favouring more stable, established firms. These insights form a foundation for exploring how economic cycles and market conditions interact with innovation to shape asset prices.

The following indicative research questions arise from the above outline of the project:

- What types of technological innovations have the most significant impact on asset prices?
- How does the impact of technological innovation on asset prices vary across different phases of the economic cycle?
- How do financial market conditions (e.g., interest rates) influence the relationship between innovation and asset prices?
- What underlying mechanisms mediate the relationship between technological innovation and asset prices?

The following articles help provide a backdrop of the literature pertaining to this field. A number of papers are by the lead supervisor to allow candidates to understand her background work on asset pricing and forecasting.

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