Online Appendix

We sent out our call for survey invitations through list serves and social media of The Committee on the Status of Minority Groups in the Economics Profession, the American Society of Hispanic Economists and the National Economic Association. Of course, these interest groups reach graduate students and practicing economists. Because we also wanted to reach those who at one time had an interest in economics but decided against it, we also targeted by e-mail former AEA Summer Program attendants and program applicants who did not attend. (These groups were targeted for a survey designed to measure the impact of the AEA Summer Program (Becker et. al 2016)). As the call (below) makes clear we were especially interested in hearing from the disaffected and those who had left economics completely, groups that we presumed would be harder to reach. We asked invitation recipients to forward the invitation accordingly. The survey portal was open from July 16, 2019 until September 17, 2019.

112 people began our survey. We could determine that 75 identified as Black, Latino or Native American and had considered an economics career so were therefore eligible. 67 of 75 completed the most important question and are therefore in the \textit{miq} sample. A partially non-overlapping 66 of the 75 indicated that they were willing to be interviewed and provided an e-mail address. We attempted to interview 55 of the 66 (39/50 non-disrupted and 16/16 disrupted) who were willing, privileging those who were disrupted and/or had intriguing responses to the \textit{miq}. We succeeded in interviewing 42, 29 of 39 non-disrupted and 13 of 16 disrupted. We were unable to interview individuals who did not reply to our original or subsequent emails. Interviews took place over Skype or Zoom between July 25 and September 30, 2019.

The three interviewers all identified as underrepresented minorities but had no connection to economics. All were involved with academia. We selected on these characteristics deliberately to encourage respondents to speak more freely. All interviewers were female. Interviewers met weekly with one of the PIs to maintain consistency.

We created a list of codes to apply to sections of text based on initial hypotheses. As is common in qualitative research, we added additional codes as the data presented themselves in unanticipated ways. Each transcript was coded twice, the second time to check for consistency and to reassess in light of new codes. The \textit{miq} was coded using the same scheme. Coders met regularly with one of the PIs to check for cross-coder and internal consistency.

Our data for analysis included the coded excerpts and the survey data.

The protocols for the survey and interview and the correspondence we sent to participants are below. They are followed by the final coding scheme.

\textsuperscript{39} In addition, a person in the practice interview sample asked for the link for forwarding and one of the PIs sent the link directly to a \textit{disrupted} individual.

\textsuperscript{40} Assuming that no individual started the survey more than once.

\textsuperscript{41} One respondent did not answer the race question. We interviewed her by mistake and in the interview she indicated her racial identity.

\textsuperscript{42} In one case we received a response that we had the wrong email address.

\textsuperscript{43} All three identified as Black; one also identified as Latinx.

\textsuperscript{44} Two are graduate students in psychology and one is a Student Activities Administrator at a university.

\textsuperscript{45} In total we had three coders, with no more than two at a time. But availability was such that one coder did the vast majority of the initial coding and all of the recoding, while still meeting with the PI to check for consistency.
Survey Invitation

Looking for Participants from Underrepresented Minority Groups for Research on the Factors that Help and Hinder Minorities’ Careers in Economics

Are you Black, Latino/a or Native American? Do you, or did you hope to, have a career in economics? We are looking to learn more about the factors and events that supported, hindered, or disrupted the career trajectories of underrepresented minorities in economics.

We want to hear about help and hindrances at all career stages, even if you no longer identify as an economist. Did you decide not to start an economics PhD program, or did you start but leave without your degree? Did you finish your degree but then were unable to land a job that made use of your doctorate? Did you land a job in academia, government or industry after your PhD but are now not in a position that fully uses your training and skill in economics? Did you have an academic job but then leave the academic track? Are you an economist with an established career? If any of these apply and you are Black, Latinx, or Native American, we want to hear from you about the factors that made it easier or harder for you to attain your initial career goals in economics. Interviewers will come from outside of the field of economics. Your responses will be held in confidence. If you are interested, please click here to complete a short screening questionnaire.

We appreciate your forwarding this communication to others who are potentially interested in participating.

