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February 15, 2024

Letter of Application to the NBER Entrepreneurship Research Bootcamp 2024

Dear Selection Committee,

It is my pleasure to submit my application for the NBER Entrepreneurship Research Boot Camp. I am a fourth year PhD student in Finance at Drexel University, where I work under the supervision of Professor Michelle Lowry. My main research interest is in Entrepreneurial Finance and Innovation. My job market paper investigates the impact of artificial intelligence on the investment decision process for venture capitalists and how this impacts the geography of innovation in the US. In addition, I am working on a joint project that investigates the impact of localized labor mobility restrictions on inventors. While still early, I am also working on a project investigating the impact of hedge funds investing in startups, and how common ownership between these distinct markets can facilitate innovation spillover.

During the last year, I had the opportunity to join the Workshop in Entrepreneurial Finance and Innovation (WEFI) Fellows, organized by Professor Michael Ewens at Columbia University. This is a group of 12 PhD students with research interests in Entrepreneurial Finance and Innovation. We run a student led workshop in the fall and attend biweekly meetings where we present our current work and discuss potential ideas for future research.

Based on my research interests and external commitments, I believe attending the NBER Entrepreneurship Research Bootcamp will be an influential experience and I would be thrilled to participate. Attending lectures from the top researchers in entrepreneurial finance as well as the Entrepreneurship Working Group Summer Institute meeting will be valuable for my current and future research.

Please see attached my CV and academic transcript as well as my research statement in the document below. My contact information is the header above and my chair Professor Michelle Lowry will send a letter of recommendation on my behalf.

Thank you for considering my application.

Sincerely,

Melissa Crumling

MELISSA CRUMLING
mej69@drexel.edu | www.melissacrumling.com | +1 908 279 9082

Education

Drexel University — August 2020 – June 2025 (anticipated)
Doctorate of Philosophy in Finance

Villanova University — August 2019 – May 2020
Master of Science in Finance

Kutztown University — August 2015 – May 2019
Bachelor of Science in Business Administration, Finance
Minors in Economics and Mathematics

Research Interests

Empirical Corporate Finance, Entrepreneurial Finance, Innovation, Labor Mobility, Venture Capital

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Working Papers

Breaking Network Barriers in the Era of Data-Driven Venture Capitalists
Job Market Paper
Abstract: This paper examines the role of local networks and geographical clusterings within the venture capital (VC) industry in the age of artificial intelligence. VCs are increasingly using algorithms and statistical techniques to source deal flow. I find heterogenous changes in VC investing strategies after adopting data technologies. VCs located in primary hub locations are more likely to invest more in local markets after adopting data technologies. However, VCs in non-hub locations are more likely to invest in distantly located startups, including but not limited to primary hub locations. Results are robust to isolating plausibly exogenous variations in VCs' pre-exposure to AI, suggesting a causal link between technology adoption and these effects. In addition, data-driven VCs are more likely to invest in areas with little history of VC activity, suggesting that data technologies may help the funding of innovation for areas outside entrepreneurial markets.

Presentations: Rising Scholars Conference, MIT (2023)
Scheduled: Drexel University Brownbag (2024)

The Ties that Bind Us: The Innovation Consequences of Social Connections
with Jason (Pang-Li) Chen and Torin McFarland
Abstract: This paper documents that localized labor mobility restrictions, such as non-compete agreements, create externalities for other areas through social connections. Using a difference-in-difference framework, we find an increase in inventor movement from states that strengthened their noncompete agreements to areas with high social ties to inventors of the strengthening state. Subsequently, these areas experience a growth in inventor population, innovation output, and firm entry. The increase is driven by firms facing high information and search frictions (private firms), supporting the idea that social ties provide information that facilitates the matching of firms and innovators. Overall, these findings deepen our understanding of the tradeoffs of labor restriction policies.

