NBER Entrepreneurship Research Boot Camp
March 2012

Dear Sirs,

I am a PhD Candidate in the Department of Computational Social Science, Krasnow Institute for Advanced Study at George Mason University, with a strong background in economics. As an economist, I have been interested not only in economic policies issues, but also in finding new interdisciplinary methods that would better inform the economic research. Therefore, during the past couple of years, my research interests have been focused on asymmetric information networks and the way they lead to the emergence of atypical organizations or topologies, such as hawala networks, the stateless economies of Afghanistan and Pakistan, certain entrepreneurship forms (i.e. formation of first merchant colonies in Ancient Babylon, fashion markets, the housing market).

Currently, I am working as part of an international academia-governmental partnership team on a project focused on discovering better forecasting tools, based on social network analysis, aggregative contingency estimation, prediction markets and Bayesian networks. From the broader aspects of this multi-disciplinary research project, I am drawing the specific tools and results in order to apply them to my dissertation topic, which is focused on tracking the emergence of high-growth companies in US.

I also have a PhD, an MA and a BA in International Business and Economics from the Academy of Economic Studies in Romania and I am a member of the Romanian Society of Economics (SOREC) and the Center for Complexity Studies – UNESCO Center, Bucharest. My Master's thesis described the impact of various risk and investment rating procedures on transnational companies. My publications span from policy issues related to European Union Accession to modeling conflict and social networks and I have teaching experience in comparative economics and economies in transition to junior and senior undergraduates in US. I am currently a recipient of the Phi Beta Delta International Honor Society for scholarly achievement in international education and a past recipient of Earhart Fellowship in Economics.

My dissertation research is focused on the causes of emergence and the robust formalization of high-impact companies. I am building on the previous work professor Acs, who is a member of my committee, by using agent-based computer simulations and social network analysis. The purpose is to provide a coherent theory-model-evidence analysis and a fresh perspective on this form of entrepreneurship, that would add insights for researchers, policy makers and business people in addition to the qualitative data, econometric analysis or hands-on experience that they currently posses. This is why I believe that the research boot camp will provide an excellent environment for me to interact with people that are working in this area as well as to share my current research results.

My dissertation advisor is professor Maksim Tsvetovat and he will be providing the letter of recommendation in my behalf.

Thank you kindly,

Anamaria Berea
PhD Candidate (ABD)
Department of Computational Social Science
Krasnow Institute for Advanced Study
George Mason University
4400 University Drive
Fairfax, VA, 22030
aberea@gmu.edu
571-314-3768

GEORGE MASON UNIVERSITY

Computational Social Science

4400 University Drive
Fairfax, Virginia 22030
Phone: 703-993-1405
Fax: 703-993-9290

Dear Search Committee:

As the graduate studies director of Computational Social Science and Anamaria's PhD advisor, I am pleased to recommend Anamaria Berea for the NBER Entrepreneurship Research Boot Camp. She is a very talented and motivated young scientist, with an amazing breadth of knowledge spanning Economics, computational modeling, social network analysis and philosophy.

As Anamaria's dissertation adviser, I have been observing her growth as a scientist over last three years – and I am very impressed by the caliber of her work. She has recently defended her dissertation proposal titled "High-impact companies: Investigations Using Computational Methods". Her dissertation is a cross-cutting interdisciplinary study that builds a theoretical basis for emergence of high-impact, high-growth companies from the entrepreneurial substrate. The theory is embodied in sets of agent-based modeling based on the cutting-edge entrepreneurship research, social network analysis, and is grounded in empirical work to demonstrate validity of both the theory and the model.

Through our joint work on an ONR-funded project, Anamaria has engaged in very novel work concerning emergence of illicit economies (e.g. drug trade) and their linkages to the indigenous economic systems of Afghanistan. This work has been also galvanized Anamaria's interest in evolution of social complexity, and has (in a generalized form) shaped her approach to the theoretical basis of her dissertation.

Anamaria is an electrifying presence in any discussion, always bringing fresh ideas and energizing others. She has great communication skills; the papers and class projects she wrote in my classes have been published in a number of peer-reviewed journals, as well as presented at conferences. I also know that, as a teacher, she builds an excellent rapport with students, and the course she developed for the Department of Economics ("Emergent Markets and Economies in Transition") have been well-received.

I believe that Anamaria holds a great promise and potential as a scientist, and will be following her career eagerly through the years.

