Object: Application to 2014 NBER Entrepreneurship Research bootcamp

Dear organisers,

please find attached my application consisting of the following documents:

- a curriculum vitae
- an unofficial transcript, with all current and completed PhD courses
- an essay with details on current and future research projects

My contact details are below:
Antonio Miscio
500 west 122nd street, 6H, 10027 New York, NY
646-287-0654, am3559@columbia.edu

Please notice that you will receive a separate email with my advisor's recommendation letter.
His contact details are below:
Prof. Donald R. Davis
420 west 118th street, room 1004, International Affairs Building, 10027 New York, NY
212-854-4037, drd28@columbia.edu

Thank you very much in advance for your time and consideration. I am looking forward to hearing from you soon.

Best regards,

Antonio Miscio

Antonio Miscio - CV

500 west 122nd street, flat 6H, 10027 New York, USA Email: am3559@columbia.edu, antoniomiscio@gmail.com

Education

Columbia University, Economics Department — New York, USA, 2010 - present

Ph.D. candidate in Economics, Primary fields: International Trade, Urban Economics, Industrial Organization. Main advisor: Prof. D.R. Davis. See below for details on current research topics.

London School of Economics and Political Science, Economics Department — London, UK, 2009-2010

M.Sc. in Economics (research track). Courses: Micro-, Macroeconomics, Econometrics, Political Economy. Graduated with Merit. Dissertation: "Microfounding citizens' preferences for infrastructure investment" (Supervisor: Prof. A. Prat)

Institut d'Etudes Politiques de Paris – Sciences Po — Paris, France, 2005 – 2007

Master in Development Economics. Graduated cum laude (*mention Bien*); Dissertation based on field study in India: "Self-help groups and health education: case study of a missed opportunity" (Evaluation Committee: Professors V. Bignon, M. Flandreau and J. Sgard).

Universitá Bocconi, Economics Department — Milan, Italy, 2002 – 2005

Undergraduate in Economics, Final grade 110/110; Dissertation in Development Economics: "A Case Study of Participatory Democracy: The Indian Panchayat System" (Advisor: Prof. E. La Ferrara). Exchange program with Economics Dept. at Victoria University of Wellington (2004).

Research and Teaching Experience

Columbia University – Economics Department — New York, USA, 2011 - present

Teaching Assistant in Intermediate Microeconomics (2012, 2014), PhD-level Microeconomics (2013), Economics of New York City (2013), Principles of Economics (2011-2012).

Summer Research Assistant to Prof. D.R. Davis on Topics in International Trade.

OECD – Directorate for Public Governance and Territorial Development — Paris, France and New York, USA, 2010 (4 months)

Consultant to Dr. A. Akhmouch. Main tasks:

Provided research support to analyze survey data on water governance; Findings published as "*Water Governance in OECD Countries: a Multi-Level Approach*", OECD Publishing, 2011.

CERI - Centre for International Studies and Research (CNRS & Sciences Po) — Paris, France, 2009 (4 months)

Research Assistant for Prof. J. Sgard; Tasks included:

Consolidated and enlarged a dataset on the French judicial system in the 19th century with a focus on bankruptcy cases, crimes and offenses at different levels of jurisdiction.

Laboratoire d'économie d'Orléans (CNRS & Université d'Orléans) — Paris-Orléans, France, 2007-2008 (14 months)

Research Assistant for Prof. V. Bignon; Main accomplishments:

Worked on funded project on Financial Information; Analyzed the determinants of media exposure of listed firms, and the impact on investors' portfolio choices; Coauthored (with V. Bignon) "Media Bias in Financial Newspapers", *European Review of Economic History,* 2010.

Institute for Development Studies of Kolkata, University of Calcutta — Kolkata, India, 2006 (6 months)

Research Internship. Supervisor: Dr. S. Mukherjee. Tasks included:

- Designed and conducted field survey on "The externalities of microfinance on health" covering three villages in rural West Bengal, India; 120+ households surveyed; Seminar presentations.

Language and IT skills

Italian (native), English (fluent), French (fluent), Spanish (intermediate), Hindi (beginner).
Software: Stata, Matlab, R, ArcGIS, QGIS, LaTeX.