Presentations: FMA Chicago (2023)*, WEFI Fellows Workshop (2023), Drexel University Brownbag (2023)*, Contemporary Issues in Financial Markets and Banking (IFMB) Conference (2024)
Scheduled: Columbia Private Equity Conference (2024), Eastern Finance Association (2024)*

Work in Progress

Learning from the Little Guy: Innovation Spillover from Private to Public Firms
with Tanja Kirmse
Presentations: FMA New Ideas Session (2023)

Impact of Social Media on Retail Traders and Markets
with Daniel Dorn
Presentations: FMA New Ideas Session (2022), Philly Five Conference New Ideas Session (2022)*

*Denotes Presentation by coauthor

Teaching Experience

Course Instructor, Introduction to Finance (FIN 301)
Spring 2023, Summer 2023 – 3.8/4
Drexel University
Course Objectives: financial structure of corporation, time value of money, risk-return tradeoff, business decision making

Teaching Assistant
Drexel University
- Fintech, for Michelle Lowry
- Investment Securities and Markets, for Daniel Dorn
- Risk Management, for Naveen Daniel

Invited Events

Workshop on Entrepreneurial Finance and Innovation (WEFI) Fellow (2023 – Present)
- Biweekly PhD workshops in entrepreneurial finance and innovation organized by Michael Ewens

Service

Discussant: FMA 2023 (2x), IFMB 2023
Co-organizer: Student-led Workshop on Entrepreneurial Finance and Innovation (SEFI) 2023

Awards & Honors

2023 Drexel Graduate Student Travel Grant
2020 – Present Blue Graduate College Fellowship, Drexel University
2020 – Present Department Fellowship, Drexel University
2020 Excellence in Finance at the Master's Level Medallion, Villanova University
2019 – 2020 MSF Fellows Program, Villanova University
2019 Overall Top Academic Achievement in Financing Award, Kutztown University
2019 Applied Investment Management Leadership Award, Kutztown University
2015 – 2019 Dean's List, Kutztown University

Additional Activities

Programming Skills: Python, SAS, Stata, Matlab, R, Latex, Picotte (Batch Processing Jobs), Machine Learning, Natural Language Processing

Last Updated: January 26, 2023

Letter of Recommendation Writer – Professor Michelle Lowry, Drexel University

List of Courses – See Transcript at End of Document

CS 570 – Programming Foundations

FIN 910 – Doctoral Seminar Corporate Governance

FIN 921 – Doctoral Seminar Behavioral Finance

FIN 922- Doctoral Seminar Corporate Finance

FIN 928 – Doctoral Seminar in Financial Econometrics

ACCT 910 – Research Methods in Accounting

STAT 931 – Statistics for Economics

ECON 902 – Mathematical Economics

ECON 910 – Advanced Microeconomics I

ECON 911 – Advanced Microeconomics II

ECON 920 – Advanced Macroeconomics

ECON 940 – Econometrics I

ECON 941 – Econometrics II

ECON 942 – Applied Microeconometrics

ECON 980 – Game Theory

NBER Entrepreneurship Research Boot Camp 2024 - Essay

Melissa Crumling

February 15, 2024

My main research areas are in Entrepreneurial Finance and Innovation. In my job market paper, I investigate how adopting artificial intelligence by venture capitalists (VCs) during the investment decision process changes where they choose to invest and consequently, the impact on the geography of innovation in the US. VCs invest in young, innovative startups with little to no public information and a limited history of success. Spatial geographic boundaries provide informational advantages for VCs to find investments and is one reason why VCs tend to invest locally (Chen et al. 2010), with the likelihood of investment diminishing as the distance between VC and startup increases (Sorenson and Stuart 2001). Prior literature highlights VC networks as the primary factor to overcoming these information frictions (e.g. Gompers et al. 2020), with well-connected VCs demonstrating superior fund performance (Hochberg, Ljungqvist, and Lu 2007). Additionally, existing relationships between VCs (Hochberg, Ljungqvist, and Lu 2010) or between a VC and founder (Garfinkel et al. 2021, Huang 2022) facilitate investments in startups located further away. This paper documents another avenue through which VCs can overcome information frictions: namely the use of artificial intelligence. In the last decade, VCs have increasingly adopted data technologies to automate the investment decision process (Bonelli 2022). Theoretically, data technologies are able to find all investment opportunities with a digital footprint. I find that after VCs adopt data technologies, they are more likely to invest in distantly located startups (extensive margin) and in more successful investments in their local markets (intensive margin). Additionally, I investigate where VCs choose to invest after adopting data technologies. VCs and VC-backed startups are largely concentrated in three areas: San Francisco, CA; New York, NY, and Boston, MA, (or "primary hubs") with approximately 50% of companies financed in these three cities (Chen et al. 2010). Using data technologies to source investments may amplify the current state of the VC market, identifying investment opportunities largely concentrated in these three cities. However, there is also an increased likelihood of data technologies identifying startups in areas with limited VC history compared to traditional VC networks. I find evidence of both: VCs are more likely to invest in primary hubs after adopting data technologies, but are also more likely to invest in more remote areas. This has important implications for local policy makers who wish to attract venture capital investment.

