Berkeley, March 17th 2021

Dear selection committee

This is my cover letter for the application to the 2021 NBER Entrepreneurship research boot camp.

Name: Roberto Hsu Rocha

3rd year PhD student in economics at UC Berkeley

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Primary Advisor: David Card

Essay in the application to the NBER Entrepreneurship Boot Camp: Roberto Hsu Rocha

Hi, my name is Roberto Rocha, I am originally from Brazil and currently I am a 3rd year PhD student in the economics department at Berkeley doing research on the relationship between entrepreneurship and labor market outcomes in developing countries. At this moment, I have finished all PhD level first year and field courses and I am currently working on my dissertation projects. In my second year, I took classes in both labor and development economics completing all courses for both sequences, but never took specific classes on entrepreneurship economics. As my research projects are becoming more related to entrepreneurship, I believe the NBER boot camp is an ideal opportunity for me to become more familiarized with research on this field, and to interact with other researchers in this area.

During my ongoing third year in the program, I started focusing on my dissertation projects. Currently I have two projects that are directly involved with entrepreneurship economics. In my main project, I study how racial differentials in entrepreneurship affect labor market outcomes differentials by race of individuals in Brazil. I depart from a motivating fact that in Brazil a white individual is two times more likely to be an entrepreneur than a nonwhite person is. This is not explained by any observed factor such as education, age or geography. My research question is: Can these discrepancies on white vs nonwhite entrepreneurship affect labor market outcomes differentials by race?

For this project, I combine different public and restricted access data to create a comprehensive data set l that contains information on race, gender and age of formal firm owners in Brazil. I am able to link this to the matched employer-employee data set on the universe of formal workers in the country that has detailed labor market outcomes and observed individual level characteristics including the race of the individual.

My analysis so far has several new findings that I hope can contribute both to the literature on racial differences in entrepreneurship and to the literature on racial differences in labor market outcomes making a much needed bridge between both literatures. I first find that firms with nonwhite owners have a significantly higher share of nonwhite workers. This result is not explained by any observed characteristics and still show up when controlling for very granular level fixed effects such as municipality and a 7-digit industry code. More surprisingly though, in my second set of results I find that nonwhite workers have higher wages if they are at firms with nonwhite owners than if they are at firms without nonwhite owners. This result is also robust to a series of controls including firm fixed effects. Sorting and wage differentials by race of the

owner are increasing in education, suggesting a kind of glass ceiling story where nonwhite workers are less likely to be hired at high level occupations in a firm without nonwhite owners.

I am currently starting to think about a model to rationalize my results and draw some policy implications. In my current idea, baseline differences in capital stock by race can amplify racial gaps in labor market outcomes and also generate TFP losses due to misallocation of talent. Potential spillovers might create a type of multiple equilibria scenario where policies that incentivize nonwhite entrepreneurs and nonwhite owned firms can have large returns both in diminishing labor market racial gaps and in better allocating talent and capital in the economy.

My second project related to entrepreneurship targets a more traditional question in development economics. How cost of being formal affect informality of microentrepreneurs? And what are their consequences for development and growth? To answer these questions I study a large and unique policy in Brazil that reduced taxes and virtually eliminated registration costs for microentrepreneurs. My evidence suggests that costs of formality are a barrier to formalization, but reducing these costs does not necessarily generate growth for targeted microentrepreneurs. This evidence goes against a large strand of the literature that points to cost of formality as a barrier for economic growth in developing countries.

Overall, I strongly believe in the importance of studying entrepreneurship to both understand labor market dynamics and economic development. With respect to labor outcomes, I believe that with more research pointing out to firm dynamics as an important determinant of employment and wage distributions, understanding what type of entrepreneurship and firm owners generates good jobs is extremely important. Regarding development economics, I believe that selection into entrepreneurship is also extremely important and creating good institutional settings might generate a better allocation of talent and economic growth.

Roberto Hsu Rocha

Personal Data

Place and Date of Birth:	São Paulo, Brazil | 28 august 1993
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Education

Jul/2018 -	PhD student in Economics **University of California, Berkeley**
Jan/2016 - Apr/2018	M.A. in Economics, **Pontifical Catholic University of Rio de Janeiro**, PUC-Rio, Rio de Janeiro Thesis: Wage Inequality, Firms and Informality: Theory and Evidence from Brazil Advisor: Gabriel Ulyssea
2011 - 2015	B.A. in Economics **Faculdade de Economia e Admnistração - USP**, FEA - USP, São Paulo Thesis: Local Effects of Higher Education on Brazillian Municipalities from 2000 to 2010 Advisor: Naercio Menezes Filho