Survey

Yale University

1. Investigators: Amanda Bayer, Gary Hoover and Ebonya Washington
   Contact Information: ebonya.washington@yale.edu.

   Amanda Bayer, Swarthmore College, Gary Hoover, University of Oklahoma and Ebonya Washington, Yale University are conducting a study of the factors that advance or hinder minorities’ careers (or potential careers) in economics. Participation in this study will involve a 10-minute written screening survey, which you can do now or at your convenience, and then a one-hour open ended interview, which will be completed at a later date.

   There are no known or anticipated risks to your participation. Although the study will not benefit you personally, our hope is that the results will add to knowledge about how to increase the racial/ethnic diversity and inclusiveness in economics.

   All of your responses will be held in confidence. Only the researchers involved in this study and those responsible for research oversight will have access to the information you provide. You will be given a participant number. The code linking your contact information (including email address and work location) and number will be kept on a secure server.

   The data will not be printed or published in any form that would identify any individual. Numerical results from this survey will be shared in summary form only. Free-form responses to open questions will be reported with identifying information removed, and without attribution.

   Participation in this study is completely voluntary. You are free to decline to participate, to end
participation at any time for any reason, or to refuse to answer any individual question. If you have any questions about this study, you may contact Ebonya Washington, ebonya.washington@yale.edu.

If you would like to talk with someone other than the researchers to discuss problems or concerns, to discuss situations in the event that a member of the research team is not available, or to discuss your rights as a research participant, you may contact the Yale University Human Subjects Committee, 203-785-4688, human.subjects@yale.edu. Additional information is available at https://your.yale.edu/research-support/human-research/research-participants/rights-research-participant.

If you would like to participate in the initial screener survey please click "Begin".

A. Begin (Please answer this question.)

2. What best describes you?
   A. I am currently considering entering an economics PhD program.
   B. I considered doing an economics PhD program but did not attend.
   C. I am currently in an economics PhD program.
   D. I started an economics PhD but did not complete it.
   E. I completed an economics PhD but was unable to find a job that used my economics skills.
   F. I landed an academic job after completing an economics PhD. I am still in academia. My position is satisfactory to me.
   G. I landed an academic job after completing an economics PhD. I am still in academia. My position is unsatisfactory to me.
   H. I landed an academic job after completing an economics PhD but have since left academia. I am now in a position that uses my economics skills and the position is satisfactory to me.
   I. I landed an academic job after completing an economics PhD but have since left academia. I am now in a position that uses my economics skills, but the position is unsatisfactory to me.
   J. I landed an academic job after completing an economics PhD but have since left academia. I am now in a position that does not use my economics skills.
   K. I landed an economics job in government, policy or industry (or other job outside of academia) after completing an economics PhD. I am now in a position that uses my economics skills and the position is satisfactory to me.
   L. I landed an economics job in government, policy or industry (or other job outside of academia) after completing an economics PhD. I am now in a position that uses my economics skills and the position is unsatisfactory to me.
   M. I landed an economics job in government, policy or industry (or other job outside of academia) after completing an economics PhD. I am now in a position that does not use my economics skills.

3. What is the most important thing we should know about what helps and hurts minorities' progress in an economics career?
   A. Open ended response

4. Race/ethnicity. Choose one or more.
   A. Black or African-American
   B. Latino/a, Latinx or Hispanic
   C. Native American
D. Asian/Pacific Islander
E. White/Caucasian

5. Gender identification
   A. Male
   B. Female
   C. Gender Non-Binary
   D. Other. Please specify (Open ended response)

6. In what year did you receive your undergraduate degree?
   A. Open ended response (The value must be greater than or equal to 1940.)

7. Tell us about the highest degree you have begun in economics, even if not completed. What is the highest degree you have begun in economics?
   A. BA/BS
   B. MA/MS
   C. PhD/D.Phil
   D. Other please specify (Open ended response)

8. At which school did you begin this degree?
   A. Open ended response

9. What is your field of economics?
   A. Development
   B. Economic History
   C. Industrial Organizations
   D. Labor Economics
   E. Macroeconomics
   F. Microeconomic Theory
   G. Public Economics
   H. Trade
   I. Econometrics
   J. Other

10. Tell us about your current employment. What is your place of employment?
    A. Open ended response

11. What is your job title?
    A. Open ended response

12. Are you willing to participate in an open-ended interview with a trained interviewer from outside the field of economics on factors that hurt and helped you in your economics career? (Please answer this question.)
    A. Yes
    B. No

13. (If respondent answered yes) Please provide your email address so we can contact you for an in-depth interview.
    A. Open ended response (Please enter a valid email address.)
Thank you for your participation in the Study on Minorities’ Career Trajectories in the Field of Economics. If you have any questions about this study, you may contact Ebonya Washington, ebonya.washington@yale.edu.