Another project I am working on, co-authored with a fellow PhD student Torin McFarland and Assistant Professor Jason Chen at Auburn University, looks at how localized labor mobility restrictions, such as non-competition agreements, create externalities for other areas through social connections. We find an increase in inventor movement from states that strengthened their noncompete agreements to areas with high social ties to inventors of the strengthening state. Subsequently, these areas experience a growth in inventor population, innovation output, and firm entry. The increase is driven by firms facing high information and search frictions (private firms), supporting the idea that social ties provide information that facilitates the matching of firms and innovators.

In addition, I am also interested in the changing dynamics of private and public markets. In early stage work with Assistant Professor Tanja Kirmse from Miami University, we examine the increased interest of hedge funds in innovative startups. Traditionally, public firms and startups receive capital from distinct investors. However, recent literature shows that as private firms stay private longer, there is an increase in public firm investors in private markets (see Lowry 2022 for a review). With the exception of Aragon, Li, and Lindsey 2023, most literature focuses on mutual fund investment in private firms (e.g. Kwon, Lowry, and Qian 2020, Chernenko, Lerner, and Zeng 2021). For this project, we investigate the impact of hedge funds investing in both public and private firms, and how this can lead to innovation spillovers across markets.

As a PhD student, I have benefited from the advice of my adivsor and chair, Professor Michelle Lowry as well as other faculty at Drexel University. I am also actively seeking ways to expand my knowledge from top scholars in the field of entrepreneurial finance and innovation. During 2023 I had the opportunity to join 11 other students in the Workshop for Entrepreneurial Finance and Innovation (WEFI) Fellows group organized by Professor Michael Ewens at Columbia University. We have bi-weekly meetings where we receive mentoring and feedback on our research. I hope to further my commitment in the field by attending the

NBER Entrepreneurship Boot Camp. Since there is no PhD-level entrepreneurship course offered at Drexel University, attending lectures by leading scholars in the field will broaden my understanding of the literature and highlight important areas for future research. In addition, attending the bootcamp will be a great networking opportunity to connect with like-minded researchers and create future research opportunities. Overall, attending this workshop will help further my research agenda and I thank you for considering my application.

References

Aragon, George O, Emma Li, and Laura Anne Lindsey. 2023. "Exploration or exploitation? Hedge funds in venture capital." *Hedge Funds in Venture Capital (January 17, 2023).*

Bonelli, Maxime. 2022. "The adoption of artificial intelligence by venture capitalists." *Available at SSRN 4362173.*

Chen, Henry, Paul Gompers, Anna Kovner, and Josh Lerner. 2010. "Buy local? The geography of venture capital." *Journal of Urban Economics* 67 (1): 90–102.

Chernenko, Sergey, Josh Lerner, and Yao Zeng. 2021. "Mutual funds as venture capitalists? Evidence from unicorns." *The Review of Financial Studies* 34 (5): 2362–2410.

Garfinkel, Jon A, Erik J Mayer, Ilya A Strebulaev, and Emmanuel Yimfor. 2021. "Alumni Networks in Venture Capital Financing." *SMU Cox School of Business Research Paper,* nos. 21-17.

Gompers, Paul A, Will Gornall, Steven N Kaplan, and Ilya A Strebulaev. 2020. "How do venture capitalists make decisions?" *Journal of Financial Economics* 135 (1): 169–190.

Hochberg, Yael V, Alexander Ljungqvist, and Yang Lu. 2007. "Whom you know matters: Venture capital networks and investment performance." *The Journal of Finance* 62 (1): 251–301.

———. 2010. "Networking as a barrier to entry and the competitive supply of venture capital." *The Journal of Finance* 65 (3): 829–859.