Sincerely,



Maksim Tsvetovat
Assistant Professor
Director of Graduate Studies
George Mason University
Computational Social Science

ANAMARIA BEREA

Department of Computational Social Science
Krasnow Institute of Advanced Study
George Mason University
Research Hall, 3rd Floor Suite
Fairfax, VA, 22030
Email: aberea@gmu.edu
Phone: 571-314-3768

Research Interests: Entrepreneurship, Agent-Based Modeling and Computational Economics, Social Network Analysis

Education:

PhD Candidate in Computational Social Science, dissertation: "High-Impact Companies: Investigations Using Computational Methods", Krasnow Institute for Advanced Study, George Mason University
August 2009 – August 2012 (expected)

PhD in Economics, dissertation "The Theory of International Economics and The Paradigm of Complexity Studies. Implications into the Methodology of Economics", Academy of Economic Studies, Bucharest, Romania
2004 - 2010

M.A. in International Business and Economics
Academy of Economic Studies, Bucharest, Romania
2001 - 2003

B.A. in International Business and Economics
Academy of Economic Studies, Bucharest, Romania
1997 - 2001

Academic Experience:

Graduate Research Assistant with C4I Center, George Mason University
July 2011 – present
IARPA funded project on forecasting through combinatorial prediction markets, aggregative contingency estimation and Bayesian networks

Graduate Research Assistant with Krasnow Institute for Advanced Study, Center for Social Complexity, George Mason University
Spring 2009 – May 2011
ONR funded project on modeling Irregular Warfare in AfPak region

Lecturer with Full Teaching Responsibilities – Economies in Transition, (ECON 380, Fall 2008 & Spring 2009), George Mason University

Class designed and taught to juniors, seniors and non-degree undergraduates

Graduate Research Assistant with GMU Libraries Consortium – Fall 2008
Developed Library's web portal and research resources for Economics

Publications and Conference Papers:

"Bayesian Crowds and Prediction Markets – A Match Made in Computational Heaven" (*with Charles Twardy and Dan Maxwell*), presented at 50th Annual Edwards Bayesian Conference Program, Fullerton, CA, January 2012

"Trade as A Premise for Social Complexity", *Studies in Emergent Order,* forthcoming (2012)

"Z-shocks or E-shocks? Can Tacit Knowledge explain Temporal Clusters of Innovation?", Mason Entrepreneurship Research Conference, May 2011 (with Petrik Runst)

"Semantic Networks with Heterogeneous Information Exchange" – presented at Sunbelt XXXI - INSNA conference, St. Pete's Beach, Florida, February 2011

"Network Externalities in Hawala Exchanges" – awarded an ASSYST bursary at the SCIVE 2010 workshop, Lisbon, Portugal, September 2010; *special recommendation letter from the head of counter-terrorism Kalkuta, India*

"Economic Processes and Network Dynamics in the Pashtun Tribes" – accepted for presentation at Eastern Economic Association, Philadelphia, February 2010

"Ecology in Agent Based Modeling of Conflict", with Maksim Tsvetovat, Claudio Cioffi-Revilla and Armando Geller – accepted for presentation at HB-CMI 2009 and ESSA 2009, Conference Proceedings, The 6th Conference of the European Social Simulation Association, edited by Bruce Edmonds and Nigel Gilbert, ISBN: 1844690172

"On Culturally Contextualized Models of Conflict: An Evidence-Driven Perspective", with Maksim Tsvetovat and Armando Geller – accepted for presentation at ESSA 2009, Conference Proceedings, The 6th Conference of the European Social Simulation Association, edited by Bruce Edmonds and Nigel Gilbert, ISBN: 1844690172

"An Agent Based Model of the Housing Market: HousingMarketRev8.3.nlogo", with Matt McMahon and Hoda Osman – accepted for presentation at NAACSOS 2009

"Modeling Kinship Structures in Pakistan's Rural North-West Frontier Province", with Maksim Tsvetovat, Claudio Cioffi-Revilla, Armando Geller,

Joseph Harrison and Hoda Osman – accepted for presentation at NAACSOS 2009

“From Knowledge Based Economy to Knowledge Based Society”, with Alina Draghici – published in "The Future of Europe: Challenges and Opportunities", 2006, ISBN: 978-973-594-931-0

“Aderarea la Uniunea Europeana a primelor zece – consideratii privind impactul la nivelul Uniunii Europene si al Romaniei” – Oeconomica, no.1/2005, EconPapers, ISSN: 1223 0685

Foreign Languages: English, Romanian and French (all fluently)

Computer Programming: Java, R, UCINET, Python, Netica, MASON, HTML

Awards and Honors

- Phi Beta Delta International Honor Society for scholarly achievement in international education, 2011
- ASSYST bursary for the paper “Network Externalities in Hawala Exchanges” and participation at the SCIVE workshop, 2010
- Richard Seth Staley Educational Foundation scholarship for the Advanced Austrian Economics Seminar, Foundation for Economic Education, 2009
- Earhart Fellow in Economics, 2007-2008
- Calihan Grant from Acton Institute, 2007
- Hayek Fund for Scholars, 2005

Business Experience (Selected)

Data Analyst, Women for Women International, Washington DC
June 2008 – August 2008

