Who is successful on the finance Ph.D. job market?

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ABSTRACT

We examine the attributes that contribute to a successful placement of first time finance Ph.D. job market participants. The results of a survey of 237 former job market candidates suggest that while the ranking of the Ph.D.-granting institution plays a significant role in candidates' success at all stages of the job market (candidates from higher ranked schools receive more conference interviews, fly-outs, job offers, and secure higher salaries), other factors also contribute. Prior publications or invitations to resubmit a paper to a journal, experience of presenting at academic conferences, and prior work experience positively affect marketability. Younger candidates, Caucasians, and graduates of higher ranked schools secure placements with higher research requirements and higher salaries. The quality of the hiring institution plays a central role in the candidate's overall satisfaction with the job market outcome. Additionally, we collect and summarize recommendations of survey respondents to future first-time job market participants.

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1. Introduction

According to the most recent AACSB Salary Study (2014–2015), the salaries of new full time tenure track Assistant Professors of Finance at AACSB-accredited institutions ranged from $58,000 to $230,000, with the mean salary of $155,000. The significant heterogeneity in the compensations secured by the new finance Ph.Ds., among other factors, relates to the level of research and teaching requirements of hiring institutions. Since the primary objective of accredited finance Ph.D. programs is to set their graduates on a path to successful academic careers, higher research requirements along with higher compensation should constitute a more favorable outcome of the job market. Using survey responses of 237 former first time job market participants who sought a placement between 2007 and 2015, we define several empirical measures of success at various stages of the job market: pre-conference, conference, fly-out, and offer. We identify individual attributes that contribute to a more successful outcome for rookie job seekers. We also report the data that shows former candidates' own perceptions of the job market and their recommendations to the future first-time job market participants.

A newly accepted Ph.D. student likely hears the expression "job market" for the first time during the Ph.D. program orientation meeting, which often takes place before the start of the first semester. The primary objective of the student in the next few years is to create a well-rounded "job market package" that will provide positive signals to prospective employers, thereby increasing the chances of a successful placement. The job market package consists of both tangibles (i.e. the CV, job market paper, recommendation letters, etc.), and intangibles, (i.e. candidate's communication and presentation skills, advisor's network and reputation, etc.). There is much information asymmetry regarding a new candidate's quality when she first goes to the job market, and it is her responsibility to mitigate this asymmetry (Butler and Crack, 2012). Thus, it is in the candidate's best interest to put together a

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job market package that provides the best signal to the prospective employer (Spence, 1973 discusses signaling in labor markets). We identify the attributes that aid in mitigation of the asymmetry problem.

We find that graduates of schools ranked in the first quintile secure 8.81 more and graduates of the fifth quintile schools receive 5.94 less conference interviews compared to graduates from the third quintile institutions.[1] Candidates with prior academic publications secure 3.3 more conference interviews. Candidates from the top quintile schools get 3.3 more campus visit invitations and enjoy a 9.1 percentage point higher interview to fly-out conversion ratio when compared to the third quintile candidates. By comparison, candidates from the fifth quintile schools get 1.5 less campus visits than the third quintile graduates. Candidates with experience of presenting at the American Finance Association (AFA) or Western Finance Association (WFA) conferences secure two additional fly-out offers. Candidates with invitations to revise and resubmit a paper to a journal receive one additional campus visit. Caucasian candidates receive two more campus visit invitations and enjoy a 7 percentage point higher interview to fly-out conversion ratio when compared to candidates of other races.[2] Candidates from the first quintile schools receive 1.15 more job offers and the fifth quintile graduates receive 1.36 less offers when compared to the third quintile candidates. Candidates with an invitation to revise and resubmit a paper to a journal receive 0.63 more job offers. Participation in academic conferences improves the fly-out to offer conversion ratio by 16.5 percentage points (this translates into 0.71 more offers). Caucasian candidates secure 0.78 more job offers. Finally, the level of the research requirements that the new hires have at the first placement institution is driven by the graduate school ranking and the personal connections between the faculties of the two institutions. Candidates from first quintile schools secure compensations that are $50,000 higher and the fifth quintile candidates receive salaries that are $21,000 lower than those secured by the third quintile graduates. Caucasian candidates secure compensations that are $17,000 higher than those secured by the candidates of other races. Younger candidates also tend to secure higher compensation.

Additionally, we conduct interquintile (by graduate school ranking) analysis to determine the attributes that allow candidates to be more competitive against their peers and graduates of higher ranked institutions. Our findings generally indicate that students should focus on developing a job market package that clearly signals future research potential.

Lastly, we examine the level of satisfaction of former job market participants with their first placement. We find that the level of satisfaction is largely driven by the level of annual compensation secured. Since the level of annual compensation also likely proxies for such factors as other faculty quality, the level of research support, and other nonpecuniary benefits, we conclude that the quality of the hiring institution is the primary contributor to the level of candidate's satisfaction. Furthermore, we provide evidence that candidates are generally satisfied with their first placement regardless of the ranking of their graduate institution. The level of satisfaction immediately after the job offer acceptance is very high for candidates who graduate from the top and bottom ranked schools, and is lower for graduates of the schools that fall in the middle of the ranking (third quintile). Although the overall level of satisfaction drops for all candidates after they spend at least one year on the job, the graduates of top schools appear to be most satisfied in the longer run. Overall, the lowest level of both short and long-term satisfaction appears in graduates of schools that rank in the middle.

Our analysis confirms that the ranking of the graduate institution and publishing potential play a central role in the success of the candidate at all stages of the job market. Although graduates of top schools secure significantly higher levels of compensation and lower teaching loads, the level of satisfaction, both immediately after placement and in years following, is rather high for all finance Ph.Ds.

The paper proceeds as follows: Section 2 provides a brief literature review on the topic; Section 3 presents an overview of the job market process; Section 4 outlines the methodology and defines the measures of success used in the study; Section 5 reports the empirical results; Section 6 presents a discussion of responses to selected questions of the survey, and Section 7 concludes.

2. Related literature

As Spence (1973) points out in his seminal essay, in most job markets, the productive capabilities of the individual are unclear at the time of hiring. Thus, the hiring decision is made under uncertainty. The cost of making an errant hiring decision in academia likely outweighs that of many other industries. Unlike most industry jobs, the contract granted to a new hire in academia is generally for six years and, thus, it carries a substantial long-term financial cost to the institution. In return, institutions are looking for candidates who will produce quality research and excel at teaching. Flagg et al. (2011) note that the quality of the school that the candidate went to is the dominant signal for determining the publishing potential of the candidate. They also find that signaled research propensity during the hiring decision plays a major role in the future productivity of the candidate. Flagg et al. draw an analogy between the quality of the underwriter in an IPO, which certifies the quality of the IPO, and the quality of a Ph.D. granting institution, which certifies the quality of the candidate. In their setting, the hiring institution is the investor who buys the shares at the IPO.

Several studies survey finance Ph.D. job market candidates who posted their resumes through the Financial Management Association (FMA) placement service (Mukherjee et al., 2006; Bertin et al., 1999, and Bertin and Zivney, 1991). Mukherjee et al. (2006) conducts a survey of finance Ph.D. candidates who were on the job market in 2002. They find that candidates

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[1] Please refer to Section 4.2 for a detailed discussion of the school ranking methodology.
[2] The non-Caucasian subsample of respondents mainly consists of Asian candidates (69.5%). Thus, the race variable may capture the language barrier issues sometimes associated with Asian candidates.

who have their Ph.D./DBA completed are more likely to succeed on the job market. They also show that females and U.S. citizens or permanent residents are more likely to secure jobs and obtain higher salaries.

A number of authors from other business-related disciplines examine the state of their respective job markets. Siegfried and Stock (1999) conduct a survey of Ph.D. graduates in economics and find that the ranking of the graduate school has a significant effect on both the likelihood of finding a permanent job immediately upon graduation and the level of the graduate's salary. Chen et al. (2013) also examine the rookie economics job market and document that among foreign placements, international students are more likely to get academic positions relative to U.S. placements. Cawley (2011) provides a comprehensive job market guide for new Ph.D. candidates in economics. Coles et al. (2010) examines two features adopted by the American Economic Association (AEA) that attempted to increase the efficiency of the economics academic job market, and find that both features were effective. Specifically, they find that AEA's signaling tool, which allows candidates to express special interest to up to two potential employers, was effective in reducing the information asymmetry that exists among employers and candidates, and significantly increased the candidate's chances of getting an interview. Furthermore, they find that the Job Market Scramble, a tool established by the AEA to aid the matching of the unfilled positions with the available candidates late in the market, is an effective tool.

Zamudio et al. (2013) examine the marketing job market and find that both the level of Ph.D. granting institution and the presence of prior publications in top tier marketing journals affect the success of the candidate on the job market. Basil and Basil (2006) examine the shortage of marketing faculty. They find that the shortage is due to a decrease in marketing doctorates and a mismatch between schools' needs and candidates' skills. In accounting, Eaton and Hunt (2002) conduct a survey of new Ph.D. candidates and faculty who are moving to a new school. Their study documents the differences in job selection preferences that exist between new faculty and relocating faculty, those accepting positions at doctoral granting and those accepting positions at non-doctoral granting schools, and males and females. Hunt et al. (2009) examine the job preferences that are important to accounting faculty. They find that the teaching load, likelihood of getting tenure, and collegiality were the most important factors to accounting faculty when accepting a position. Furthermore, they find that accounting faculty going to non-doctoral institutions rated salary as somewhat less important than the geographic location.

3. The job market (a brief overview)

In the Updated Rookie's Guide for Finance Ph.Ds. (Butler and Crack, 2012), the authors provide a detailed discussion of the first time finance Ph.D. job market and its stages. The authors also advance numerous useful suggestions to future first-time market participants that pertain to the preparation and participation in the job market. To reduce overlap with their paper, we limit the discussion of the process to reporting a flow-chart that depicts the chronology of the job market.

