KAREN SMITH

656-A South Street, Waltham, MA 02453 | 781-250-9791 | klsmith@brandeis.edu

December 7th 2019

Professor Yuriy Gorodnichenko
Research Associate
The National Bureau of Economic Research (NBER)
1050 Massachusetts Avenue
Cambridge, MA 02138

Dear Professor Gorodnichenko:

I am writing to express my interest in participating in the upcoming Behavioral Macroeconomics Research Boot Camp hosted by the NBER on March 12th 2020. As a second year student currently enrolled in the Ph.D. International Economics and Finance Program at the Brandeis International Business School (IBS), I intend on pursuing directed research on the macroeconomic dynamics of the Expectations Formation (EF) process in the context of emerging and developing economies, with a focus on the Latin American and Caribbean (LAC) Region.

While recent progress in reconciling departures from Full-Information Rational Expectations (FIRE) has led to a renewed interest in modeling the EF process, there have been few in-depth applications of these models and empirical results, in developing economies. What is unique about my future research agenda is that I intend to employ a highly contextualized approach to modeling the EF process, taking into consideration the commodity driven nature of the region and its reliance on global economic growth prospects. My future research agenda will also focus on assessing the impact of prevailing macroeconomic conditions of the region's major trading partners such as the United States, on the expectations formation process.

As an international student from Trinidad and Tobago, participation in this workshop will allow me to combine the requisite skills in behavioral macroeconomics with my knowledge of the region to meaningfully contribute to the growing literature and more importantly, to the betterment of the lives of others.

While I am relatively new to the behavioral macroeconomics research arena, I am deeply impassioned about focusing my research efforts to explore the implications of this line of research in the context of developing economies. If given the opportunity to participate in this workshop, I will undoubtedly be strongly positioned to become a leading contributor in this field. Thank you in advance for your consideration of this application.

Sincerely,

Karen Smith

Ph.D. Program Director: Professor Nidhiya Menon
Brandeis International Business School, 415 South Street, Waltham MA, 02453
Email: nmenon@brandeis.edu Phone: 781-736-2230

KAREN SMITH

656-A South Street, Waltham, MA 02453 | 781-250-9791 | klsmith@brandeis.edu

EDUCATION

Brandeis University International Business School — **Waltham, MA**
Ph.D. International Economics and Finance — 2018 –
Relevant Ph.D. Coursework:

Advanced Microeconomics I and II	Advanced Macroeconomics I and II
Advanced Econometrics I and II	Applied Econometrics with R
Advanced Asset Pricing	Topics in Corporate Finance (Current Semester)
Applied Methods I (Current Semester)	Applied Methods II (Spring 2020)
International Macroeconomics (Spring 2020)	Computer Simulation and Risk Assessment (Spring 2020)

Masters in Business Administration (MBA), with Distinction — 06/2011

University of the West Indies — **St. Augustine, Trinidad and Tobago**
Bachelor of Science (B.Sc.), Management Studies and Finance, with First Class Honors — 07/2004

PROFESSIONAL QUALIFICATIONS

CFA Institute — **Charlottesville, VA**
Chartered Financial Analyst (CFA) — 08/2016

EXPERIENCE

Brandeis University International Business School — **Waltham, MA**
Graduate Teaching Assistant
ECON 312A: Applied Econometrics with R — 08/2019-12/2019
Adjunct Professor — 06/2019-08/2019
ECON 202A: Applied International Macroeconomics
Graduate Research Assistant — 08/2018-05/2019
Professor Daniel Bergstresser

University of the West Indies — **St. Augustine, Trinidad and Tobago**
Part-time Lecturer — 09/2012 – 05/2018
MGMT 3055: Applied Topics in Corporate Finance
MGMT 3059: International Financial Management

Infinity Financial Engineering Ltd. — **Port of Spain, Trinidad and Tobago**
Portfolio Manager — 10/2011 – 05/2018
Actively managed a global investment portfolio for an institutional client, approximately $200 million AUM

Clico Trust Corporation — **Port of Spain, Trinidad and Tobago**
Director — 01/2013 – 01/2017
Appointed by the Minister of Finance to provide oversight over close-ended mutual fund, approximately $100 million AUM

AWARDS AND HONORS

2019 Rosenberg Institute of Global Finance Summer Research Award, Brandeis University
2011 Fulbright Scholar

SKILLS

Technical Skills: R, Matlab, STATA, Bloomberg
Languages: Spanish (Intermediate)

Expectations Formation: An Application in Emerging and Developing Economies

Submitted by: Karen Smith, Brandeis International Business School

"Expectations matter[1]." These are the introductory words of one of the first set of papers I have ever read on behavioral macroeconomics, as a second-year Ph.D. student in International Economics and Finance, at the Brandeis International Business School. These words have resounded with me because they succinctly capture the powerful role of the individual in the macro-economy, which to me is the very essence of the study of behavioral macroeconomics.