Awards and other Achievements

Fellowships: Columbia University Faculty Fellowship (2010-present), Institute for Humane Studies (2013-present), Fondazione Einaudi & Centro Studi Luca d'Agliano (2009-2011), Fondation Nationale des Sciences Politiques (2005-2007), ISU-Bocconi University Scholarship (2002-2005), American Field Service full scholarship for year exchange program to Belgium (2000-2001). Selected to represent Italian chapter at World Scout Jamboree, Chile (1999).

Work in Progress

Start-ups' Location Choice and Agglomeration Economies

Recent evidence suggests that information spillovers decay very quickly with distance and that studies of agglomeration economies at the MSA scale may fail to capture these effects. I use location decisions of a large panel of start-up firms at a very fine geographical scale to investigate how different industries trade off the costs and benefits of agglomeration.

Market Definition and Spatial Competition : an Application to the Fuel Market (with Ilton G. Soares)

Defining a market is a fundamental and often overlooked part of many analyses of competitive conditions. The practical difficulties in defining markets have lead researchers to search for approaches that do not rely on market definition at all but these attempts have strong limitations. We develop a novel and tractable way to characterize the relevant markets for spatially differentiated goods by combining commuting flows, gravity estimation and satellite data.

Agglomeration : a Dynamic Approach (with W.W. Hanlon)

Most studies of city growth, both theoretical and empirical, ignore or abstract away from the particular set of industries in a city. The goal of this project is to provide an empirical assessment of the role that industrial composition plays in the growth of cities, and the channels through which industrial composition matters.

The Distribution of Skills, Occupations and Industries Across Cities: A Comparative Advantage Approach (with Donald R. Davis and Jonathan I. Dingel)

The distributions of skills, occupations, and industries vary substantially and systematically across cities. Davis and Dingel (2013) propose a spatial-equilibrium model of the comparative advantage of cities and demonstrate its predictive power for the contemporary United States. This empirical study investigates the spatial distributions of skills, occupations, and industries using historical data from the US and recent data from two countries at different levels of development, Brazil and China.

Published Work

Media Bias in Financial Newspapers: Evidence from Early Twentieth-Century France (with Vincent Bignon), 2010, *European Review of Economic History*, vol. 14, no. 3, pp. 383-432.

Updated 31 March 2014

Student Services Online

Grades and Registration Status

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Antonio Miscio

Identifiers		**Spring 2014 Registration**	
Email:	am3559@columbia.edu	Standing:	GRADUATE FOURTH YEAR
UNI:	am3559	School:	GRADUATE SCHOOL OF ARTS AND SCIENCES
PID:	C003570055	Affiliation:	ECONOMICS

This document does not constitute an official transcript
Data last updated 8:13 p.m. 03/30/2014

ACADEMIC SUMMARY

GRAD SCHOOL OF ARTS & SCIENCES

Completed Columbia Points	76.00
Transfer Points	0.00
Columbia Residence Units	6.00
Transfer Residence Units	0.00

COLUMBIA COURSES AND GRADES

Spring 2014 - GRAD SCHOOL OF ARTS & SCIENCES

Call#	Dept	Number	Section	Points	Title	Grade
77771	EXRS	G0001	001	0.00	EXTENDED RESIDENCE F/T	
15740	ECON	G8708	001	3.00	COLL IN INTERNATIONAL TRA	
Completed Columbia Points					0.000	
Completed Residence Points					0.000	
Enrollment Status					Full-Time	

Fall 2013 - GRAD SCHOOL OF ARTS & SCIENCES

Call#	Dept	Number	Section	Points	Title	Grade
77771	EXRS	G0001	001	0.00	F/T EXT RESIDENCE MORN	
26249	ECON	G8708	001	3.00	COLL IN INTERNATIONAL TRA	P
Completed Columbia Points					3.000	
Completed Residence Points					0.000	
Enrollment Status					Full-Time	

Spring 2013 - GRAD SCHOOL OF ARTS & SCIENCES

Call#	Dept	Number	Section	Points	Title	Grade
99991	RESI	G0001	001	0.00	1-RESIDENCE UNIT MORN	
11350	ECON	G8708	001	3.00	COLL IN INTERNATIONAL TRA	P
71433	ECON	G8440	001	3.00	COLL IN INDUST ORGANIZAT	P
Completed Columbia Points					6.000	
Completed Residence Points					1.000	
Enrollment Status					Full-Time	