Huang, Can. 2022. "Networks in venture capital markets." *Available at SSRN 4501902.*

Kwon, Sungjoung, Michelle Lowry, and Yiming Qian. 2020. "Mutual fund investments in private firms." *Journal of Financial Economics* 136 (2): 407–443.

Lowry, Michelle. 2022. "The Blurring Lines between Private and Public Ownership." *Available at SSRN.*

Sorenson, Olav, and Toby E Stuart. 2001. "Syndication networks and the spatial distribution of venture capital investments." *American journal of sociology* 106 (6): 1546–1588.

Drexel University

Unofficial Academic Transcript

ⓘ This is not an official transcript. Courses which are in progress may also be included on this transcript.

Transcript Data

STUDENT INFORMATION

Current Program

Doctor of Philosophy

College	Major Concentration	Major and Department
Bennett S. LeBow Coll. of Bus.	Finance	Business Administration, Office of the Dean of COBA

INSTITUTION CREDIT

Term : Fall Quarter 20-21

Major	Academic Standing	Term Comments
Business Administration	Good Standing	In response to COVID-19, optional P/NP and P*/NP*,grading was adopted for the Fall Quarter.

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	Start and End Dates	R
ECON	902	GR	Mathematical Economics	A-	3.000	11.01		
ECON	980	GR	Game Theory	B+	3.000	9.99		
STAT	931	GR	Statistics for Economics	A	3.000	12.00		

Term Totals (Graduate Quarter)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term	9.000	9.000	9.000	9.000	33.00	3.66
Cumulative	9.000	9.000	9.000	9.000	33.00	3.66

Term : Winter Quarter 20-21

Major	Academic Standing	Term Comments
Business Administration	Good Standing	In response to COVID-19, optional P/NP and P*/NP*,grading was adopted for the Winter Quarter.

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	Start and End Dates	R
ECON	910	GR	Advanced Microeconomics I	A-	3.000	11.01		
ECON	940	GR	Econometrics I	A	3.000	12.00		
FIN	921	GR	Doct. Sem Behav Fin	A-	3.000	11.01		

Term Totals (Graduate Quarter)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term	9.000	9.000	9.000	9.000	34.02	3.78
Cumulative	18.000	18.000	18.000	18.000	67.02	3.72

Term : Spring Quarter 20-21

Major	Academic Standing	Term Comments
Business Administration	Good Standing	In response to COVID-19, optional P/NP and P*/NP*,grading was adopted for the Spring Quarter.

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	Start and End Dates	R
ECON	911	GR	Advanced Microeconomics II	B	3.000	9.00		
ECON	942	GR	Applied Microeconometrics	A-	3.000	11.01		
FIN	910	GR	Doc Sem Corp Gov	A	3.000	12.00		

Term Totals (Graduate Quarter)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term	9.000	9.000	9.000	9.000	32.01	3.55
Cumulative	27.000	27.000	27.000	27.000	99.03	3.66

Term : Summer Quarter 20-21

Major	Academic Standing
Business Administration	Good Standing

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	Start and End Dates	R
BUSN	996	GR	Summer Research	CR	9.000	0.00		

Term Totals (Graduate Quarter)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term	9.000	9.000	9.000	0.000	0.00	0.00
Cumulative	36.000	36.000	36.000	27.000	99.03	3.66

Term : Fall Quarter 21-22

Major	Academic Standing
Business Administration	Good Standing

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	Start and End Dates	R
ACCT	910	GR	Research Methods in Accounting	A+	3.000	12.00		
BUSN	997	GR	Pre-Dissertation Research	CR	3.000	0.00		I
CS	570	GR	Programming Foundations	A+	3.000	12.00		

Term Totals (Graduate Quarter)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term	9.000	9.000	9.000	6.000	24.00	4.00
Cumulative	45.000	45.000	45.000	33.000	123.03	3.72

Term : Winter Quarter 21-22

Major	Academic Standing
Business Administration	Good Standing

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	Start and End Dates	R
BUSN	997	GR	Pre-Dissertation Research	CR	6.000	0.00		I
ECON	920	GR	Advanced Macroeconomics I	A	3.000	12.00		
RCRG	600	GR	RCRG	CR	0.000	0.00		