Fig. 1 presents the different stages and the timeline of the job market. It also provides a list of the variables that we use as measures of success of a candidate at various stages of the job market process. We discuss the success measures in detail in the following section.

There are two conferences that provide placement services to the finance Ph.D. job market — the FMA in October and the AFA in January. The candidates have an option of going to either or to both conferences. Based on our sample of 237 candidates, 45.8%
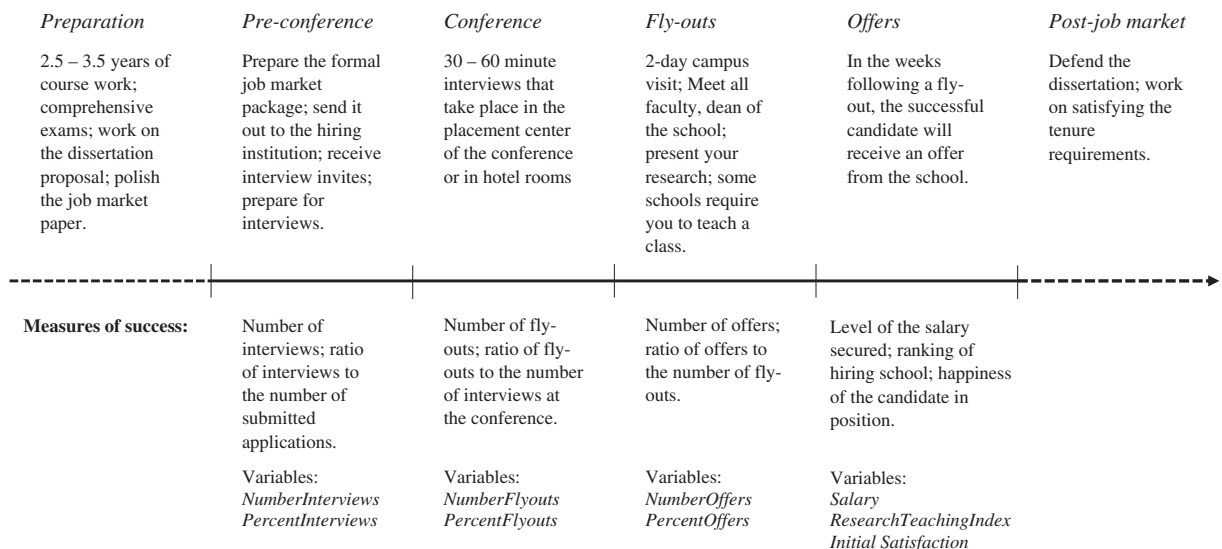
Preparation	*Pre-conference*	*Conference*	*Fly-outs*	*Offers*	*Post-job market*
2.5 – 3.5 years of course work; comprehensive exams; work on the dissertation proposal; polish the job market paper.	Prepare the formal job market package; send it out to the hiring institution; receive interview invites; prepare for interviews.	30 – 60 minute interviews that take place in the placement center of the conference or in hotel rooms	2-day campus visit; Meet all faculty, dean of the school; present your research; some schools require you to teach a class.	In the weeks following a fly-out, the successful candidate will receive an offer from the school.	Defend the dissertation; work on satisfying the tenure requirements.

Measures of success:	Number of interviews; ratio of interviews to the number of submitted applications.	Number of fly-outs; ratio of fly-outs to the number of interviews at the conference.	Number of offers; ratio of offers to the number of fly-outs.	Level of the salary secured; ranking of hiring school; happiness of the candidate in position.	
	Variables: *NumberInterviews* *PercentInterviews*	Variables: *NumberFlyouts* *PercentFlyouts*	Variables: *NumberOffers* *PercentOffers*	Variables: *Salary* *ResearchTeachingIndex* *Initial Satisfaction*	

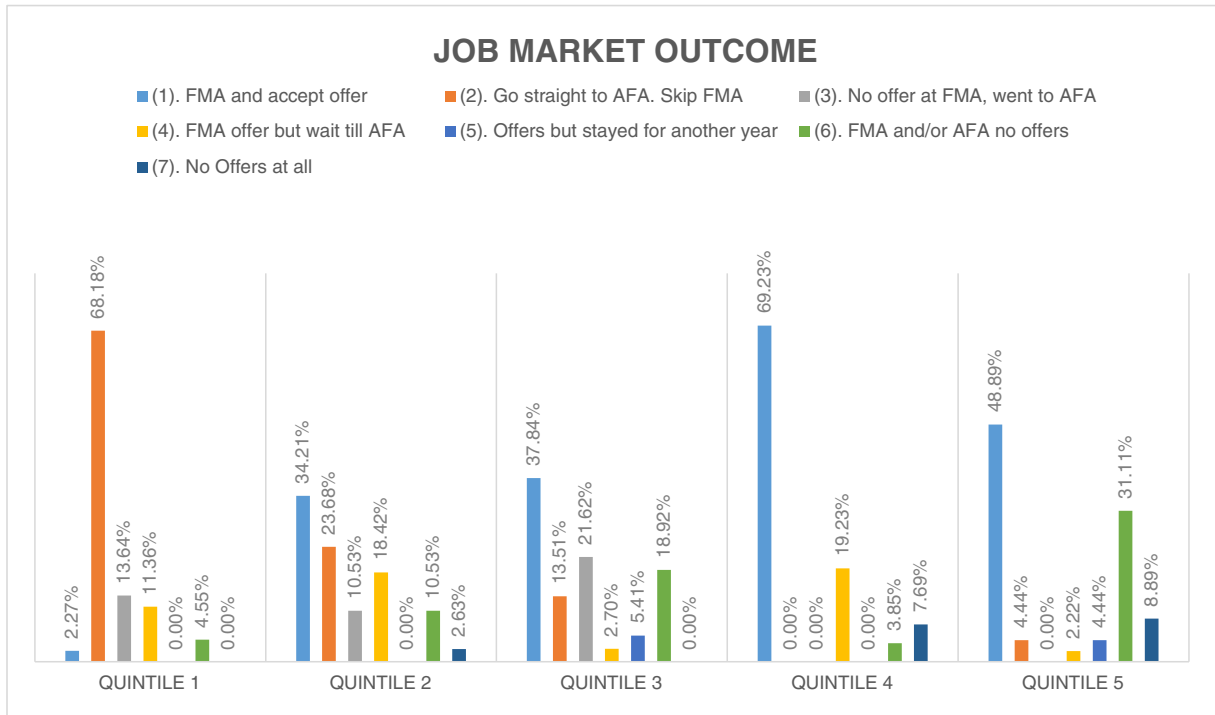**Fig. 1.** Job market flow chart and measures of success.

Fig. 2. Job market outcome. The figure presents the responses to the question: "Which of the following best describes your situation when you first entered the job market?" based on the quintile of the graduate institution ranking, where Quintile 1 represents the first (top) quintile schools. The possible responses provided in the survey are presented on the graph from left to right in the following order: (1) I went to the FMA, accepted a job before the AFA and never went to the AFA, (2) I decided to skip the FMA and went to the AFA, (3) I was not successful at the FMA and went to the AFA, (4) I went to the FMA, got a job offer, but postponed the decision and went to the AFA, (5) I received offer(s) but decided to not accept any and stay for another year, (6) I went to FMA/AFA or both, wasn't successful in getting a job [or I didn't go to either], and looked for jobs though sources like higheredjobs.com or the chronicle.com, and (7) I was unsuccessful (didn't get any offers) in the first year on the market and decided to try again the following year.

of them went only to the FMA, 23.3% went only to the AFA, and 25.8% went to both.[3] Fig. 2 displays the data on what conference(s) candidates interviewed at and what conference they secured the fly-out that resulted in their final placement. The reported data are partitioned by the ranking of the candidate's graduate institution.[4]

A vast majority (almost 70%) of top quintile candidates skipped the FMA and secured jobs at the AFA. About 13% of top quintile candidates were unsuccessful at the FMA and went to the AFA, while about 11% of top quintile candidates had job offers from the FMA but decided to wait and go to the AFA. The percent of students who go directly to the AFA is 23% and 13% for the 2nd and 3rd tier schools, respectively. The FMA appears to dominate the job market for lower quintile candidates (Q2–Q5). The percent of candidates who go to the FMA and accept a job is 34%, 38%, 69%, and 49% for the 2nd, 3rd, 4th, and 5th quintiles respectively. It is noteworthy that candidates from the fifth and the third quintile schools are most likely to be unsuccessful in securing a job when interviewing at a conference. As such, 31% of candidates from fifth quintile schools and about 19% of third quintile candidates did not secure a job offer at a conference, but did so in the "aftermarket".[5] About 9% of fifth quintile candidates and 7% of fourth tier candidates were not able to secure any job offers during their first year on the job market. Approximately 5% of third quintile candidates do secure an offer when first on the job market, but decide to stay at their graduate institution for another year. It is also noteworthy that, in our sample, no candidates from the fourth quintile and only a few candidates from the fifth quintile secured jobs at the AFA.

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[3] 5.08% of all respondents did not go to either conference during their first job market.

[4] Section 4.2 explains the methodology used to rank the Ph.D.-granting institutions.

[5] We refer to the "aftermarket" as the market for schools that either did not interview at the AFA or FMA or were unsuccessful in hiring candidates at these conferences and proceeded to search for candidates via other means such as posting on chronicle.com or higheredjobs.com.

4. Methodology

4.1. Survey

Don Chance from Louisiana State University maintains a list of U.S. universities that grant a Ph.D. in Finance.[6] We verify the list against the 2012–2014 FMA resume listings and add several universities to Don Chance's list. Our list contains 105 universities.[7] We conduct a survey of finance Ph.D. graduates from these universities who went on the job market for the first time between 2007 and 2015. The survey is anonymous. The questions of the survey can be found at www.nikvolkov.com.[8]

We obtain the contact information for recent graduates from: (1) the web sites of their graduate institutions and (2) the directors of finance Ph.D. programs in the U.S. Additionally, we asked finance professors at Ph.D.-granting institutions to forward the web link to our survey to their former students. Finally, we asked the prospective respondents to forward the link to the survey to their colleagues.[9] We are indebted to everyone who contributed.

