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Doctoral Studies

Kellogg School of Management, Northwestern University, USA
PhD in Managerial Economics and Strategy, 2015-2020 (expected)

Dissertation Committee and References

Prof. Efraim Benmelech
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Michael Powell, 847-491-8676, mike-powell@kellogg.northwestern.edu

Prior Education

MSc in Applied Mathematics, 2011-2013 Wrocław University of Technology, Poland
BA in Finance, 2008-2011 Wrocław University of Economics, Poland

Fields

Primary: Corporate Finance, Economics of Innovation
Secondary: Labor Economics, Household Finance

Teaching Experience

Managerial Economics, Executive MBA
TA for prof. James Schummer (2017-2019)

Strategy and Organization, Executive, Full- and Part-Time MBA
TA for prof. Niko Matouschek, prof. Michael Powell (2016-2019)

Foundations for Strategy Formulation, Executive MBA
TA for prof. Jeroen Swinkels (2018-2019)

Competitive Strategy, Full-Time MBA
TA for prof. Joshua Mollner (2018)

Tutor of Economics (Oct 2009 - Jun 2014)
Wrocław No. 14 High School, Poland

Other Relevant Experience

Research assistant (Aug 2016 - Jun 2017)
Kellogg School of Management. Research assistant to prof. Nicola Persico

Research assistant (Jun 2014 - Jul 2015)
ETH Zurich, Switzerland. Full-time research assistant to prof. Daniel Chen

Revenue Management & Pricing Specialist (Sep 2013 - Jun 2014)
PKP Intercity (Polish Railways); Warsaw, Poland

Business Consulting Intern (Aug 2011 - Sep 2011)
Ernst & Young; Warsaw, Poland

Financial Analyst Intern (Apr 2011 - Jun 2011)
Crisil Irevna; Wroclaw, Poland

Fellowships, Grants and Awards

Kellogg Center for Research in Technology and Innovation Grant (2018-19)

Kellogg Graduate Fellowship (2015-20)

Polish Ministry of Science Young Researchers "Diamond Grant" (2013-15)

Polish Ministry of Science Merit Scholarship (twice, 2011 and 2012)

Wroclaw University of Technology Merit Award (2011-13)

Wroclaw University of Economics Merit Award (2008-11)

Publications and Working Papers

(See next page for abstracts)

Digitization and Automation: Firm Investment and Labor Outcomes (2019)

Working More to Pay the Mortgage: Household Debt, Consumption Commitments and Labor Supply (2019)

Capital Structure and Flexibility: Danish Firms During the Cartoon Crisis (2019) with Benjamin Friedrich

Morale and Debt Dynamics (2019) with Daniel Barron and Jin Li

Older Papers:

A note on using the Hodrick-Prescott filter in electricity markets. Energy Economics 48 (2015); with Rafał Weron

Revisiting the relationship between spot and futures prices in the Nord Pool electricity market. Energy Economics 44 (2014); with Rafał Weron

Transaction costs and volatility on Warsaw Stock Exchange: implications for financial transaction tax. Bank & Credit 45 (2014)

Work in Progress

Investment in Robots, with Efraim Benmelech and Dimitris Papanikolaou

Designation and Impact of Opportunity Zones, with David Matsa

Beyond Silicon Valley: Dispersing Innovation

Other

Citizenship: Polish (J-1 US Visa)
Languages: Polish, English (fluent), German (basic)
Technical Skills: Stata (fluent), Matlab (basic)
Date of Birth: November 28, 1989
Refereeing: American Economic Journal: Microeconomics, Applied Mathematical Finance, Energy Economics, Energy Journal

Abstracts

Digitization and Automation: Firm Investment and Labor Outcomes (2019)

Digitization and automation are thought to be transforming the economy, but evidence on their adoption and impact is limited. This paper analyzes firms' investment in these technologies using administrative data from Germany. The main result shows that while technology typically substitutes for workers, in several service industries the complementarity effect dominates. This is shown in two ways: (1) labor scarcity increases investment in technology on average but impedes it in selected industries; (2) technology typically reduces employment but increases it in selected industries. For identification, I instrument labor scarcity with population aging and use a difference-in-differences design which combines industry-level technological trends with local intensity of adoption. Additional results show that financial constraints impede technology adoption and that the new technology is skill-biased. Overall, the paper unwinds the heterogeneous link between new technologies and labor, highlighting the importance of analyzing a broad set of technologies and studying patterns of their adoption by firms.