Term Totals (Graduate Quarter)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term	9.000	9.000	9.000	3.000	12.00	4.00
Cumulative	54.000	54.000	54.000	36.000	135.03	3.75

Term : Spring Quarter 21-22

Major	Academic Standing
Business Administration	Good Standing

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	Start and End Dates	R
ECON	941	GR	Econometrics II	B+	3.000	9.99		
FIN	922	GR	Doctoral Sem in Corporate Fin	A	3.000	12.00		
FIN	928	GR	Doc Sem in Fin Econometrics	A	3.000	12.00		

Term Totals (Graduate Quarter)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term	9.000	9.000	9.000	9.000	33.99	3.77
Cumulative	63.000	63.000	63.000	45.000	169.02	3.75

Term : Summer Quarter 21-22

Major	Academic Standing
Business Administration	Good Standing

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	Start and End Dates	R
FIN	998	GR	Diss Research: Finance	CR	9.000	0.00		I

Term Totals (Graduate Quarter)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term	9.000	9.000	9.000	0.000	0.00	0.00
Cumulative	72.000	72.000	72.000	45.000	169.02	3.75

Term : Fall Quarter 22-23

Major	Academic Standing
Business Administration	Good Standing

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	Start and End Dates	R
FIN	998	GR	Diss Research: Finance	CR	9.000	0.00		I

Term Totals (Graduate Quarter)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term	9.000	9.000	9.000	0.000	0.00	0.00
Cumulative	81.000	81.000	81.000	45.000	169.02	3.75

Term : Winter Quarter 22-23

Major	Academic Standing
Business Administration	Good Standing

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	Start and End Dates	R
FIN	998	GR	Diss Research: Finance	CR	9.000	0.00		I

Term Totals (Graduate Quarter)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term	9.000	9.000	9.000	0.000	0.00	0.00
Cumulative	90.000	90.000	90.000	45.000	169.02	3.75

Term : Spring Quarter 22-23

Major	Academic Standing
Business Administration	Good Standing

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	Start and End Dates	R
FIN	998	GR	Diss Research: Finance	CR	9.000	0.00		I

Term Totals (Graduate Quarter)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term	9.000	9.000	9.000	0.000	0.00	0.00
Cumulative	99.000	99.000	99.000	45.000	169.02	3.75

Term : Summer Quarter 22-23

Major	Academic Standing
Business Administration	Good Standing

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	Start and End Dates	R
FIN	998	GR	Diss Research: Finance	CR	9.000	0.00		I

Term Totals (Graduate Quarter)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term	9.000	9.000	9.000	0.000	0.00	0.00
Cumulative	108.000	108.000	108.000	45.000	169.02	3.75

Term : Fall Quarter 23-24

Major	Academic Standing
Business Administration	Good Standing

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	Start and End Dates	R
FIN	998	GR	Diss Research: Finance	CR	9.000	0.00		I

Term Totals (Graduate Quarter)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term	9.000	9.000	9.000	0.000	0.00	0.00
Cumulative	117.000	117.000	117.000	45.000	169.02	3.75

TRANSCRIPT TOTALS

Transcript Totals - (Graduate Quarter)	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Total Institution	117.000	117.000	117.000	45.000	169.02	3.75
Total Transfer	0.000	0.000	0.000	0.000	0.00	0.00
Overall	117.000	117.000	117.000	45.00	169.02	3.75

COURSE(S) IN PROGRESS

Term : Winter Quarter 23-24

Major
Business Administration

Subject	Course	Campus	Level	Title	Credit Hours	Start and End Dates
FIN	998		GR	Dissertation Research in Finance	9.000	

To: Brett Maranjian
From: Professor Michelle Lowry, advisor to Melissa Jenkins
Date: January 26, 2024
Re: Melissa Jenkings, applicant to NBER Innovation and Entrepreneurship boot camps

Melissa Jenkings is a fourth-year finance PhD student at LeBow Business School, Drexel University. Melissa has been a student in two PhD classes I have taught, and I am the Chair of her dissertation committee. Melissa has been extraordinarily diligent in her classes, in her RA work, and in her research. She has presented her research at several conferences, and she was accepted as a fellow in the Workshop on Entrepreneurship and Innovation (the WEFI Phd Fellows program) run by Mike Ewens. This workshop represents a small group of 12 PhD students working in the areas of innovation and entrepreneurship. Together with Mike Ewens, the group meets biweekly, where participants present research. Relatedly, Melissa also co-organized the WEFI Fellows workshop on Entrepreneurial Finance and Innovation, and she has presented her research in several conferences, as described in more detail below. Melissa's research focus makes her an ideal candidate for the bootcamp, and her experience in these other venues positions her well for success in the bootcamp.