Account Manager, Romania Insight, Bucharest, Romania
October 2006 – August 2007

Consultant, Euromonitor - London, UK
March 2007 – March 2007

Researcher, Center for Complexity Studies, Bucharest, Romania
January 2006 – June 2006

Researcher and Junior Consultant, Antal International, Bucharest, Romania
November 2005 – February 2006

Research Statement for NBER Boot Camp

Anamaria Berea

My primary research interests are entrepreneurship and economic growth, social network analysis, agent-based economics and social complexity. My dissertation research concerns growing high-impact companies from the bottom-up and evaluating the causes of their successful growth in employment and revenue. My approach draws from the evidence provided by econometric and statistical research, but employs the new, interdisciplinary, methodological and theoretical tools developed for the study of complex phenomena, such as non-linear dynamics, evolutionary computation, network analysis, emergent phenomena, power law analysis and scaling, social geospatial modeling, complexity theory and multi-agent systems.

Research Philosophy and Methodology

As an interdisciplinary student of social complex phenomena with a background in economics, my research interests have been broadly focused on asymmetric information networks and the way they lead to the emergence of atypical organizations or topologies, such as hawala networks, the stateless tribes of Afghanistan and Pakistan, certain entrepreneurial organizations (i.e. formation of first merchant colonies in Ancient Babylon, fashion markets, the housing market).

I started my academic career with a broader research focus on how the methodology and philosophy of science influences the future economics agenda. I have been fascinated with the debates about the directions of research economics and complexity theory will take and the way the interdisciplinary approach in science will open the possibilities frontier of scholarly study. This resulted in a successful first PhD dissertation, where I discussed comparatively different schools of economics and different approaches of complexity science and I argued for more dialogue and interdisciplinary approach into studying economic phenomena, such as the housing crisis of 2007. The research for this dissertation made me aware of the strengths and weaknesses of different methodologies and epistemologies employed in social science as well as of the history of the social science disciplines.

My publications span from policy issues related to European Union Accession to modeling conflict and social networks and I have teaching experience in comparative economics and economies in transition to junior and senior undergraduates in US. Simultaneously to my early academic experience, I have gained 5 years of business experience in an international environment, where I worked mostly for very young companies that were also their market leaders in Romania, a transition economy that experienced a boom of new markets and industries during the first years of the 21st century. This early experience has proven to be extremely valuable for my current academic focus on the emergence of entrepreneurship, atypical organizations and transition processes.

Current Challenges and Specific Approaches

Later on, I have narrowed my research focus to applying specific computational social science theories and methods to current real world phenomena, such as the remittances and informal transfers of money through hawala networks or the role of ecology in irregular, atypical warfare and conflicts. The research and paper I had developed for hawala networks won an Assyst Bursary Award from ESSA (European Social Simulation Association), as well as an official recommendation letter from the Head of Counter-Terrorism in Calcutta, India. Also, as part of this project, I co-authored paper on the ecology and economics of conflicts.

Currently, I am working on applying social network analysis, Bayesian networks and macroeconomics to aggregative contingency estimation markets in order to forecast world events. I am also working on computational models of skills and team formation for entrepreneurship research. From the broader aspects of this multi-disciplinary research project, I am drawing the specific tools and results in order to apply them to my dissertation topic, which is focused on tracking the emergence of entrepreneurship and high-impact companies in US.

The success of certain companies relative to others is still a very important and highly researched area in business, entrepreneurship and economics. But, apart from the current employed research methods, mostly focused on case studies, econometric analysis, qualitative surveys and quantitative statistics, I am bringing new interdisciplinary research tools base on computational methods and the experience I gained from researching transitioning processes and economic conflicts. One of the fundamental phenomena for the success of either irregular conflicts, transition institutions or high-impact companies is the exchange of skills and team formation and my current dissertation addresses how entrepreneurial teams contribute to the growth of a business.

Future Research

As further research, I want to build and expand from the current results of my entrepreneurship research (microeconomic level) to address the broader, macroeconomic problems of economic growth and development in countries where irregular conflicts are a norm. Thus, I would apply the experience from these past successes to draw a research framework for entrepreneurship and business growth in slow developing areas from US (mezo-economic level) and in countries that are transitioning from conflict economies to developing countries (macroeconomic level). My findings on the co-evolution of employment and revenue growth at the firm level can potentially be expanded to inform the entrepreneurial and economic growth policies needed for the 21st century developing countries.