Working More to Pay the Mortgage: Household Debt, Consumption Commitments and Labor Supply (2019)

This paper analyzes how a change in the size of mortgage payment affects household's labor supply. Using income tax data for the universe of Polish population and exploiting variation in floating-rate mortgage payments driven by interbank rates fluctuations, I show that an increase in payment induces households to work and earn more. Higher income covers 30-45% of the increase in payment. The effect increases with households' debt-to-income ratio, is higher for more flexible income sources and is accompanied by a decrease in proxies for consumption expenditures. Several mechanisms contribute to this effect: spousal labor supply, change of job and additional income from after-hours work. Consistent with a model of labor decisions with consumption commitements, but contrary to other mechanisms such as debt overhang, household debt can increase labor supply.

Capital Structure and Flexibility: Danish Firms During the Cartoon Crisis (2019) with Benjamin Friedrich

How does capital structure affect firms flexibility to adapt to changes in their environment? We study the boycott of Danish products in Muslim countries in response to a Danish newspaper publishing caricatures of prophet Muhammad. Using detailed data on Danish exporters, we exploit variation in their capital structure and exposure to Muslim countries to analyze the effect of leverage on firms response to the boycott. We find that only firms with low leverage compensate for lost demand by increasing investment, introducing new products and entering new markets. In contrast, high-leverage firms reduce sales and employment and decrease operating risk by turning to more flexible arrangements, in particular outsourcing. Our findings confirm that debt limits firms flexibility, consistent with the importance of this consideration for capital structure decisions.

Morale and Debt Dynamics (2019) with Daniel Barron and Jin Li

Financial obligations make it more difficult for firms to motivate their employees and so generate wage, effort, and productivity dynamics. Using firm- and worker-level administrative data, we document that a firm's financial leverage is negatively related to various measures of employee morale, wages and productivity. To explore these facts, we develop a model of a manager with limited wealth who simultaneously repays a creditor and motivates a worker. If the manager cannot commit to output-contingent payments, then indebted managers are less willing to follow through on promised rewards, leading to low morale as workers are less willing to exert effort. In profit-maximizing equilibria, therefore, effort and wages both increase as the manager repays her debts, and repaid debts can have lingering negative effects on effort. If the manager can collude with her workers, then the creditor must threaten to liquidate the firm following low output to deter such collusion, exacerbating the incentive cost of debt.

Work in Progress

Adopting and Financing Robots, with Efraim Benmelech

Designation and Impact of Opportunity Zones, with David Matsa

Beyond Silicon Valley: Dispersing Innovation

Innovation and high-growth entrepreneurship are highly concentrated geographically. Agglomeration effects, often related to the depth of labor market, make it difficult to build new innovation centers from scratch, but perhaps improving connections between existing hubs and other areas can help to disperse the innovative activity? I analyze the introduction of fast-speed rail that significantly decreased the transportation time between main innovation hubs and several smaller cities in Germany. Fast-rail system in Germany was designed between 1990-2010 to connect major cities, but simultaneously improved their connection to smaller cities which happened to be located on the train route. Using administrative data on firms and workers, I study the effects of the improvements in transportation on the industry structure and innovativeness of firms in the smaller cities. I hypothesize that the deeper labor market (the data shows that more people started commuting from large to small cities) made smaller municipalities more attractive to high-tech and innovative firms for which – as I show in the data – availability of skilled labor is the primary location factor.