Melissa's job market paper, 'Breaking network barriers in the era of data-driven venture capitalists', focuses on the use of artificial intelligence (AI) within VC firms. VC's two main sources of value creation include investment selection and advising / monitoring of portfolio firms. AI can substantially decrease VCs' costs of selecting investments, but it arguably has a smaller effect on monitoring and advising. The combined influence of these two factors suggests that AI will have disparate effects on different types of VCs. Melissa focuses on three specific forms of heterogeneity: geographic, industry, and stage of investment.

In the interests of space, I will just discuss the predictions related to geographic heterogeneity. The fundamental economic intuition underlying the other forms of heterogeneity follows a similar structure. Regarding geography, Melissa develops a framework that is based on both the location of the VC and the source of VCs costs. In terms of location: VCs are located in either hub locations, i.e., locations with much entrepreneurial activity such as New York City and San Francisco, or non-hub locations. In terms of costs: AI significantly lowers VCs' costs of selecting companies that are located outside of their local networks, which increases the likelihood of investing in non-local companies. In contrast, AI has a smaller effect on monitoring costs. Putting these two effects together, VCs in non-hub locations face both higher investment selection costs, due to the sparser local networks, and higher monitoring costs, due to the fact that fewer portfolio companies are located in close proximity to the VC. These fundamentals lead to several predictions. First, among VCs in non-hub locations, AI significantly decreases investment selection costs, via its ability to identify investment opportunities outside of VCs' immediate networks. It has less of an effect on monitoring costs. The net effect is an increase in non-local investments. Second, VCs in hub locations benefit less from AI's ability to identify non-local investments, because they face an ample supply of entrepreneurial activity in their own geographic locale. Strikingly, the aggregate effect is

an increase in VC investments in locations outside of entrepreneurial hubs. This is an intriguing finding, as it suggests that AI can mitigate some of the benefits of local agglomeration effects. As the paper has developed, I have been impressed by the strong economic motivation Melissa has developed, the cleverness towards developing key proxies, and the data skills to empirically implement it all. She recently presented it at the Rising Scholars Conference, held this past year at MIT.

Melissa has several other projects, many of which similarly relate to entrepreneurial activity. One such paper is 'The ties that bind us: the innovation consequences of social connections', co-authored with Torin McFarland (a fellow PhD student) and Jason Chen (who just completed his PhD from Drexel). The concentration of startups within certain parts of the country is well-recognized, and such areas offer key benefits to these firms in terms of local agglomeration effects. However, these areas also tend to have the disadvantage of high costs of living. In this paper, Melissa and co-authors examine whether firms can obtain the benefits of local agglomeration effects without incurring the high costs of living. In particular, they examine whether firms that are located in counties with strong social connections to innovative hubs enjoy benefits similar to firms located within these hubs. Findings suggest that the answer to this question is yes. Firms in more socially connected counties produce greater quantities of innovation, create higher impact innovation, and attract more investors. The paper has been presented at the 2023 FMA meetings and the 2024 IFMB Conference, and it is scheduled to be presented at the Columbia Private Equity Conference.

Melissa is working on an additional project with Tanja Kirmse, who just completed her Ph.D. at Drexel. The project represents a further signal of Melissa's ability to use unique datasets to answer key economic questions. They use form D clicks by public firms as a proxy for these firms' research on private firms. They posit that information obtained through this channel influences public firms' investment strategies, including for example innovation efforts and acquisition behavior.

In sum, Melissa is driven to conduct high-quality research, and I can confidently say that she will be an engaged participant in the bootcamp if accepted. If you have any questions, please do not hesitate to reach out.

Sincerely,



Michelle Lowry
TD Bank Professor of Finance
Drexel University