Fall 2012 - GRAD SCHOOL OF ARTS & SCIENCES

Call#	Dept	Number	Section	Points	Title	Grade
99991	RESI	G0001	001	0.00	1-RESIDENCE UNIT MORN	
22601	FINC	B9311	023	3.00	(PhD) Computational Bayes	P
74167	ECON	G8708	001	3.00	COLL IN INTERNATIONAL TRA	P
19296	ECON	G8440	001	3.00	COLL IN INDUST ORGANIZAT	P
Completed Columbia Points					9.000	
Completed Residence Points					1.000	
Enrollment Status					Full-Time	

Spring 2012 - GRAD SCHOOL OF ARTS & SCIENCES

Call#	Dept	Number	Section	Points	Title	Grade
99991	RESI	G0001	001	0.00	1-RESIDENCE UNIT MORN	
80996	ECON	G8708	001	3.00	COLL IN INTERNATIONAL TRA	P
66296	ECON	G6905	001	3.00	TOPICS IN TRADE	A
63496	ECON	G6904	001	3.00	INT'L MONEY AND FINANCE	A-
80796	ECON	G6255	001	3.00	INDUSTRIAL ORGANIZATION	A-
Completed Columbia Points					12.000	
Completed Residence Points					1.000	

Enrollment Status Full-Time

Fall 2011 - GRAD SCHOOL OF ARTS & SCIENCES

Call#	Dept	Number	Section	Points	Title	Grade
99991	RESI	G0001	001	0.00	1-RESIDENCE UNIT MORN	
16197	ECON	G8708	001	3.00	COLL IN INTERNATIONAL TRA	P
78280	ECON	G6903	001	3.00	THEORY OF INTERNATIONAL T	A-
82496	ECON	G6417	001	3.00	ECONOMETRICS III	B+
58447	ECON	G6306	001	3.00	INDUSTRIAL DEVELOPMENT	A
53249	ECON	G6254	001	3.00	INDUSTRIAL ORGANIZATION I	A
Completed Columbia Points					15.000	
Completed Residence Points					1.000	
Enrollment Status					Full-Time	

Spring 2011 - GRAD SCHOOL OF ARTS & SCIENCES

Call#	Dept	Number	Section	Points	Title	Grade
99991	RESI	G0001	001	0.00	1-RESIDENCE UNIT MORN	
26801	ECON	G6930	001	3.00	PERSPECTVS ON ECONOMIC	A
22097	ECON	G6412	001	4.00	INTRODUCTN TO ECONOMETRIC	B+
11097	ECON	G6216	001	4.00	MACROECONOMIC ANALYSIS II	C
98442	ECON	G6212	001	4.00	MICROECONOMIC ANALYSIS II	A-
Completed Columbia Points					15.000	
Completed Residence Points					1.000	
Enrollment Status					Full-Time	

Fall 2010 - GRAD SCHOOL OF ARTS & SCIENCES

Call#	Dept	Number	Section	Points	Title	Grade
99991	RESI	G0001	001	0.00	1-RESIDENCE UNIT MORN	
55530	ECON	G6411	001	4.00	INTRODUCTION TO ECONOMETR	A-
07920	ECON	G6410	001	4.00	MATH METHODS FOR ECONOMIS	B
98497	ECON	G6215	001	4.00	MACROECONOMIC ANALYSIS I	B
96047	ECON	G6211	001	4.00	MICROECONOMIC ANALYSIS I	B+
Completed Columbia Points					16.000	
Completed Residence Points					1.000	
Enrollment Status					Full-Time	

TRANSFER COURSES

GRAD SCHOOL OF ARTS & SCIENCES

No Transfer Courses on Record

NBER Entrepreneurship Research Bootcamp 2014

Antonio Miscio - Essay

One of my main research interests is understanding the mechanisms behind the spatial distribution of economic activity. The different projects that I am carrying out as part of my doctoral training at Columbia University can all be seen as different ways to disentangle such mechanisms. The link between this research area and my interest in Entrepreneurship is that one of the most strategic issues entrepreneurs must address is where to locate their business venture. Such location choice has strategic importance not only because it affects the availability and cost of production inputs, but also because it determines in what downstream market a firm operates.