We acknowledge that our sample may be biased toward former candidates who were relatively successful on the job market. Successful candidates may be more likely to share their experience when solicited to participate in a survey. We review the summary statistics of the sample (see Table 2 and Section 5.1) and do not find significant skewness of the data. We received 44, 36, 37, 26, and 42 responses from graduates of 1st, 2nd, 3rd, 4th, and 5th quintile schools respectively. The standard deviations of the starting salary levels and the research-teaching load index at institutions of first placement are similar for the graduates of all levels of Ph.D. programs.

4.2. Graduate school rankings

School rankings, both of the graduate institution and the placement institution, are vital in identifying the attributes that contribute to the success of job market candidates. In order to maintain anonymity, we do not ask the respondent to provide us with the name of either their alma mater or the first placement institution. Instead, we ask the respondent to provide us with the quintile of their graduate school ranking. The quintile break down of schools is determined based on the Arizona State University finance department rankings. The ranking is based on the number of faculty publications in the top four finance journals (Journal of Finance, Journal of Financial Economics, Review of Financial Studies, and Journal of Financial and Quantitative Analysis) in the period of 2003–2013. We acknowledge that the ranking may be biased toward universities with large number of faculty or schools with a few very productive scholars. As the result of the ranking methodology, a few schools (e.g. Yale University or Carnegie Mellon University) may appear in a lower tier than commonly perceived.

We match the period covered by the ranking to the time when the surveyed students were in the Ph.D. programs at the respective institutions. Refer to Appendix A to view the list of Ph.D.-granting schools and their rankings.

4.3. Empirical measures of success at different stages of job market

We measure the success of the candidate at every stage of the job market process. A visual representation of the process is presented in Fig. 1. The bottom of the figure provides the measures of success at each respective stage of the job market. If the candidate applied to schools that interviewed at both the FMA and the AFA, we combine the responses for the purpose of calculating all variables in the empirical tests reported in the paper.

4.3.1. Pre-conference stage

Conference interviews allow the candidate to spend 30–60 min in front of her prospective employer. Naturally, a higher number of interviews should increase the chances of the candidate to secure fly-out invitations and, ultimately, job offers. At this stage we expect that a candidate's success depends solely on characteristics that are visible through the application documents.

We use two variables to measure the success of the candidate at the pre-conference stage of the process: (1) NumberInterviews — the number of invitations for conference or around-conference interviews that the candidate received[10]; (2) PercentInterviews — the ratio of the number of conference and around-conference interviews to the number of applications sent out by the applicant at the pre-conference stage of the process.

4.3.2. Conference stage

We assume that, if a candidate was granted a conference interview, her credentials satisfy the requirements of the school in general, thus the primary focus of the conference interviews is to determine whether the candidate's personality and future

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[6] The list is available at the following link http://www.bus.lsu.edu/academics/finance/faculty/dchance/MiscProf/doctoral.htm. The list includes several universities that did not yet graduate any students (Rice and Auburn).

[7] There are many foreign Ph.D. granting institutions, which graduate candidates that participate in the job market alongside the U.S. candidates. We do not include foreign universities' graduates in our sample.

[8] The direct link to the survey is http://www.nikvolkov.com/sites/www.nikvolkov.com/files/media-downloads/general/nikanor-volkov-survey-39.pdf

[9] Although we did not stop anyone from participating in the survey, we eliminated the few responses of participants who placed in non-academic positions.

[10] In the recent years, some institutions chose to either substitute or complement the FMA interviews with Skype interviews. Such interviews generally take place within two weeks of the conference. We include such interviews in the calculation of this variable.

research and teaching agenda fits the department. Thus, at this stage, we expect that besides the candidate's credentials, her personal traits should have an impact on the success in the conversion of conference interviews into campus visits.

We use two measures of success at this stage of the process: (1) NumberFlyouts — the number of campus visit invitations that the candidate received following the conference interviews; (2) PercentFlyout — the ratio of the number of fly-outs to the number of interviews at the conference or around the conference.

4.3.3. Fly-out stage

The central objective of the candidate on the fly-out stage of the job market is to convince the faculty of the interviewing institution that she has a promising research potential, has well-rounded presentation skills, and has a personality that would fit well in their department. The ultimate goal of the candidate at this stage is to secure job offers.

We employ two measures of success at this stage of the job market: (1) NumberOffers — the raw number of offers received following the campus visits; and (2) PercentOffers — the ratio of the number of offers to the number of fly-outs secured.

4.3.4. Offer stage

If in previous stages of the job market all (most) of the decision rights were concentrated in the hands of the prospective employer. At this stage, assuming she has more than one offer, the candidate has some discretion over her future placement. This stage also is indicative of the ultimate success of the candidate on the job market.

We employ two measures of success at this stage: (1) Salary — the level of the salary secured by the candidate represented either by the exact salary obtained (if provided during the survey) or by the median of the range chosen by the respondent; (2) ResearchTeachingIndex — an index that combines the level of research requirements and the teaching load at the placement institution. We build the index by combining questions that pertain to the level of the research and teaching requirements at the hiring institution and assigning numerical values to the research and teaching components of the first placement. The scale ranges from 2 to 8, where the higher number represents higher research and lower teaching requirements. Since the Ph.D. degree prepares candidates for research-oriented careers, we assume that higher research requirements and lower teaching loads constitute a more successful job market placement.[11] A higher value of the index implies a better quality school.

4.3.5. Satisfaction of the candidate at the first placement institution

Finally, we ask the candidates to rank the level of their happiness with the secured position immediately upon accepting the offer and after at least one year spent on the job. The questions provide a scale of 0 to 10, where 0 is extremely unhappy and 10 is extremely happy. The variable Initial Satisfaction proxies for the level of happiness at the time of accepting the offer and the variable Current Satisfaction proxies for the happiness of the candidate with the first position after at least one year of employment.[12]

4.4. Model and explanatory variables

We use various specifications of the following OLS regression model to determine the factors that contribute to success on different stages of the job market:

$$Dep\ Variable_i = \alpha + \beta_1 Gender_i + \beta_2 AgeMarket_i + \beta_3 ImmigrationStatus_i + \beta_4 Caucasian_i + \beta_5 Ranking\ 1_i + \beta_6 Ranking\ 2_i + \beta_7 Ranking\ 4_i + \beta_8 Ranking\ 5_i + \beta_9 NumberApps_i + \beta_{10} Proposed_i + \beta_{11} Defended_i + \beta_{12} CustomLetters_i + \beta_{13} PostedCVOnline_i + \beta_{14} PriorConferences_i + \beta_{15} AFAorWFA_i + \beta_{16} PriorPublications_i + \beta_{17} RRs_i + \beta_{18} WorkExperience_i + \beta_{19} Certifications_i + \beta_{20} CoursesTaught_i + \beta_{21} Network_i + \beta_{22} ConfidenceConf_i + \beta_{23} ConfidenceFlyout_i + \beta_{24} Personality_i + e_i,$$

$$(1)$$

where Dep Variable is the measure of success as discussed in Section 4.3. The explanatory variables are generated based on the responses to the survey. The definitions of the explanatory variables are provided in Table 1.

5. Empirical results

5.1. Summary statistics

Table 2 reports the summary statistics for all variables used in the study. We report the statistics for the overall sample and for subsamples based on the quintile of the school ranking. Out of the 237 respondents, 32 did not respond to the question pertaining to the quintile of their graduate school ranking. We report the summary statistics for this group in a separate column.

The average number of conference interviews (NumberInterviews) for all candidates is 14.70 with candidates of top quintile schools getting 21.57 interviews and fifth quintile schools only 9.78. The conversion of the applications into conference interviews (PercentInterviews) is also higher for top schools at 34.3% vs. 23.10% for fifth quintile school candidates. There is a monotonic decrease in

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[11] This statement appears to be generally true from the perspective of the Ph.D. granting institution, which is not always in accordance with the candidate's personal preference.

[12] The question regarding current happiness is posed only to respondents who already spent at least a year on the job and have not switched employers since the first placement.

Table 1

Explanatory variables.

The table reports the variable names and their definitions. All variables are created based on the responses to specific survey questions. The list of survey questions and possible answers can be obtained from www.nikvolkov.com.