If you would like to talk with someone other than the researchers to discuss problems or concerns, to discuss situations in the event that a member of the research team is not available, or to discuss your rights as a research participant, you may contact the Yale University Human Subjects Committee, 203-785-4688, human.subjects@yale.edu. Additional information is available at https://your.yale.edu/research-support/human-research/research-participants/rights-research-participant.

If answered A then email follows completion of survey:

Thank you for your interest and participation in the Study on Minorities’ Career Trajectories in the Field of Economics. Unfortunately, resource constraints prevent us from conducting open ended interviews with all interested. We balance concerns about diversity in demographic background and in career experience in selecting participants to interview. If you are selected for an interview, an interviewer will contact you for scheduling. Thank you for your willingness to speak on these issues.

If you have any questions about this study, please contact Ebonya Washington, ebonya.washington@yale.edu.

If you would like to talk with someone other than the researchers to discuss problems or concerns, to discuss situations in the event that a member of the research team is not available, or to discuss your rights as a research participant, you may contact the Yale University Human Subjects Committee, 203-785-4688, human.subjects@yale.edu. Additional information is available at https://your.yale.edu/research-support/human-research/research-participants/rights-research-participant.

Email to Set Up Interview

Note: The survey does not ask for respondent’s name. If respondent is interested in an interview s/he provides email address. In some cases the email address provides the name or at least the place of work. In these cases, feel free to google the email address to recover the missing information of title or name. However if the email address provides no clues to person’s name or workplace (and the person fails to provide a workplace) then write to the person with a generic greeting (eg Good morning) to begin the conversation. People are of course free to provide a fake name for the interview.

Dear Dr (or Ms or Mr.) or Survey Respondent or Good morning/evening

Thank you for your participation in the Study on Minorities’ Career Trajectories in the Field of Economics. We greatly appreciate both your completing the survey and your willingness to sit for an interview over Zoom. My name is [name] and I’m a [PhD student in psychology; Student Activities Administrator at NYU] and I will be conducting your interview. The interview will last approximately one hour. I am available this coming week on [fill in times and be clear they are east coast times if person not on east coast]. Please let me know which, if any, of those times work for you. If not, what works for you in the following week?

Thank you,
Name

Other Emails with Interview Participant
Those sitting for interviews are doing us a favor. Please remember to thank them in every communication.

**Final Confirmation email**

Dear Dr. XXXX,

Thank you for confirming our interview for the Study on Minorities’ Career Trajectories in Economics on ________ at__________. You should receive a google calendar invite shortly in a separate email if you have not already.

Just a reminder, our interview will be conducted remotely via Zoom. Please note, in order to use Zoom, you’ll have to download it from this page on to your computer if it is not installed already.

We have found we are able to obtain the highest quality audio recording of interviews by using Zencastr. Zencastr is web-based software that records audio from more than one computer simultaneously. Zencastr does not need to be downloaded, however, it only works on Google Chrome or Firefox and only works on a computer. Zencastr also works best if you wear a headset. However, if you do not have a headset nearby your computer’s microphone will be fine.

At the time of our interview, please join Zencastr using this [link]. Once you have joined on Zencastr, you may join our Zoom meeting through the link provided in our google calendar invite. However, please mute yourself on Zoom to avoid double audio playback. Both links to Zencastr and Zoom are also provided in our google calendar invitation.

Please note once you click the Zencastr link, I will be able to hear you from your computer and vice versa. Feel free to join, only when you are ready to speak with me.

If you need help downloading or setting up any program or have any questions about these instructions or the interview itself, feel free to reach out to me.

I look forward to talking with you.

Sincerely,

Interviewer sets google invite to include a reminder one hour before the interview.

**Interview Consent**

(read and emailed to participant)

Yale University

Verbal Consent to Participate in a Research Study

Title of Study: Study on Minorities’ Career Trajectories in the Field of Economics

Investigator: Ebonya Washington

Contact Information: ebonya.washington@yale.edu
Hi, my name is (name). I’m conducting interviews as an employee of Yale University and in particular for Amanda Bayer, Gary Hoover and Ebonya Washington’s research study on the factors that help and hinder minorities’ career trajectories in economics. Participation in this study involves an interview of under an hour about your experiences in the profession.