Broadly speaking, I am interested in examining recently developed theoretical and empirical insight into modeling the expectations formation process, utilizing models that incorporate information frictions, to account for deviations from Full Information Rational Expectations (FIRE). More specifically, as an international student from Trinidad and Tobago, my future research agenda lies in assessing the role, challenges and impact of socio-economic differences on the expectations formation process in developing and emerging economies, particularly within the Latin American and Caribbean (LAC) region.

While economies within this region have emerged from a common colonial past, with favorable factor endowments, they have been plagued by persistent inflation and significant income inequality and not surprisingly, display a significant degree of heterogeneity both in terms of growth and development. Further, as global commodity exporters, economies within the LAC region remain particularly vulnerable to swings in global growth. As a recent report by the International Monetary Fund (IMF) highlighted, *"External factors remain a headwind to economic prospects in the region, led by sluggish global growth, subdued commodity prices, and volatile capital flows"*[2].

Through my research, I would like to apply the two main models which test for departures from FIRE, that is, the *sticky-information model* put forward by Mankiw and Reis (2002) and the *noisy information or rational inattention model,* put forward by Woodford (2002), Sims (2003) and Maćkowiak and Wiederholt (2009), using regional data from Consensus Economics or another reputable economic forecasting firm.

What is unique about my study is that I will apply the novel approach of Coibion and Gorodnichenko (CG) (2015) on data for most economies within the LAC region and in so doing attempt to ascribe direct economic meaning to departures from FIRE by quantifying these deviations using a measure of information rigidity. Similar to the approach of Bordalo, Gennaioli, Ma and Shleifer (2019) I also plan to include key financial variables and assess the CG model at both the individual and consensus levels.

---

[1] **Coibion,Oliver, and Yuryi Gorodnichenko**. 2015. "Informational Rigidity and the Expectations Formation Process: A Simple Framework and New Facts." *The American Economic Review*, vol. 105(8), pages 2644-2678, August.

[2] **International Monetary Fund.** 2019. "Regional Economic Outlook, Western Hemisphere: Stunted by Uncertainty." Retrieved from https://www.imf.org/en/Publications/REO/WH/Issues/2019/10/22/wreo1019#Outlook%20for%20Latin%20America%20and%20the%20Caribbean:%20Stunted%20by%20Uncertainty

Another key contribution of my future research agenda would be to incorporate other measures, such as the Merchandise Trade Balance, which capture the role of commodity trade flows on the expectations formation process. Since these economies are commodity driven I believe that this approach may reveal critical aspects of the expectations formation process within the LAC region as a whole, while capturing the heterogeneity across countries given the vast differences in their exports.

Finally, given the interlinkage of these economies with the growth rate of their major trading partners, a key aspect of my future research agenda would be to focus on assessing the possible impact of major macroeconomic developments within developed economies such as the United States, on the expectations formation process of agents in the LAC region. Such empirical findings would also have significant implications for policy formation within the region.

To my knowledge, this integrated and contextualized approach using the novel models identified to research the expectations formation process within the LAC region has not yet been undertaken. Further, it is likely that, these models, when applied to the region would yield significantly dissimilar results compared to developed economies and in so doing spur research into yet unexplored aspects of the expectations formation process.

For example, Frache and Lluberas (2019)[3], explore the inflation expectations formation process among firms in Uruguay, employing many of the approaches, and models discussed above. Their findings already confirm that the standard models do not precisely fit to the data in Uruguay, *"in light of our results, it seems that we need a hybrid model between the sticky and noisy information models in order to describe our empirical facts"*.

In this regard, my motivation for participating in this Behavioral Macroeconomics workshop is to get firsthand knowledge and insight into the key aspects of the expectations formation process and to integrate this knowledge to execute my future research agenda. In so doing I will be able to more effectively contribute to the growing literature on modeling the expectations formation process, with the ultimate aim of delivering tangible macroeconomic insight to improve the lives of many.

Specifically, I hope to gain additional perspective on the reasoning behind the development of existing models, the choices of econometric approaches to modeling, and some exposure to the relevant psychological insight leading the revolution in behavioral macroeconomics.

As someone who is committed and deeply impassioned about uncovering applications of the expectations formation process, particularly in the context of developing economies, I am excited by the opportunity this workshop presents. If given the opportunity to participate, I believe that in years to come I myself will become a leading contributor to the field and a source of motivation to others to pursue research in this direction.

I thank you in advance for your consideration of this application.