The rest of this essay will provide an overview of my current work. I will begin by presenting an ongoing project directly related to Entrepreneurship Economics. Due to the early-stage nature of this project, I would greatly benefit from attending the NBER Entrepreneurship Research bootcamp. It would give me an unparalleled opportunity to interact with other researchers currently working on related topics and to gather valuable feedback. Finally, I will briefly discuss the preliminary findings of a co-authored work that was recently presented at the NBER Productivity, Innovation and Entrepreneurship meeting.

Start-ups' location choice and agglomeration economies

Spatial clustering of related economic activities is the subject of a long research tradition dating back to Marshall (1890). The traditional view is that businesses locate close to one another in order to reduce the cost of transporting goods, people or ideas. Assessing empirically the magnitude of such geographical externalities has proven challenging due to endogeneity problems, in particular unobserved heterogeneity and simultaneity bias (Martin et al. 2011). A further challenge has been to separately identify different sources of externality. Martin et al. (2011) focus on yearly variations in total factor productivity and interpret their estimates are a measure of short term gains from agglomeration, therefore reflecting labor and input market externalities rather than technological spillovers which take longer to realize. Ellison et al. (2010) instead draw insights from coagglomeration patterns, that is the tendency of firms from different industries to locate near one another. A different line of research, closer to this project, looks instead at *birth* patterns rather than *stock* patterns on the argument that new establishments' location choices are more informative of current economic forces. I will now focus on the key contributions that fall in the latter tradition in order to highlight the challenges they faced as well as how I plan to address them.

Arzaghi and Henderson (2008) study the entry patterns of advertising agencies and find that networking and information externalities decay very quickly with distance. Their evidence suggests that this source of agglomeration economies in industries that rely heavily on

ideas or complex face-to-face interactions is difficult to detect at large spatial scales. Rosenthal and Strange (2010) extend the analysis to a wider set of industries and estimate that additional employment at small and medium size establishments - but not large establishments - positively affects entry of small firms. Their analysis finds evidence of input-output externalities in the manufacturing sector, but it is inconclusive for other industries. One possible explanation for their mixed results is that agglomeration forces have a heterogeneous effect across industries, which may confound the estimation at the high level of industrial aggregation they use. Another explanation can be found in a particular form of congestion forces studied by Delgado et al. (2010). The latter argue that studies of agglomeration economies on regional entry patterns should control for convergence due to the existence of diminishing returns to entrepreneurship at the regional level. Though Rosenthal and Strange (2010) work at the zipcode level and not at the regional level, their study focuses on small firms from relatively mature sectors, so it is possible that diminishing returns also operate at such a small spatial scale.

In this research project I will focus on the entry patterns of high-technology companies. Given the innovative nature of their businesses, issues such as convergence and diminishing returns are less of a concern. My focus on a narrower but more detailed set of industries than the one considered by Rosenthal and Strange (2010) will shed light on location tradeoffs of a very different nature than those faced in the more mature industries they study. In particular, the high-risk profile of technology start-ups has implications for the type of funding typically available to them. This, in turn, also affects their location choice. Venture capital (hereafter VC) funding, along with other forms of seed funding, is often the only option available to high-tech firms that are too small or too young to secure bank loans or to raise funds in the public markets. VC do not simply provide working capital to early-stage, high potential companies but their role typically extends to mentoring, product development, business planning, market research or introduction to a portfolio of contacts and other investors (Hochberg et al. 2007, Senor and Singer 2009). Since VC funding is usually bundled with a range of services that require complex and repeated interactions with funded firms, the entry pattern of the latter is not orthogonal to the location of the VC industry. In this respect, it is interesting to notice that the VC industry displays a level of geographical concentration even higher than that of general economic activity (Chatterji et al. 2013). Moreover, in this study I will take into account the existence of some regulations that can potentially affect entry patterns or the study of agglomeration forces more generally. A particular form of regulation relevant to the high-tech firms is the creation of government sponsored start-up incubators and special industrial business zones. Most of the studies mentioned above ignore the existence of zoning regulations. One exception is Arzaghi and Henderson (2008) who use the stickiness of New York zoning constraints to argue the exogeneity of some variables. However, zoning restrictions vary within and between metropolitan areas in the US. This observation does not invalidate previous estimates but it does imply that a careful account of regulations may be turned to an advantage, for instance, when addressing endogeneity issues.