There are no known or anticipated risks to participation except for a possible loss of confidentiality. Although the study will not benefit you personally, our hope is that the results will add to knowledge about how to increase the racial/ethnic diversity in economics.

With your permission, your responses will be audiotaped and then transcribed. All of your responses will be held in confidence. Only the researchers involved in this study and those responsible for research oversight will have access to the information you provide. You will be given a participant number. The code linking your contact information and number will be kept on a secure server.

The data will not be printed or published in any form that would identify any individual. Responses will be reported with identifying information removed and without attribution.

Participation in this study is completely voluntary. You are free to decline to participate, to end participation at any time for any reason, or to refuse to answer any individual question. If you have any questions about this study, you may contact Ebonya Washington, ebonya.washington@yale.edu.

If you would like to talk with someone other than the researchers to discuss problems or concerns, to discuss situations in the event that a member of the research team is not available, or to discuss your rights as a research participant, you may contact the Yale University Human Subjects Committee, 203-785-4688, human.subjects@yale.edu. Additional information is available at https://your.yale.edu/research-support/human-research/research-participants/rights-research-participant

Would you like to participate?

**Interview protocol**
(conducted over Skype or Zoom except when those technologies failed for us)

You were generous enough to volunteer to speak to me for a study on minorities’ career trajectories. What is it the most important thing we should know about minorities’ career trajectories in economics? (Alternatively ask them to speak about what they said was most important in the survey or about why they left economics or are unhappy in economics if they respond so to question1.)

[Sample transitions to career trajectory.] Walk me through your career trajectory so I can understand how you were able to overcome obstacles such as (whatever they described) and make it this far.

Walk me through your career trajectory in economics, from your undergraduate days through now including all positions you have held and those you tried for but did not ultimately end up in. Here interviewers should make sure to follow up on survey question 1 as a hook. If a person says unhappy or didn’t finish a particular level of econ schooling we want to know why. [Interviewer then asks the following questions about undergrad, grad, first job, second job through final job. If respondent moved from pre to post tenure at a particular job then ask about both stages. Interviewer also asks about jobs/schooling the respondent tried for but did not get.]

A. Why did you decide to take (try to take or not take) this step? (Who was influential in decision?)
B. What was the balance of teaching, research and service? How could the balance be improved? (not applicable for undergrad)
C. (if person has not dropped out from this step) What helped (or what is helping you) be successful in this position (program)?
D. What support or resources do you or did you not have that you wish you had? What would help (or would have helped) you make it through?
E. Did you have a mentor during this stage? Was the mentor helpful? How so? Race of mentor?
F. What hindered (or is hindering) your advance in this position (program)?
G. Do you think your status as a member of an underrepresented minority group impacted your progress at this stage? If so, how

What initially attracted you to economics? In what ways has your career been as you anticipated? In what ways has it differed from your expectations? What do you like most about a career in economics? What has been the most disappointing aspect of a career in economics? Do you think your race/ethnicity/gender affects your research questions/methods/interpretations? If so, how? If you had it to do over again, would you make the choice to pursue economics?

Thank you for your participation. Before I go,
What do you think would help improve the economics profession for minorities?
What do you think would improve diversity within the profession?

Is there anything you would like to add?

Thank you. Your interview will inform a Journal of Economics Perspective piece by Amanda Bayer, Gary Hoover and Ebonya Washington on how to increase diversity in the profession. The article will appear in 2020.