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Academic Transcript

G00524383 Anamaria Berea
Nov 22, 2011 11:05 am

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

Institution Credit Transcript Totals Courses in Progress

Transcript Data
STUDENT INFORMATION

Name : Anamaria Berea

Curriculum Information

Current Program
Doctor of Philosophy

College: Krasnow Inst. for Advncd Study

Major: Computational Social Science

This is NOT an Official Transcript

INSTITUTION CREDIT -Top-

Term : Fall 2007

Academic Standing: Good Standing

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	R
ECON	630	GR	Mathematical Econ I	B	3.000	9.00	
ECON	715	GR	Macroeconomic Theory I	B	3.000	9.00	
ECON	811	GR	Microeconomic Theory I	B	3.000	9.00	

Term Totals (Graduate)

	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term:	9.000	9.000	9.000	9.000	27.00	3.00
Cumulative:	9.000	9.000	9.000	9.000	27.00	3.00

****Unofficial Transcript****

Term : Spring 2008

Academic Standing: Good Standing

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	R
ECON	637	GR	Econometrics I	B+	3.000	9.99	
ECON	812	GR	Microeconomic Theory II	B-	3.000	8.01	
ECON	816	GR	Macroeconomic Theory II	B	3.000	9.00	

Term Totals (Graduate)

	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term:	9.000	9.000	9.000	9.000	27.00	3.00
Cumulative:	18.000	18.000	18.000	18.000	54.00	3.00

****Unofficial Transcript****

Term : Summer 2008

Academic Standing: Good Standing

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	R
ZREG	115	GR	Cooperative Educ: Part-Time	REG	0.000	0.00	

Term Totals (Graduate)

	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term:	0.000	0.000	0.000	0.000	0.00	0.00
Cumulative:	18.000	18.000	18.000	18.000	54.00	3.00

****Unofficial Transcript****

Term : Fall 2008

Academic Standing: Good Standing

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	R
CSS	600	GR	Intr Computatnl Social Science	A	3.000	12.00	
ECON	852	GR	Public Choice	A+	3.000	12.00	
ECON	880	GR	Aust Thry Market Proc I	A	3.000	12.00	

Term Totals (Graduate)

	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term:	9.000	9.000	9.000	9.000	36.00	4.00
Cumulative:	27.000	27.000	27.000	27.000	90.00	3.33

****Unofficial Transcript****

Term : Spring 2009

Term Comments: Resigned from PhD Economics program on September 11, 2009

Academic Standing: Good Standing

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	R
ECON	854	GR	Public Choice II	A	3.000	12.00	
ECON	881	GR	Austrian Theory Market Proc II	A	3.000	12.00	
ECON	895	GR	Comp Analy of Soc Complexity	A	3.000	12.00	

Term Totals (Graduate)

	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term:	9.000	9.000	9.000	9.000	36.00	4.00
Cumulative:	36.000	36.000	36.000	36.000	126.00	3.50

****Unofficial Transcript****

Term : Fall 2009

Academic Standing: Good Standing

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	R
CSI	773	GR	Stat Graph/Data Explortn	A	3.000	12.00	
CSS	605	GR	Obj-Oriented Modeling Soc Sci	A-	3.000	11.01	
CSS	620	GR	Origins of Social Complexity	A-	3.000	11.01	

Term Totals (Graduate)

	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:	45.000	45.000	45.000	45.000	160.02	3.56

****Unofficial Transcript****

Term : Spring 2010

Academic Standing: Good Standing

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	R
CSS	625	GR	Complexity Theory Soc Sciences	A	3.000	12.00	
CSS	692	GR	Social Network Analysis	A	3.000	12.00	

Term Totals (Graduate)

	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term:	6.000	6.000	6.000	6.000	24.00	4.00

Cumulative:	51.000	51.000	51.000	51.000	184.02	3.61

****Unofficial Transcript****

Term : Fall 2010

Academic Standing: Good Standing

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	R
CSS	998	GR	Doctoral Dissertation Proposal	S	6.000	0.00	

Term Totals (Graduate)

	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term:	6.000	6.000	6.000	0.000	0.00	0.00
Cumulative:	57.000	57.000	57.000	51.000	184.02	3.61

****Unofficial Transcript****

Term : Spring 2011

Academic Standing: Good Standing

Subject	Course	Level	Title	Grade	Credit Hours	Quality Points	R
CSS	998	GR	Doctoral Dissertation Proposal	S	6.000	0.00	

Term Totals (Graduate)

	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Current Term:	6.000	6.000	6.000	0.000	0.00	0.00
Cumulative:	63.000	63.000	63.000	51.000	184.02	3.61

****Unofficial Transcript****

TRANSCRIPT TOTALS (GRADUATE) -Top-

	Attempt Hours	Passed Hours	Earned Hours	GPA Hours	Quality Points	GPA
Total Institution:	63.000	63.000	63.000	51.000	184.02	3.61
Total Transfer:	0.000	0.000	0.000	0.000	0.00	0.00
Overall:	63.000	63.000	63.000	51.000	184.02	3.61

****Unofficial Transcript****

COURSES IN PROGRESS -Top-

Fall 2011

Subject	Course	Level	Title	Credit Hours

CSS	999	GR	Doctoral Dissertation	6.000

RELEASE: 8.1