Explanatory variable	Description
Gender	Dummy variable that equals 1 if the candidate is a male and 0 otherwise
AgeMarket	The age of the candidate when first on the job market
ImmigrationStatus	Dummy variable that equals 1 if the candidate was a U.S. citizen or permanent resident at the time when first on the market and 0 otherwise
Caucasian	Dummy variable that equals 1 if the applicant's race is white Caucasian and 0 otherwise
Ranking 1 (2, 4, 5)	Dummy variable that equals 1 if the respondent indicated that she went to a school that falls in the 1st (2nd, 4th, or 5th) quintile of school ranking based on Arizona State University finance department rankings
NumberApps	The number of applications for employment that the candidate submitted
Proposed	Dummy variable that equals 1 if the candidate proposed the dissertation topic prior to going on the market and 0 otherwise
Defended	Dummy variable that equals 1 if the candidate defended the dissertation prior to going on the market and 0 otherwise
CustomLetters	Dummy variable that equals 1 if the candidate wrote customized cover letters to accompany the application and 0 if the same cover letters was used for all applications
PostedCVOnline	Dummy variable that equals 1 if the candidate posted the CV online though a placement center, like the FMA, and 0 otherwise
PriorConferences	Dummy variable that equals 1 if the candidate presented his/her work at one or more academic conferences prior to going to the market and 0 otherwise
AFAorWFA	Dummy variable that equals 1 if the candidate presented at the AFA or WFA and 0 otherwise
PriorPublications	Dummy variable that equals 1 if the candidate had accepted publications prior to going on the market and 0 otherwise
RRs	Dummy variable that equals 1 if the candidate had an invitation to revise and resubmit a paper to a journal while on the market and 0 otherwise
WorkExperience	Dummy variable that equals 1 if the candidate had prior industry work experience and 0 otherwise
Certifications	Dummy variable that equals 1 if the candidate was a CFA, CFP, or other finance-related charter holder and 0 otherwise
CoursesTaught	Prior teaching experience, represented by the number of different courses taught prior to going to the market
Network	Dummy variable that equals 1 if the hiring institution had any faculty member with close ties to the faculty of the graduating school and 0 otherwise. This variable is created based on a survey answer, thus it reflects the candidate's perception of the network of the faculty members of his graduating institution. The perception of the candidate may differ from the actual extent of the network.
ConfidenceConf	The level of confidence of the candidate during the conference interview stage as indicated in the survey response measured on a scale from 1 to 10 where 10 is the highest.
ConfidenceFlyout	The level of confidence of the candidate during the fly-out stage as indicated in the survey response measured on a scale from 1 to 10 where 10 is the highest.
Personality	The personality index generated using seven survey questions from psychology research (see for example Martin (1997)). A higher value indicates a more outgoing/extroverted personality.

the average value of both variables as the ranking of the school decreases. This result is expected as the candidates of higher ranked schools are more desirable by potential employers. Notably, the top school candidates apply to more schools (NumberApps) — on average, they apply to 73.02 schools compared to the mean of 63.13 for the entire sample.[13] Similarly, there is also a monotonic decrease in the average number of submitted applications with the drop in the ranking of the graduate school. It is possible that applicants from all schools apply to most open positions at and below the level of their Ph.D.-granting institution.[14]

Top school candidates also get significantly more campus visit invitations (NumberFlyouts) with a candidate being offered on average 8.45 fly-outs, which compares to the overall sample average of 5.27 and only 2.92 for the fifth quintile candidates. Interestingly, the lowest interview to fly-out conversion ratios (PercentFlyout) are observed for candidates from the third and fourth quintiles of school ranking, 25.61 and 24.06% respectively. In contrast, the candidates from top schools convert 34.36% of conference interviews and fifth quintile candidates get an invitation to visit the campus 29.77% of the time.

The NumberOffers variable exhibits a pattern that is similar to that of previously discussed variables. The number of offers is 3.45, 2.50, 2.30, 2.00, and 1.30 for the 1st, 2nd, 3rd, 4th, and 5th quintiles of school ranking respectively. The conversion of fly-outs to offers is the lowest for the two top quintiles of school (44.02 and 45.07% respectively vs. the average of 53.50% for the entire sample). This result may be explained by the fact that higher ranked schools, which tend to be the employers of top school graduates, are more selective when hiring. They may invite more candidates to campus visits, which would result in higher number of fly-outs and lower conversion numbers for top school graduates.[15]

Not surprisingly, a decrease in the level of average salary (Salary) is observed as one moves from the top to the fifth quintile of graduate school ranking. The top school candidates in our sample obtain an average compensation of $187,420 versus the average of $142,900 for the entire sample and only $104,860 for the fifth quintile. We compare the salary figures to those of the AACSB Salary Reports for 2007–2015 and our averages are consistent. One notable observation from the starting salary information is a virtual lack of difference in compensation secured by candidates representing the 3rd ($127,250) and the 4th ($126,960) quintiles of school ranking.

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[13] The maximum number of applications submitted is 190 and the minimum number is 18.

[14] It is generally believed that a graduate cannot obtain her first position at an institution that is ranked higher than the university she graduates from. Thus, top school candidates have a greater number of prospective employers than candidates from lower tier schools.

[15] This could also be budget-related. Coles et al. (2010) describes how long the offer is valid for. At top schools' offers are very long because they make offers to all candidates they liked, regardless of their need. Smaller schools' offers are shorter because they need to move to the next candidate on the list.

Table 2

Summary statistics.

The table presents summary statistics for the variables used in the empirical tests used in the study for the overall sample and by quintile of school ranking based on Arizona State University ranking of finance departments. The first number represents the mean of the variable, the second (in parentheses) is the standard deviation of the variable, the third [in brackets] is the number of observations. The variable descriptions are as follows: NumberInterviews is the number of interviews that a candidate had at or around the conferences; PercentInterviews is the ratio of the number of conference and around-conference interviews to the number of applications that a candidate submitted; NumberFlyouts is the number of fly-outs that the candidate was invited to; PercentFlyouts is the ratio of the number of flyouts to the number of conference and around-conference interviews that the candidate had; NumberOffers is the number of job offers that the candidate received; PercentOffers is the ratio of the number of offers to the number of fly-outs; Salary is the salary that the candidate secured when first on the job market; ResearchTeachingIndex is the index that combines the teaching load and the research requirements of the first placement institution (a higher index constitutes a more research-oriented institution). The definitions of the rest of the variables are consistent with Table 1.

		Quintile of graduating school ranking					
	Overall sample	1	2	3	4	5	Quintile unknown
Dependent variables							
NumberInterviews	14.70 (12.00) [217]	21.57 (14.26) [44]	15.86 (12.31) [36]	13.77 (10.18) [37]	13.04 (7.68) [26]	9.78 (7.42) [42]	12.81 (14.17) [32]
PercentInterviews	.2808 (.2685) [215]	.343 (.2791) [44]	.2966 (.2436) [36]	.2962 (.3510) [36]	.2689 (.1755) [26]	.2310 (.1815) [41]	.1464 (.1428) [32]
NumberFlyouts	5.27 (4.16) [199]	8.45 (4.14) [42]	5.83 (3.64) [36]	4.53 (3.88) [32]	3.38 (2.39) [24]	2.92 (2.50) [39]	5.58 (5.15) [26]
PercentFlyouts	.3218 (.2101) [178]	.3436 (.1482) [37]	.3709 (.2039) [31]	.2561 (.1576) [28]	.2406 (.1233) [24]	.2977 (.2251) [36]	.4279 (.3377) [22]
NumberOffers	2.49 (2.21) [212]	3.45 (2.18) [44]	2.50 (1.58) [36]	2.30 (1.98) [36]	2.00 (1.50) [26]	1.30 (1.35) [42]	3.42 (.46) [28]
PercentOffers	.5350 (.3399) [191]	.4402 (.2243) [42]	.4507 (.2110) [34]	.5522 (.2705) [34]	.6723 (.2935) [21]	.5195 (.5011) [37]	.7068 (.4007) [23]
Salary	142.9 (48.07) [205]	187.42 (33.97) [42]	158.37 (38.84) [37]	127.25 (37.81) [39]	126.96 (40.93) [25]	104.86 (27.73) [44]	156.55 (62.86) [18]
ResearchTeachingIndex	5.41 (1.67) [203]	6.97 (.6043) [42]	5.83 (1.50) [36]	4.88 (1.29) [36]	4.87 (1.78) [24]	4.15 (1.49) [46]	5.94 (1.47) [19]
Initial satisfaction	8.07 (1.88) [210]	8.39 (1.61) [44]	8.29 (1.59) [38]	7.15 (2.38) [39]	8.16 (1.49) [25]	8.27 (1.72) [45]	8.21 (1.79) [19]
Independent variables							
Gender	.7679 (.4230) [237]	.8636 (.3471) [44]	.8157 (.3928) [38]	.7179 (.4558) [39]	.8076 (.4019) [26]	.6382 (.4856) [47]	.7906 (.4116) [43]
AgeMarket	32.38 (6.22) [232]	29.54 (3.52) [42]	32.00 (5.97) [38]	32.94 (5.84) [39]	32.92 (7.26) [26]	34.57 (6.51) [47]	32.22 (7.08) [40]
ImmigrationStatus	.6000 (.4909) [235]	.5681 (.5010) [44]	.6052 (.4953) [38]	.5897 (.4983) [39]	.7307 (.4523) [26]	.6382 (.4856) [47]	.5121 (.5060) [41]
Caucasian	.6480 (.4786) [233]	.6976 (.4647) [43]	.6578 (.4807) [38]	.5789 (.5003) [38]	.7307 (.4523) [26]	.6595 (.4789) [47]	.5853 (.4987) [41]
NumberApps	63.13 (38.79) [224]	73.02 (37.96) [44]	68.78 (46.53) [37]	69.32 (37.00) [38]	55.42 (28.63) [26]	53.54 (38.72) [42]	56.02 (36.82) [38]
Proposed	.8185 (.3861) [237]	.8181 (.3901) [44]	.8684 (.3425) [38]	.8461 (.3655) [39]	.9615 (.1961) [26]	.8085 (.3977) [47]	.6744 (.4741) [43]
Defended	.1072 (.3101) [233]	.0930 (.2939) [43]	.1315 (.3425) [38]	.0769 (.2699) [39]	.1153 (.3258) [26]	.1111 (.3178) [45]	.1190 (.3277) [42]
CustomLetters	.7751 (.4185) [209]	.6136 (.4925) [44]	.8421 (.3695) [38]	.7948 (.4091) [39]	.9230 (.2717) [26]	.7872 (.4136) [47]	.7333 (.4577) [15]
PostedCVOnline	.5693 (.4963) [209]	.2954 (.4615) [44]	.5000 (.5067) [38]	.5897 (.4983) [39]	.8076 (.4019) [26]	.7234 (.4521) [47]	.6000 (.5070) [15]
PriorConferences	.7330 (.4434) [206]	.5454 (.5036) [44]	.6578 (.4807) [38]	.7368 (.4462) [38]	.8076 (.4019) [26]	.8936 (.3116) [47]	.8461 (.3755) [13]
AFAorWFA	.0817 (.2746) [208]	.0909 (.2908) [44]	.1052 (.3110) [38]	.1025 (.3073) [39]	.0384 (.1961) [26]	.0425 (.2040) [47]	.1428 (.3631) [14]
PriorPublications	.3429 (.4758) [207]	.2558 (.4414) [43]	.1315 (.3425) [38]	.2820 (.4588) [39]	.3076 (.4706) [26]	.6382 (.4856) [47]	.4285 (.5135) [14]
RRs	.2621 (.4408) [206]	.2500 (.4385) [44]	.1315 (.3425) [38]	.2162 (.4173) [37]	.3076 (.4706) [26]	.3617 (.4856) [47]	.3571 (.4972) [14]
WorkExperience	.6521 (.4774) [207]	.5348 (.5046) [43]	.6842 (.4710) [38]	.6666 (.4775) [39]	.6923 (.4706) [26]	.7234 (.4521) [47]	.5714 (.5135) [14]
Certifications	.1196 (.3252) [209]	.1136 (.3210) [44]	.1052 (.3110) [38]	.2307 (.4268) [39]	.0769 (.2717) [26]	.1063 (.3116) [47]	0.000 (0.000) [15]
CoursesTaught	2.67 (1.00) [207]	1.88 (.84) [44]	2.63 (.88) [38]	2.69 (.89) [39]	2.96 (.99) [26]	3.40 (.74) [47]	2.15 (.98) [13]
Network	.3186 (.4670) [204]	.3181 (.4711) [44]	.3684 (.4888) [38]	.2564 (.4423) [39]	.3200 (.4760) [26]	.3260 (.4739) [46]	.3333 (.4923) [12]
ConfidenceConf	6.98 (2.10) [200]	7.15 (2.05) [44]	7.34 (1.90) [38]	6.68 (1.78) [39]	6.46 (2.33) [26]	7.21 (2.25) [42]	6.50 (.49) [12]
ConfidenceFlyout	7.64 (1.70) [199]	7.31 (1.70) [44]	7.71 (1.81) [38]	7.23 (1.66) [39]	8.08 (1.16) [23]	7.97 (1.82) [44]	8.00 (1.67) [11]
Personality	22.05 (5.76) [200]	22.07 (5.90) [43]	23.10 (6.68) [38]	21.31 (5.74) [38]	21.2 (4.94) [25]	21.82 (5.37) [47]	24.22 (5.26) [9]