Additional Academic Experience

Jan/2021 -	Teaching Assistant *UC Berkeley* ECON 172 - Prof. Edward Miguel
Jan/2020 - Dec/2020	Research Assistant *UC Berkeley* Prof. Claire Montialoux & Prof. François Gerard
Aug/2019 - Dec/2019	Teaching Assistant *UC Berkeley* ECON 100A - Microeconomics
Jun/2019 - Aug/2017	Research Assistant *UC Berkeley* Prof. Frederico Finan
Mar/2017 - Dez/2017	Research Assistant *Pontifical Catholic University of Rio de Janeiro* Prof. Gustavo Gonzaga (PhD, UC Berkeley 1993) Prof. Claudio Ferraz (PhD, UC Berkeley 2006)
April/2014 - Dec/2015	Research Assistant *Center of Public Policies - INSPER* Prof. Naercio Menezes Filho (PhD, UCL 1997)

Scholarships and Prizes

Jan 2021	Labor Science Initiative Grant *Opportunity Lab, UC Berkeley*
Jul 2019 -June 2023	Department Fellowhship *Department of Economics, UC Berkeley*
Jul 2018 -June 2019	First Year Fellowhship *Department of Economics, UC Berkeley*
Dez 2018	IPEA/Roberto Campos Prize for Excellence in Research *Awarded to the Best Paper Published in IPEA Journal's in the previous year.*
June 2017	Prize of Best Summer Paper by a Master Student - PUC-Rio
Mar. 2017 - Mar. 2018	Scholarship for M.A. students BOLSISTA NOTA 10 - FAPERJ *Awarded to the two best GPA's of the class at PUC-Rio*
Mar. 2016 - Mar. 2017	Scholarship for M.A. students from CAPES
June 2013 - Dec. 2013	Academic Merit Scholarship for International Internship - USP

Working Paper

Registration Costs, Taxes and Formalization of Microentrepreneurs: Evidence From Brazil
with, Alison Farias

Work in Progess

Does the Firm Owner's identity matter? White vs Nonwhite entrepreneurship and labor market outcomes of workers
with, Marina Dias

Labor Supply responses to Deaths of Family Members in the presence of Survivors' Pensions

Publications in Portuguese

The relations between Higher Education and Labor and Income in Brazilian Municipalities
with, Naercio Menezes Filho, Bruno Komatsu and Alison Oliveira
(2017) *Revista Pesquisa e Planejamento Econômico - PPE-IPEA*
IPEA/Roberto Campos Prize for Excellence in Research.
Original Title: *A relação entre o ensino superior público e privado e a renda e emprego nos municípios brasileiros*

Evaluating the Impact of Educational Policies in Sobral
with, Naercio Menezes Filho and Bruno Komatsu
(2018) *Revista Economia Aplicada*
Original Title: *Avaliando o Impacto das Políticas Educacionais em Sobral*

PhD level Courses

1st year PhD sequence at UC Berkeley: 2x Semesters of Macroeconomics, Econ Theory and Econometrics
2nd Year PhD sequence at UC Berkeley: Full sequences of Development and Labor Economics

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March 28, 2021

Dear Colleagues:

I am very pleased to write in support of the application by Roberto Rocha for the NBER Entrepreneurship Bootcamp. Roberto is a third year PhD student at Berkeley Economics: I am serving as his main advisor.

Roberto is a really creative and technically gifted student who is very interested in different aspects of entrepreneurship. In one of his papers he using very rich longitudinal data on workers, merged with information on the race of company owners, to study the effects of nonwhite owned firms on the employment opportunities and wages of nonwhite workers in Brazil. I give him a huge amount of credit for realizing that one of the administrative data sets on firm owners actually codes race; and for the huge amount of work he has done to merge these data with the REIS, the tax-based longitudinal worker-firm data set that is widely used to study worker mobility patterns and earnings outcomes in Brazil. This will be an important addition to the racial wage gap literature.

In another project, Roberto is looking into the transitions between spells as a worker and spells as an entrepreneur. Such transitions are rare, and the size and comprehensive coverage of the REIS data set, as well as the detailed information it provides for people who are employed as wage and salary earners (such as education, occupation, hours and earnings) will allow him to make important contributions to this area too.

Roberto is, in my opinion, the top student doing empirical micro research in his Berkeley cohort. He is very engaged with research, and is a voracious consumer of the economics literature. He is a friendly and outgoing person who will definitely add a lot to the workshop. Frankly, I cannot think of a student I have worked with in many years who is a better match for the Entrepreneurship Bootcamp, and I really hope you can give him a slot. I guarantee that you will not be disappointed.

Sincerely,



David Card, Class of 1950 Professor