---

[3] **Frache, Serafin, and Rodrigo Lluberas**. 2019. "New information and inflation expectations among firms." BIS Working Papers 781, *Bank for International Settlements*

Brandeis University

Nidhiya Menon
Professor of Economics

Department of Economics
Mailstop 021
P.O. Box 549110
Waltham, MA 02454-9110 USA

781-736-2230 Tel
781-736-2269 Fax
nmenon@brandeis.edu
http://www.brandeis.edu/~nmenon/

December 2, 2019

Recommendation for Karen Smith

I write to support Karen Smith's application for the NBER Behavioral Macroeconomics Research Boot Camp to be held on March 12, 2020. Karen is a second year student in our PhD program having successfully completed the qualifying exams last year, and she is making good progress in terms of coursework this year towards the program's field requirements. Her interests broadly are in Behavioral Macroeconomics. This has been honed by her previous education and importantly, by her past work experience in her home country of Trinidad and Tobago. I have known Karen since July of this year when I took over as PhD Director.

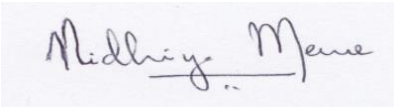
Karen is interested in applying research on "the Expectations Formation Process" in emerging and developing countries, with a focus on the Latin American and Caribbean Regions. As I noted above, she is from Trinidad and Tobago, and thus understands the challenges of the region exceptionally well. From our conversations, she is especially interested in applying this lens of Behavioral Economics to understanding (and improving) retirement planning in her home nation; a huge value added given lack of research and expertise on this topic. Understandably, this issue has the potential to touch many lives. Being able to execute high quality research effectively is thus critical. This is her motivation in applying for this NBER Boot Camp.

In addition to the above, there is great value added to her from being able to learn from this Camp as next year, she is required to write a third year paper on a research topic of her choice – an opportunity to kick-start her dissertation and learn the nuts and bolts of conducting research and writing effectively about it. The tools that she learns from this Camp will be of great value to her in producing a top-notch paper that will add momentum

to the research she conducts as part of her dissertation. Further, given our constraints, we do not offer a Behavioral Economics class here at the Brandeis International Business School. This Boot Camp may be thus one of her few opportunities to gain exposure to where the field currently is and to be taught by leading experts.

I believe that Karen is well suited to this Camp. She is committed to the research agenda she outlines in her proposal and what I discuss above. There is next to nothing when it comes to this area in her region of interest and so I believe that equipping her with the "tools of the trade" on this topic will be especially impactful in the future. From my knowledge of her, I am confident that she has the ability, discipline and maturity to do well. Therefore, I am happy to recommend her without reservation for this Boot Camp. Thank you for considering her application.

Sincerely,



Nidhiya Menon
Professor of Economics & PhD Director

Brandeis University
INTERNATIONAL BUSINESS SCHOOL

December 2, 2019

Dear Selection Committee:

I am writing to you to strongly recommend Ms. Karen Smith to be accepted as a participant in the NBER's Behavioral Macro Research Bootcamp. I was the PhD Director when Karen was admitted to the PhD program at Brandeis International Business School, and was also her teacher in her first year PhD Micro Theory course. I have followed Karen's progress carefully over the past year and a half.

Karen is an unusual PhD candidate. When she applied to our program, we (the school) knew her as an exceptionally gifted MBA student who had graduated a number of years earlier from Brandeis and had gone back to her home country to work. After working in the finance area, she accepted a position at the university in Trinidad and Tobago and began teaching. It was after this experience that she decided she wanted to pursue a PhD so that she could both teach and do research. As you are well aware, there is a huge gap that exists between an MBA and a PhD – and Karen did not have the requisite background in math or economics to jump into a PhD program. Understanding that this might be the case, Karen came to the business school and asked me what she needed to do to make herself a viable candidate for a PhD program. When I first met Karen and spoke to her about the courses and skills she would need to get under control before she could even entertain thinking about auditing a PhD class, I was skeptical. Although she was articulate and quite obviously an adult, I wasn't sure that she would be able to immerse herself in basic math and economics courses to learn what she needed to. I am very pleased to report that I was wrong. Karen has worked very hard and has more than survived her first year and a half as a PhD student, she has truly thrived.

If the purpose of this workshop is to provide promising graduate students the opportunity to be exposed to behavioral macro and to seed research ideas, I can assure you that Karen would take full advantage of this opportunity. She is mature, hardworking, and thoughtful (as well as incredibly articulate -- you don't often see such strong communicators in our field). Her hope is to take her knowledge and to go home to Trinidad and Tobago and to help make her country stronger – and she's exactly the kind of person who can do that. I am confident that Karen would be an active participant in the workshop and would benefit greatly from the opportunity.

I enthusiastically support Karen's application to your workshop and hope that you'll give this opportunity. She will not disappoint you. If you have any questions or concerns, please feel free to contact me.

Sincerely yours,

Linda TM Bui /s/ electronic

Linda T.M. Bui
Associate Dean of
Academic Programs
Director, PhD Program

415 South Street, MS 032
Waltham, MA 02453-2728

781-736-4848
781-736-2669 *fax*
ltbui@brandeis.edu
www.brandeis.edu/global