Similar patterns are observed when examining the level of teaching and research requirements of first placement institutions (ResearchTeachingIndex). The graduates of higher level schools secure positions with much higher research and lower teaching requirements when compared to graduates of lower level schools. Once again, the value of the ResearchTeachingIndex is virtually the same for the graduates of 3rd (4.88) and the 4th (4.87) quintile schools.

The data suggest that top quintile schools graduate more male students (86.36%) then fifth quintile schools (63.82%).[16] Furthermore, the average age (AgeMarket) of the top school candidates when first on the market is 29.54 and it increases monotonically to 34.57 for the fifth quintile graduates. This observation, coupled with the level of work experience (WorkExperience)

Table 3

Pre-conference stage.

The table presents the results for the tests of success on the pre-conference stage of the job market using Eq. (1). The dependent variable in models (1), (2), and (3) is NumberInterviews, which is the number of interviews that a candidate had at or around the conferences. The dependent variable in models (4), (5), and (6) is PercentInterviews, which is the ratio of the number of conference and around-conference interviews to the number of applications that a candidate submitted. The definitions of the explanatory variables are consistent with Table 1. The reported statistics from top to bottom are the coefficient and the p-values for them. The *, **, and *** represent significance at 10, 5, and 1% level, respectively. VIF ranges for models (1)–(6) are: 1.06–1.75, 1.12–2.19, 1.12–2.21, 1.06–1.75, 1.13–2.33, 1.13–2.34.

Variable	NumberInterviews			PercentInterviews		
	(1)	(2)	(3)	(4)	(5)	(6)
Gender	.307	−1.561	−1.424	−.053	−.023	−.030
	(0.865)	(0.368)	(0.444)	(0.234)	(.591)	(.477)
AgeMarket	−0.076	0.045	0.013	.002	.003	.003
	(0.565)	(0.705)	(0.918)	(0.673)	(.415)	(.437)
ImmigrationStatus	−0.281	1.248	0.914	−.003	−.018	−.026
	(0.869)	(0.473)	(0.620)	(0.954)	(.685)	(.590)
Caucasian	1.153	2.234	2.973	.086	.044	.056
	(0.540)	(0.242)	(0.121)	(0.110)	(.316)	(.262)
Ranking 1	9.165***	8.223***	8.810***	.072	.078	.081
	(0.001)	(0.003)	(0.002)	(0.332)	(.282)	(.266)
Ranking 2	2.008	2.025	2.287	−.002	.036	.040
	(0.462)	(0.407)	(0.335)	(0.973)	(.581)	(.534)
Ranking 4	2.008	−0.847	−0.835	−.067	−.083	−.069
	(0.462)	(0.727)	(0.722)	(0.351)	(.226)	(.306)
Ranking 5	−4.703**	−5.384**	−5.943***	−.106	−.139**	−.139**
	(0.032)	(0.020)	(0.009)	(0.152)	(.016)	(.021)
NumberApps		.110***	.104***		−.003***	−.003***
		(0.000)	(0.000)		(.000)	(.000)
Proposed		−1.525	−2.391		−.004	−.018
		(0.503)	(0.318)		(.916)	(.709)
Defended		−3.269	−2.932		.022	.042
		(0.354)	(0.407)		(.826)	(.706)
CustomLetters		−0.543	−0.441		−.004	−.015
		(0.796)	(0.846)		(.930)	(.756)
PostedCVOnline		−0.889	−0.524		.033	.034
		(0.618)	(0.768)		(.432)	(.463)
PriorConferences		1.808	2.760		.022	.030
		(0.380)	(0.191)		(.573)	(.452)
AFAorWFA		5.07	4.461		.101	.091
		(0.149)	(0.166)		(.125)	(.165)
PriorPublications		3.245*	3.307*		.070*	.064
		(0.091)	(0.080)		(.092)	(.175)
RRs		1.795	−.637		.066	.066
		(0.262)	(0.723)		(.131)	(.136)
WorkExperience		−1.478	−0.446		−.014	−.011
		(0.374)	(0.838)		(.645)	(.749)
Certifications		.0489	−0.093		.066	.057
		(0.981)	(0.917)		(.331)	(.396)
CoursesTaught		−.387	0.017		−.036	−.037
		(0.648)	(0.992)		(.234)	(.236)
Network			0.017			−.018
			(0.992)			(.562)
Personality			−0.267*			−.002
			(0.071)			(.667)
Intercept	16.833***	6.999	12.856**	0.244	.4135***	.474***
	(0.000)	(0.166)	(0.026)	(0.106)	(0.001)	(0.000)
Adj. R-squared	0.2142	0.4051	0.4113	0.0837	0.3483	0.3551
F probability	0.0000***	0.0000***	0.0000***	0.0230**	0.0000***	0.0000***
N	169	162	160	169	162	158

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[16] We do not have the data to investigate whether this is a result of lower female enrollment or higher dropout rates of female students at top tier schools.

Table 4

Conference Stage[a].

The table presents the results for the tests of success on the conference stage of the job market using Eq. (1). The dependent variable in models (1), (2), and (3) is Number Flyouts, which is the number of fly-outs that a candidate received invitations to following the conference interviews. The dependent variable in models (4), (5), and (6) is Percent Flyouts, which is the ratio of the number of fly-outs to the number of conference interviews a candidate had. The definitions of the explanatory variables are consistent with Table 1. The reported statistics from top to bottom are the coefficient and the p-values for them. The *, **, and *** represent significance at 10, 5, and 1% level, respectively. VIF ranges for models (1)–(6) are: 1.08–1.80, 1.14–2.21, 1.15–2.27, 1.08–1.84, 1.15–2.43, and 1.16–2.43.

Variable	NumberFlyouts			PercentFlyouts		
	(1)	(2)	(3)	(4)	(5)	(6)
Gender	.115	−.146	−.215	.011	.022	.010
	(0.855)	(0.824)	(0.766)	(0.760)	(0.594)	(0.795)
AgeMarket	−.052	−.045	−.052	−.001	−.003	−.005
	(0.161)	(0.217)	(0.207)	(0.672)	(0.316)	(0.109)
ImmigrationStatus	.022	.305	.176	.025	.0009	−.019
	(0.969)	(0.608)	(0.778)	(0.413)	(0.977)	(0.498)
Caucasian	1.751***	1.871***	2.043***	.081**	.071**	.073**
	(0.004)	(0.004)	(0.002)	(0.014)	(0.038)	(0.018)
Ranking 1	3.641***	3.481***	3.357***	.079**	.073*	.091**
	(0.000)	(0.000)	(0.000)	(0.040)	(0.056)	(0.014)
Ranking 2	1.145	1.432*	1.323	.102**	.113**	.127***
	(0.200)	(0.077)	(0.116)	(0.026)	(0.015)	(0.003)
Ranking 4	−1.393*	−.747	−.238	−.031	−.036	.007
	(0.085)	(0.330)	(0.758)	(0.395)	(0.382)	(0.856)
Ranking 5	−1.544**	−1.829**	−1.914**	.042	.020	.019
	(0.035)	(0.016)	(0.022)	(0.405)	(0.684)	(0.678)
NumberApps		.024***	.026***		−.0005	−.0006
		(0.002)	(0.001)		(0.211)	(0.148)
Proposed		−.958	−1.124		−.027	−.051
		(0.202)	(0.188)		(0.482)	(0.219)
Defended		−.085	.019		−.021	−.012
		(0.936)	(0.986)		(0.677)	(0.810)
CustomLetters		−1.310	−1.666**		−.056	−.059
		(0.058)	(0.017)		(0.172)	(0.175)
PostedCVOnline		−.259	−.332		.017	.005
		(0.669)	(0.599)		(0.550)	(0.858)
PriorConferences		.145	.197		−.001	−.008
		(0.830)	(0.771)		(0.967)	(0.819)
AFAorWFA		2.315**	2.002*		.020	.044
		(0.039)	(0.074)		(0.746)	(0.501)
PriorPublications		.848	.820		−.018	.010
		(0.162)	(0.186)		(0.565)	(0.742)
RRs		1.166**	1.072*		.061*	.062*
		(0.027)	(0.057)		(0.057)	(0.066)
WorkExperience		.994*	.904		.088***	.090***
		(0.064)	(0.193)		(0.003)	(0.004)
Certifications		−.047	−.286		−.029	−.034
		(0.949)	(0.720)		(0.460)	(0.366)
CoursesTaught		.1670	.075		.014	.027
		(0.579)	(0.816)		(0.442)	(0.190)
Network			−.277			−.006
			(0.647)			(0.850)
ConfidenceConf			.261*			−.016*
			(0.062)			(0.060)
Personality			.008			.003
			(0.567)			(0.166)
Intercept	5.072***	3.886**	2.170	.222**	.297***	.400***
	(.001)	(.021)	(0.314)	(0.017)	(0.005)	(0.001)
Adj. R-squared	0.3239	0.4559	0.4648	0.1313	0.2195	0.3551
F probability	0.0000***	0.0000***	0.0000***	0.0011**	0.0248**	0.0087***
N	171	162	154	155	148	141