Codebook

1. Problems- Stated reason as to why path not as originally envisioned or things that threatened along the way (even if eventually overcome)
   1.1. Tokenism (Respondent mentions not wanting to be or promoting others as being accepted, hired, or promoted due to their underrepresented minority status (a token) as opposed to their ability and qualifications)
   1.2. Mental health issues exacerbated by economics-related activities (code where respondent discusses struggling with mental health issues that were caused by or have gotten worse due to economics-related work/activities)
   1.3. Failure to pass through a checkpoint in the economics pipeline (Includes not getting into graduate school after applying, not passing their comps in graduate school, not succeeding in their dissertation defense, not getting tenure or promoted at their institution/job, etc.)
   1.4. Lack of/difficulty finding a professional network
   1.5. Social media (Social media is described as a problem by the respondent)
   1.6. Distance between school and home/family/community (e.g. respondent states distance between school and home, family, or community as a problem or important factor/constraint for them)
   1.7. Institutional inaction about diversity
   1.8. Underutilized resources
   1.9. Rapid turnover of professors
   1.10. Teaching style or practices
   1.11. Lack of/difficulty in finding an advisor
   1.12. Harmful/lack of policies/actions of department or boss
   1.13. Career prospects in economics profession (e.g. Respondent states concern of less financial security from economics relative to other professions, like STEM)
1.14. Harmful/lack of professional association (AEA) initiatives or activities
1.15. Community or cultural expectations/obligations
1.16. Outside Responsibilities (creating time pressure)
1.17. Explicit bias (including that based on race, gender, LGBTQ+ identity, socioeconomic status or other aspects of an individual’s identity) by an individual (colleague, boss, professor, or student)
1.18. Harmful policies/initiatives at home institution or employer
1.19. Implicit bias (including that based on race, gender, LGBTQ+ identity, socioeconomic status or other aspects of an individual’s identity) by an individual (colleague, boss, professor, or student) (Race not specifically mentioned, but the respondent felt the comment/action racially biased or had differential impact by race)
1.20. Lack of awareness, understanding, listening by colleague, boss, professor, or student
1.20.1. Lack of appreciation (Respondent feels that their work, efforts, or presence is not appreciated by colleagues, boss, students, etc.)
1.21. Colleague, boss, professor, or student not believing in you / holding a fixed mindset
1.22. Subject not believing in self / holding a fixed mindset (including lack of confidence)
1.23. Job/activity was not enjoyable for subject
1.24. Job/activity did not match subject’s values
1.25. Harmful/difficult family/significant other/friend obligations/expectations/understanding/support structure
1.26. Isolation in profession or workplace, lack of personal or cultural connection
1.27. Lack of mentor or help from senior colleague(s)
1.27.1. Same Socioeconomic Status
1.27.2. Female
1.27.3. Male
1.27.4. person of color
1.27.5. same race/ethnicity
1.27.6. white person
1.28. Lack of study group or help from peers
1.29. Lack of role model
1.30. Lack of good information or knowledge about job/career/application process/etc.
1.31. Lack of connections or elite background (e.g., unknown undergrad institution)
1.32. Lack of academic preparation
1.33. Lack of money/funding/other resources
1.34. Extra burden (minority tax, extra work minority economists called on to do that white economists are not) (e.g. if all committees must reflect the US population racially but minorities are underrepresented in faculty then minorities do more committee work; minority professors spending lots of time mentoring/working with minority students in ways white professors are not called on to work with white students; educating white co-workers about race)
1.35. Elitism in the economics profession
1.36. Brutal/hostile environment in the economics profession
1.37. Lack of openness to new questions, methods, topics in the economics profession
1.38. Racist institutions, systemic or structural oppression
1.39. Other problem (e.g., “politics”)

2. Solutions- Explanation for how success occurred or what might have helped it occur
2.1. Sought Academic Resources (Respondent states that they took initiative in reaching out for help/using academic resources)
2.2. Benefited from being in a diverse environment
2.3. Awareness, understanding, or listening by colleague, boss, professor, or student
2.4. Teaching style or practices
2.5. Not wanting to be a statistic
2.6. Lack of outside responsibilities (The respondent discusses having more free-time to work on economics/career-related activity as a benefit/solution)
2.7. Distance between school and home/family/community (e.g. respondent states distance between school and home, family, or community as a problem or important factor/constraint for them)
2.8. Spirituality / Religion
2.9. Social media (Social media is described as a solution by the respondent)
2.10. Therapy
2.11. Colleague, boss, professor, or student worked explicitly to counter racism and bias
2.12. Grit (e.g. persevering through challenges on their own, off of sheer will, etc.)
2.13. Activity outside of economics for work/life balance
2.14. Colleague, boss, professor, or student was not biased
2.15. Colleague, boss, professor, or student listened / created positive environment
2.16. Colleague, boss, professor, or student believed in you / holding a growth mindset
2.17. Subject believed in self / holding a growth mindset (including confidence and drive)
2.18. Job/activity was enjoyable for subject
2.19. Job/activity matched subject’s values
2.20. Beneficial family/significant other/friend structure/support/understanding
2.21. Did not feel isolated, made a personal or cultural connection
2.22. Had a mentor or help from senior colleague(s)
   2.22.1. Same Socioeconomic Status
   2.22.2. Female
   2.22.3. Male
   2.22.4. person of color
   2.22.5. same race/ethnicity
   2.22.6. white person
2.23. Had help from peers or a professional network
2.24. Role model
2.25. Had access to good information about job/career/application process/etc.
2.26. Benefitted from a connection or a privileged background
2.27. Benefitted from strong academic preparation
2.28. Had money/funding/other resources
2.29. Helpful policies/actions of department or boss
2.30. Helpful policies/initiatives at home institution or employer
2.31. Helpful professional association (AEA) initiatives or activities
2.32. Other solution