Other projects

Another related project I am currently working on is "Agglomeration: A Dynamic Approach" (with Walker Hanlon, UCLA). We introduce a dynamic approach for estimating the sources of agglomeration economies. This framework allows us to simultaneously estimate the importance of agglomeration forces attributable to cross-industry spillovers, to within-industry spillovers, and to overall city size in the growth of city-industries. This is done while controlling for fixed locational fundamentals, city-specific shocks, and national industry growth rates. We implement the approach using detailed new data describing the industry composition of English cities from 1851 to 1911. We find strong evidence that cross-industry connections can influence industry growth, particularly for industries with small firms and more skilled workers. Within-industry effects are not present for most industries, but may be important in a small number of sectors characterized by large firms and low-skilled workers.

References

- Arzaghi, M. and Henderson, J.V. 2008, "Networking off Madison Avenue", Review of Economic Studies, 75, 1011-1038
- Chatterji, A., Glaeser, E.L. and Kerr, W.R. 2013, "Clusters of Entrepreneurship and Innovation", NBER working paper no. 19013
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- Ellison, G., Glaeser, E.L. and Kerr, W.R. 2010, "What Causes Industry Agglomeration? Evidence from Coagglomeration Patterns", American Economic Review, 100, 1195-1213
- Hochberg, Y.V., Ljungqvist, A. and Lu, Y. 2007, "Whom You Know Matters: Venture Capital Networks and Investment Performance", Journal of Finance, 62, 251-301
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- Martin P., Mayer T. and F. Mayneris 2011, "Spatial concentration and plant-level productivity in France", Journal of Urban Economics, 69, 182-195
- National Venture Capital Association 2011, "Venture Impact: The Economic Importance of Venture Backed Companies to the U.S. Economy", ISBN: 0-9785015-9-4.
- Rosenthal, S.S. and Strange, W.C 2010, "Small establishments/big effects: Agglomeration, industrial organization and entrepreneurship" in "Agglomeration Economics", Glaeser, E.L. (ed.), ch.9
- Senor D. and Singer S. 2009, "Start-up Nation", Twelve, New York

Letter of recommendation for Antonio Miscio, April 7, 2014

I am very happy to support Antonio Miscio's application for the NBER Entrepreneurship Bootcamp 2014.

Since I know you will have many letters to read through, let me be brief and to the point. I think Antonio will be an excellent addition to the group of people that you bring in to the bootcamp. He has a background in international trade/regional/urban economics as well as industrial organization. As a result he brings a particular kind of perspective to questions of entrepreneurship that will be valuable not only for his own work but also for those students participating in the bootcamp with different backgrounds.

You can see these influences in the range of problems he is considering in his dissertation work. The project that is most directly related to entrepreneurship is one that tries to understand spatial patterns of startups in high tech industries, including relations with venture capital firms. This is still in an early phase and so will benefit a lot from the bootcamp. But he has identified various quite interesting sources of data and has a good background in the underlying spatial economics to make this a fruitful path.

Antonio also has active projects that treat related spatial issues from varying perspectives. He is working with Walker Hanlon, an Assistant Professor at UCLA, on how the distribution of activity across industries affects growth opportunities of firms, implementing this on a consistent panel of British data from 1851-1911. In addition, he is working with Jonathan Dingel (new Assistant Professor at Chicago Booth) and myself on understanding how skill is distributed across cities of different size, including countries at different stages of development (US, Brazil, China).

In short, Antonio brings to this project a very rich set of influences that extend from macro/city-level patterns of skill, the role of industrial mix on growth opportunities of firms, and micro-level evidence on growth of innovative firms in high tech industries. I think this breadth will make him a very lively contributor to conversations at the bootcamp.

Very best,

Donald R. Davis,
Ragnar Nurkse Professor of Economics and International Affairs
Columbia University