[a] We eliminated 9 observations in models 4–6 because the ratio of fly-outs to interviews was higher than 1.00.

suggests that candidates of top schools are much more likely to enroll in the Ph.D. program immediately following their under-graduate or graduate degree. The summary statistics indicates that about 65% of candidates in our sample are Caucasian.

Candidates from the middle quintiles of school ranking appear to be more likely to customize the cover letters (CustomLetter) of their applications and the graduates of the two bottom quintile schools are much more likely to post their CVs on the FMA web site (PostedCVOnline).

The number of candidates who presented at one or more academic conferences (PriorConferences) increases monotonically as the level of graduate school drops. This result is intuitive as lower school students may be more likely to submit papers to conferences with higher acceptance levels. In the overall sample, 34.29% of candidates had prior publications. The percent of

candidates with publications is fairly consistent for the first four quintiles of school rankings with the exception of the 2nd quintile (25.58, 13.15, 28.20, 30.76% for the 1st, 2nd, 3rd, and 4th respectively). Almost 64% of fifth quintile graduates come to market with an accepted publication. Again, this result may be driven by the fact that bottom school candidates are more likely to submit their work to lower quality journals. It is also possible that the faculty of lower ranked schools is more open to co-authorship with the students, which in turn results in more publications for prospective graduates. A similar, although not as pronounced, pattern is observed when the presence of revise and resubmits (RRs) is examined. Roughly 36% of candidates from fifth quintile schools have an invitation to resubmit a paper to a journal at the time they go to the market, which compares to the overall sample average of 25% and only 13.15% for the candidates from the 2nd quintile schools.

The number of courses taught prior to going to the market (CoursesTaught) increases gradually as the school quality drops. This is an expected observation, as lower level schools require more teaching of their Ph.D. students.

5.2. Multivariate results

The results of various specifications of Eq. (1) with the dependent variables NumberInterviews and PercentInterviews, which proxy for candidates' success at the pre-conference stage of the job market are presented in Table 3. The results are reported based on the sample of observations for which respondents indicated the quintile of their graduate university ranking.

Models (1)–(3) show that the quintile of graduate school raking plays a determining role in the number of interviews that the candidates receive. Candidates from top schools, on average, get about nine more interviews than those from schools that fall in the third quintile of school ranking. Candidates from fifth quintile schools receive about five fewer interviews than those from the third quintile. The results also suggest a positive association between the number of applications submitted and the number of interviews. It appears that for every ten additional applications, the candidate receives one additional interview. Finally, candidates with prior publications receive three more interviews than those without any accepted papers.

Models (4)–(6) demonstrate that the conversion of applications into interviews is rather consistent for the first four quintiles of schools. The conversion ratio is significantly lower for fifth quintile candidates. Their ratio is 13.9 percentage points lower than that of the third quintile candidates. Furthermore, we provide some evidence that candidates with prior publications enjoy a higher application to interviews conversion ratio (see Model 5 in Table 3). Finally, despite the belief that networks are extremely important in securing conference interviews, we do not find this association in our sample.

The results for the measures of success at the conference stage of the job market are presented in Table 4. The results indicate a strong relation between the quality of the graduate school and both, the number of fly-out offers and the conversion ratio of conference interviews to campus visit invitations. Top school candidates receive 3.64 more fly-out offers than their middle-ranking schools colleagues, when candidates of fifth quintile schools receive 1.54 less campus visits than students in the 3rd quintile. Similarly, the ratio of fly-outs to interviews is higher for first and second quintile graduates. We also find that Caucasian candidates receive two more fly-out invitations and enjoy about 7 percentage points higher conversion of interviews to fly-out ratio than representatives of other races. This result is obtained while controlling for the immigration status of the candidate, which is insignificant in all model specifications.

Experience of presenting at the AFA and WFA and existence of a current invitation to resubmit a paper to a journal positively affect the number of fly-out offers and the fly-out to interview ratio. A positive relation between prior work experience and both the number of fly-outs and the conversion ratio is documented. This result may be explained by the fact that candidates with prior work experience are more comfortable in an interview setting and, thus, are more successful in convincing the interviewer that she is a worthy candidate. Furthermore, the level of a candidate's confidence at the conference interview is positively related to the number of campus visits secured.

We measure the success at the fly-out stage of the job market by the number of offers received and by the offers to accepted fly-outs conversion ratio (see Table 5). As with the results of the previous stages, we demonstrate that the number of offers variable is related to the quintile of graduating school ranking. Candidates from top quintile schools receive one more job offer while candidates of the fifth quintile schools receive 1.3 less job offers when compared to the third quintile graduates.

As in the case of the conference stage, Caucasian candidates secure more job offers. The number of applications submitted has a positive statistically significant effect on the number of offers received, but its economic significance is rather low. Experience of presenting at conferences has a significant effect on both the number of offers and the conversion of campus visits into job offers. This result indicates that it is helpful for the students to present their work to non-familiar audiences prior to going to the market. An invitation to resubmit a paper to a journal at the time of the job market and prior work experience also contribute significantly to the increase in the number of job offers. Surprisingly, candidates with professional certifications secure fewer offers and have lower conversion ratios. Finally, candidates with more outgoing personalities appear to be worse at converting campus visits into job offers. A possible explanation to this finding is that the faculty of the hiring institution may be alerted by overly outgoing candidates.

Finally, we investigate the factors that affect the measures of the overall success of the candidate on the job market. We use salary and the research to teaching index as the measure of success at this stage. The coefficients for Eq. (1) are reported in Table 6. As in previous results, the quintile of graduate's Ph.D. school ranking plays a significant role in the level of compensation and the quality of the hiring university (measured by the research to teaching index). Candidates from top quintile schools receive annual salaries that are about $50,000 higher than those of the third quintile schools. Students of the second quintile schools receive average compensation that is $30,000 higher than the graduates of third quintile universities. Based on the results of model (1), in which we control only for the demographic attributes of the candidates, fifth quintile schools' graduates receive salaries that are $21,000 less than those of the third quintile institutions. However, this result disappears when the resume and personal

Table 5

Fly-out stage.

The table presents the results for the tests of success on the fly-out stage of the job market using Eq. (1). The dependent variable in models (1), (2), and (3) is NumberOffers, which is the number of job offers that a candidate received following the fly-outs. The dependent variable in models (4), (5), and (6) is PercentOffers, which is the ratio of the number of offers to the number of fly-outs a candidate had. The definitions of the explanatory variables are consistent with Table 1. The reported statistics from top to bottom are the coefficient and the p-values for them. The *, **, and *** represent significance at 10, 5, and 1% level, respectively. VIF ranges for models (1)–(6) are as follows: 1.07–1.72, 1.14–2.18, 1.14–2.17, 1.07–1.73, 1.14–2.20, 1.15–2.18.