3. Timing and type of activity involved in problem or solution
3.1. Unknown time after degree
   3.1.1. Service to institution or profession
   3.1.2. Research/journals/conferences/coauthors
   3.1.3. Daily work of a non-academic job, e.g., in government
   3.1.4. Teaching/dealing with students
3.2. Non-economic Job
3.3. As grad student
   3.3.1. Research/journals/conferences/coauthors
   3.3.2. Teaching/dealing with students
   3.3.3. Service to institution or profession
3.3.4. Daily work of non-academic job, e.g., in government
3.4. During job search/hiring/promotions
3.5. 0-7 years after PhD
   3.5.1. Research/journals/conferences/coauthors
   3.5.2. Teaching/dealing with students
   3.5.3. Service to institution or profession
   3.5.4. Daily work of a non-academic job, e.g., in government
3.6. 7+ years after PhD
   3.6.1. Research/journals/conferences/coauthors
   3.6.2. Teaching/dealing with students
   3.6.3. Service to institution or profession
   3.6.4. Daily work of a non-academic job, e.g., in government
3.7. Before grad school

4. US born (Best estimate using the transcript. Code if transcript indicates whether or not the respondent was born in the US; gauge the answer.)
   4.1. Yes
   4.2. No

5. If you had to do it all over again would you still pursue economics? (Question asked towards the end of the interview. Coded Either yes or no)
   5.1. Yes
   5.2. No

6. Goals- stated aspirations and motivations
   6.1. Aspiration- Mark text where specific jobs/fields/topics are stated as goals
   6.2. Motivation- Mark text where values/issues/experiences are offered as motivating interest in particular jobs/topics
      6.2.1. Initial Attraction
      6.2.2. Left Economics Profession (Participant discusses exiting the pipeline in the Economics profession (includes opting out of completing an Economics PhD, not going into or staying in academia after PhD, etc.))

7. Consequences/outcome- Effects of the subject’s experience on self, on others, or on larger society
   7.1. Economic hardship for self/family
   7.2. Improvement in economic condition for self/family
   7.3. Stress/anxiety/depression for self/family
   7.4. Lack of stress/anxiety/depression for self/family
   7.5. Slowed or diverted career progression for self
   7.6. Hastened career progression for self
   7.7. Feeling worse about self
   7.8. Feeling better about self
   7.9. Changed topic or quality of a research project, started or stopped a line of research
   7.10. An effect on students
   7.11. An effect on society or policymaking
8. **Impact of identity** - Mark any text where race/ethnicity/gender or personal identity or status as member of an underrepresented minority group is noted as having an impact.

8.1. Minority
8.2. Nationality
8.3. race/ethnicity
8.4. gender
8.5. LGBTQ+ status
8.6. socioeconomic status (or first-gen college status)
8.7. other aspect of personal identity

9. **Great quote** - Mark any text that coder thinks is a great quote

10. Useful but does not fit in current categories (Coder views as useful information but does not fit in current categories.) *Please bring to attention of PIs in coder meeting.*

Notes: Code broadly. For example, if someone discusses a problem in one sentence and the fact that it happened in grad school in the next sentence or even a couple of sentences down. Code a swath that includes both pieces of information with both codes. “Discrimination” stated alone coded as implicit bias.

Also, if excerpt continues onto another page, attach memo on both excerpt pieces, “continued on/from previous page” or “continued on/from next page”