Variable	NumberOffers			PercentOffers		
	(1)	(2)	(3)	(4)	(5)	(6)
Gender	.143	.029	−.049	−.040	.022	.004
	(.580)	(.913)	(.867)	(.570)	(.726)	(.945)
AgeMarket	−.024	−.032*	−.036*	−.004	−.003	−.003
	(.212)	(.098)	(.076)	(.482)	(.498)	(.445)
ImmigrationStatus	−.033	.012	−.114	.001	−.017	−.032
	(.904)	(.965)	(.708)	(.981)	(.746)	(.541)
Caucasian	.467	.649**	.780**	−.094*	−.055	−.035
	(.113)	(.040)	(.013)	(.095)	(.310)	(.520)
Ranking 1	.876*	1.016**	1.150***	−.108*	−.085	−.041
	(.056)	(.022)	(.010)	(.093)	(.250)	(.562)
Ranking 2	.141	.163	.234	−.091	−.131*	−.093
	(.736)	(.667)	(.545)	(.140)	(.069)	(.194)
Ranking 4	−.356	−.315	−.061	.144*	.091	.091
	(.435)	(.468)	(.889)	(.070)	(.309)	(.288)
Ranking 5	−.957**	−1.340***	−1.360***	−.024	−.082	−.100
	(.012)	(.001)	(.001)	(.795)	(.343)	(.238)
NumberApps		.009**	.008**		−.0009*	−.001**
		(.014)	(.019)		(.076)	(.043)
Proposed		−.106	−.234		.020	−.018
		(.751)	(.498)		(.762)	(.790)
Defended		−.056	−.019		.075	.040
		(.881)	(.958)		(.364)	(.617)
CustomLetters		−.385	−.372**		.018	.045
		(.251)	(.289)		(.760)	(.479)
PostedCVOnline		−.278	−.256		−.001	.010
		(.389)	(.424)		(.983)	(.860)
PriorConferences		.633**	.710**		.142**	.165***
		(.046)	(.025)		(.014)	(.006)
AFAorWFA		.871	.771		.057	.038
		(.101)	(.149)		(.541)	(.684)
PriorPublications		.125	.177		−.073	−.070
		(.665)	(.550)		(.180)	(.193)
RRs		.634**	.626**		−.043	−.024
		(.037)	(.044)		(.407)	(.647)
WorkExperience		.561**	.641**		.036	.063
		(.035)	(.033)		(.538)	(.268)
Certifications		−.656*	−.698*		−.218***	−.206***
		(.097)	(.092)		(.001)	(.003)
CoursesTaught		.169	.231		−.003	.023
		(.267)	(.151)		(.901)	(.412)
Network			−.033			.023
			(.895)			(.629)
ConfidenceFlyout			−.046			−.021*
			(.608)			(.190)
Personality			−.021			−.009**
			(.419)			(.017)
Intercept	2.722***	1.440**	2.247**	.756***	.664***	.935***
	(.000)	(.038)	(.032)	(.000)	(.000)	(.000)
Adj. R-squared	0.1668	0.3472	0.3516	0.0803	0.1832	0.2256
F probability	0.0001***	0.0000***	0.0000***	0.0374**	0.0159**	0.0011**
N	180	171	163	164	155	154

attributes are included in the regression, which implies that candidates from the lower quintile schools can increase their salaries by improving their CVs.[17] Models (2) and (3) demonstrate that compensation for third, fourth, and fifth quintile graduates do not differ significantly.

The variable Caucasian, which proxies for the race of the candidate, is a significant determinant of the salary obtained by the candidate. Caucasians secure compensations that are about $17,000 higher than salaries of candidates of other races. The composition of the non-Caucasian subsample consists of 69.5% Asian candidates, which may support the language barrier, rather than the purely

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[17] Alternatively, candidates of the third quintile schools with weaker resumes may not be able to secure positions with larger compensation packages.

Table 6

Offer stage.

The table presents the results for the tests of success on the offer stage of the job market using Eq. (1). The dependent variable in models (1), (2), and (3) is Salary, which is the salary that the candidate secured when first on the job market. The dependent variable in models (4), (5), and (6) is ResearchTeachingIndex, which is the index that combines the teaching load and the research requirements of the first placement institution (a higher index constitutes a more research-oriented institution). The definitions of the explanatory variables are consistent with Table 1. The reported statistics from top to bottom are the coefficient and the p-values for them. The *, **, and *** represent significance at 10, 5, and 1% level, respectively. VIFs for models (1)–(6) are as follows: 1.08–1.68, 1.14–2.12, 1.15–2.10, 1.07–1.77, 1.13–2.22, 1.15–2.21.

Variable	Salary			ResearchTeachngIndex		
	(1)	(2)	(3)	(4)	(5)	(6)
Gender	8.021	7.246	4.370	−.015	.102	.059
	(.158)	(.250)	(.490)	(.951)	(.680)	(.813)
AgeMarket	−1.649***	−1.227**	−1.291**	−.050***	−.027	−.024
	(.000)	(.018)	(.017)	(.008)	(.162)	(.247)
ImmigrationStatus	6.219	5.443	3.798	.142	−.028	−.156
	(.267)	(.341)	(.522)	(.578)	(.905)	(.493)
Caucasian	16.379***	17.715***	17.991***	−.014	.120	.017
	(.003)	(.004)	(.004)	(.957)	(.636)	(.949)
Ranking 1	50.83***	46.454***	48.530***	1.929***	1.629***	1.598***
	(.000)	(.000)	(.000)	(.000)	(.000)	(.000)
Ranking 2	25.91***	29.279***	30.874***	.883***	.840**	.778**
	(.001)	(.000)	(.000)	(.009)	(.017)	(.027)
Ranking 4	−6.01	1.772	3.338	−.050	.108	.207
	(.514)	(.861)	(.735)	(.906)	(.799)	(.625)
Ranking 5	−21.40***	−12.698	−12.345	−.664**	−.549*	−.596*
	(.001)	(.121)	(.155)	(.034)	(.087)	(.064)
NumberApps		−.018	−.021		−.002	−.003
		(.783)	(.735)		(.392)	(.274)
Proposed		−8.598	−9.188		.162	.220
		(.243)	(.217)		(.477)	(.350)
Defended		3.379	1.476		.374	.333
		(.748)	(.888)		(.322)	(.410)
CustomLetters		−6.824	−4.313		−.639**	−.645**
		(.347)	(.577)		(.017)	(.011)
PostedCVOnline		−8.647	−10.370		−.254	−.313
		(.189)	(.119)		(.290)	(.204)
PriorConferences		−7.715	−4.880		−.280	−.263
		(.330)	(.495)		(.328)	(.323)
AFAorWFA		10.911	9.666		.435	.522
		(.278)	(.333)		(.239)	(.165)
PriorPublications		−2.041	−2.026		−.086	−.115
		(.724)	(.736)		(.737)	(.657)
RRs		6.489	6.855		.085	.036
		(.242)	(.235)		(.715)	(.875)
WorkExperience		−1.586	1.846		−.035	.042
		(.775)	(.747)		(.877)	(.858)
Certifications		7.583	6.542		−.447*	−.400
		(.301)	(.371)		(.087)	(.128)
CoursesTaught		−4.300	−3.386		−.1315	−.102
		(.246)	(.348)		(.325)	(.416)
Network			.317			.407*
			(.957)			(.053)
ConfidenceFlyout			−2.148			−.081
			(.184)			(.212)
Personality			−.197			.024
			(.629)			(.163)
Intercept	163.69***	182.53***	200.42***	6.495***	6.937***	6.892***
	(.000)	(.000)	(0.000)	(.000)	(.000)	(.000)
Adj. R-squared	0.5172	0.5654	0.586	0.4087	0.4855	0.527
F probability	0.0000***	0.0000***	0.0000***	0.0000***	0.0000***	.0000***
N	183	168	163	181	166	160

race driven, explanation of this result.[18] Furthermore, there appears to be a negative relation between the age of the candidate and her salary. This result can be explained by the fact that graduates of top schools are generally younger (see Table 2).[19]

The result for the research to teaching index is consistent with the notion that graduates of better schools end up with better placements. We generally observe a decrease in the research to teaching index as we move from the first to the fifth quintile of graduate school ranking. The third and the fourth quintile indexes do not differ significantly.

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[18] We obtained this result while controlling for the immigration status of the candidate.

[19] This can also be attributed to the fact that best students excel and accelerate their studies.

Level of teaching experience is negatively related to the level of the research teaching index, which again shows that teaching schools hire graduates of lower level Ph.D.-granting institutions. The network effects are significant while controlling for the ranking of the graduate institution (see Network variable in Table 6 Model 6).

5.3. Interquintile analysis

In Section 5.2, we make generalized conclusions regarding attributes that contribute to improved marketability of candidates. Next, we attempt to answer the question of what attributes increase a candidate's marketability, when measured against the graduates from the same and the next higher (in terms of ranking) quintile school. To that extent, in Table 7, we compare four groups of candidates: 1st versus 2nd, 2nd versus 3rd, 3rd versus 4th, and 4th versus 5th quintiles of graduate school ranking. We do this by running separate regressions with observations from the respective two quintiles included in the subsamples. The formal regression model is as follows:

$$
\begin{aligned}
\text{Dep Variable}_i = {} & \alpha + \beta_1 \text{NumberApps}_i + \beta_2 \text{Ranking X}_i + \beta_3 \text{PriorPublications}_i + \\
& \beta_4 \text{PriorPublications} * \text{Ranking X}_i + \beta_5 \text{RRs}_i + \beta_6 \text{RRs} * \text{Ranking X}_i + \beta_7 \text{AFAorWFA}_i + \beta_8 \text{AFAorWFA} * \text{Ranking X}_i + \\
& \beta_9 \text{CoursesTaught}_i + \beta_{10} \text{CoursesTaught} * \text{Ranking X}_i e_i,
\end{aligned}
\tag{2}
$$

where, Dep Variable and a number of explanatory variables are the same as in Eq. (1). The variable Ranking X is a dummy variable that equals 1 if the observation falls into the lower of the two ranking quintiles. The terms PriorPublications $*$ Ranking X, RRs $*$ Ranking X, AFAorWFA $*$ Ranking X, and CoursesTaught $*$ Ranking X are interaction terms between individual candidate's attribute and Ranking X. This empirical set up allows us to identify the attributes that candidates from lower schools should focus on to increase their competitiveness against their colleagues from the same ranking quintile, which in turn, should make them more competitive against the higher quintile graduates.

Note that the reported results should be interpreted with caution. First, because of the sub-samples' size limitations, we do not include a number of control variables used in previous regressions. Second, we only include variables that candidates have some control over (e.g. working harder on research increases the chances of securing a publication or an invitation to resubmit a paper to a journal) and that are found to be significant in previous tests (see Section 5.2). Since the size of the sub-samples is rather small, some of the surprising findings may be attributed to the limitations of our methodology of ranking the Ph.D. granting school.

When looking at the candidates from the second quintile, we find that experience of presenting at the AFA or WFA increases the conversion of applications to conference interview ratios significantly (the coefficient is 0.345, which represents a 34.5 percentage point higher conversion ratio). Furthermore, candidates who presented at the AFA or WFA secure jobs with significantly higher research requirements. These findings indicate that quality research potential is a primary factor that affects the marketability of graduates of top tier institutions. Candidates with prior publications secure 1.85 more job offers and have a 24 percentage point higher fly-outs to offers conversion ratios. Second quintile candidates with prior publications secure salaries that are on average lower than those of candidates from the first quintile schools and those of second quintile schools without publications. Although the result appears somewhat surprising, it is plausible that some of the publications of the second tier candidates were viewed as a negative rather than a positive signal to the top-tier employers. In the survey, several second quintile candidates indicated that their highest pre-job market publication is in journals that are generally considered of marginal quality by top research-oriented institutions.

The comparison of the second and the third quintiles of school ranking indicates that existence of prior publications helps third quintile students secure on average $42,661 higher compensations and significantly higher research requirements than third tier graduates without publications. Even though prior publications positively affect the compensation of third quintile graduates, it is still below that of the students who graduate from the second quintile schools. Third tier candidates who presented at the AFA or the WFA also enjoy higher compensations and secure jobs with greater research requirements. Furthermore, the third quintile students appear to benefit from prior teaching experience.

Existence of invitations to resubmit a paper to a journal helps fourth quintile candidates in securing positions with higher research requirements, but having prior publications puts them into less research oriented schools. There are not enough candidates with AFA or WFA presentation experience in our sample to draw any inferences regarding the effect of conference participation.

Finally, we observe that existence of an invitation to resubmit a paper to a journal aids the bottom quintile candidates in converting their job applications into conference interviews, but not fly-outs to offers. Generally, it appears that the candidates of the fourth and the fifth quintile are rather homogeneous in that they may be competing for similar positions (also see Table 2 for by quintile of school ranking summary statistics).

Overall, the above results indicate that, to improve their chances on the job market, all candidates should primarily focus on building a job market package that signals quality research potential.

5.4. Satisfaction with the job market outcome

Finally, we measure the attitude of the former candidates toward the job market experience and the secured position. We ask the respondents for their overall level of satisfaction with the job market experience by answering the question: "How would you

Table 7
Interquintile analysis.
The table presents the results for interquintile tests using Eq. (2). The dependent variables are reported in the top row and most explanatory variables are consistent with those discussed in Table 1. The terms PriorPublications ∗ Ranking X, RRs ∗ Ranking X, AFAorWFA ∗ Ranking X, and CoursesTaught ∗ Ranking X are interaction terms between individual candidate's attribute and respective Ranking X variable. The *, **, and *** represent significance at 10, 5, and 1% level respectively.

Variable	NumberInterviews	PercentInterviews	NumberFlyouts	PercentFlyouts	NumberOffers	PercentOffers	Salary	ResearchTeachingIndex
Ranking 1 vs Ranking 2								
PriorPublications ∗ Ranking 2	3.109	.189	.918	−.040	1.854*	.240**	−50.609**	−.392
	(0.651)	(0.153)	(0.711)	(0.724)	(0.066)	(0.034)	(0.012)	(0.641)
RRs ∗ Ranking 2	−.625	−.112	−1.253	−.106	−.707	.001	−17.884	−.435
	(0.899)	(0.314)	(0.472)	(0.240)	(0.465)	(0.989)	(0.246)	(0.325)
AFAorWFA ∗ Ranking 2	10.501	.345**	2.259	.127	1.049	.177	14.838	1.472***
	(0.311)	(0.025)	(0.498)	(0.565)	(0.300)	(0.368)	(0.622)	(0.005)
CoursesTaught ∗ Ranking 2	−1.786	−.072	.194	−.016	−.149	−.025	−11.372	−.544
	(0.548)	(0.192)	(0.847)	(0.802)	(0.728)	(0.728)	(0.295)	(0.107)
NumberApps	.136***	−.003***	.020	−.000	.009**	−.000	−.128	.003
	(0.001)	(0.000)	(0.100)	(0.151)	(0.039)	(0.594)	(0.121)	(0.256)
Ranking 2	−2.408	.058	−2.651	.080	−.647	−.025	17.999	.214
	(0.762)	(0.677)	(0.320)	(0.648)	(0.605)	(0.896)	(0.511)	(0.795)
PriorPublications	2.381	.007	.981	−.014	−.701	−.190***	12.973	−.596**
	(0.658)	(0.928)	(0.536)	(0.822)	(0.256)	(0.004)	(0.266)	(0.029)
RRs	5.815	.126	1.896	.022	1.003	−.043	11.131	−.003
	(0.119)	(0.188)	(0.200)	(0.625)	(0.162)	(0.563)	(0.243)	(0.984)
AFAorWFA	−3.018	−.096	.218	.047	.247	.007	29.085	−.033
	(0.732)	(0.408)	(0.925)	(0.771)	(0.646)	(0.954)	(0.161)	(0.916)
CoursesTaught	−.408	.017	−.430	−.009	−.021	.013	−9.495	−.016
	(0.838)	(0.659)	(0.528)	(0.772)	(0.944)	(0.803)	(0.194)	(0.81)
Intercept	12.909**	.585***	7.074***	.426***	2.608***	.505***	207.196***	6.948***
	(0.037)	(0.000)	(0.001)	(0.000)	(0.008)	(0.000)	(0.000)	(0.000)
Adj. R-squared	0.3537	0.4915	0.2161	0.1173	0.2101	0.1182	0.3789	0.3491
F probability	0.0006***	0.000***	0.0804*	0.8716	0.0171**	0.1716	0.0002***	0.0004***
N	71	71	77	67	78	73	77	76
Ranking 2 vs Ranking 3								
PriorPublications ∗ Ranking 3	.698	−.154	−1.238	.071	−.315	.077	42.661**	1.773*
	(0.904)	(0.283)	(0.598)	(0.558)	(0.768)	(0.574)	(0.043)	(0.056)
RRs ∗ Ranking 3	−10.621**	.133	−.025	.211*	.631	.218	15.245	.066
	(0.019)	(0.521)	(0.989)	(0.071)	(0.572)	(0.191)	(0.453)	(0.917)
AFAorWFA ∗ Ranking 3	7.534	−.223	4.419	−.090	1.822	−.287*	−8.422	−1.014
	(0.277)	(0.251)	(0.142)	(0.579)	(0.123)	(0.079)	(0.731)	(0.188)
CoursesTaught ∗ Ranking 3	1.535	−.062	.396	.025	.650	.074	20.401*	.475
	(0.596)	(0.600)	(0.715)	(0.728)	(0.201)	(0.349)	(0.073)	(0.277)
NumberApps	.112***	−.004***	.018	−.000	.007	−.000	−.091	.001
	(0.005)	(0.000)	(0.171)	(0.387)	(0.180)	(0.391)	(0.344)	(0.571)
Ranking 3	−4.370	.156	−3.047	−.231	−2.415*	−.107	−93.585***	−2.491*
	(0.609)	(0.635)	(0.334)	(0.234)	(0.096)	(0.669)	(0.009)	(0.055)
PriorPublications	5.530	.196*	1.908	−.055	1.168	.053	−38.001**	−.976
	(0.265)	(0.062)	(0.329)	(0.581)	(0.166)	(0.547)	(0.015)	(0.231)
RRs	5.053	.011	.641	−.082	.293	−.042	−6.767	−.438
	(0.160)	(0.846)	(0.501)	(0.318)	(0.674)	(0.712)	(0.582)	(0.317)
AFAorWFA	8.029	.257***	2.506	.169	1.344	.194	42.993**	1.471***

Table 7 (continued)

Variable	NumberInterviews	PercentInterviews	NumberFlyouts	PercentFlyouts	NumberOffers	PercentOffers	Salary	ResearchTeachingIndex
	(0.212)	(0.008)	(0.310)	(0.298)	(0.151)	(0.165)	(0.049)	(0.001)
CoursesTaught	−2.138	−.053	−.229	−.027	−.160	−.009	−21.110***	−.552*
	(0.312)	(0.175)	(0.761)	(0.639)	(0.600)	(0.861)	(0.010)	(0.098)
Intercept	12.025*	.666***	4.481*	.491***	2.059**	.497***	223.488***	7.222***
	(0.069)	(0.000)	(0.061)	(0.004)	(0.031)	(0.004)	(0.000)	(0.000)
Adj. R-squared	0.4628	0.4379	0.3538	0.2230	0.4029	0.2116	0.3459	0.2567
F probability	0.0000***	0.0000***	0.0008***	0.1796	0.0004***	0.3412	0.0004***	0.0000***
N	64	64	66	57	70	62	71	67
Ranking 3 vs Ranking 4								
PriorPublications * Ranking 4	−3.519	.071	.175	.015	−.812	−.298	−25.042	−2.204**
	(0.482)	(0.538)	(0.927)	(0.871)	(0.418)	(0.137)	(0.320)	(0.035)
RRs * Ranking 4	4.224	−.244	−.384	−.092	−.210	.077	−21.848	1.839*
	(0.325)	(0.262)	(0.847)	(0.327)	(0.848)	(0.670)	(0.395)	(0.097)
AFAorWFA * Ranking 4	–			–	–		–	
CoursesTaught * Ranking 4	1.605	.133	.163	.008	.018	−.032	−.584	−.547
	(0.497)	(0.201)	(0.861)	(0.870)	(0.971)	(0.718)	(0.963)	(0.265)
NumberApps	.065**	−.004***	.004	−.000	.003	−.000	−.119	−.008
	(0.045)	(0.005)	(0.713)	(0.620)	(0.662)	(0.784)	(0.441)	(0.264)
Ranking 4	−5.474	−.403	−.951	−.019	−.021	.193	14.452	1.748
	(0.442)	(0.167)	(0.733)	(0.895)	(0.987)	(0.509)	(0.717)	(0.264)
PriorPublications	6.520**	.038	1.023	.017	1.077	.141	7.047	1.085**
	(0.031)	(0.692)	(0.410)	(0.800)	(0.123)	(0.211)	(0.639)	(0.043)
RRs	−6.198**	.144	.278	.135	.857	.182	8.035	−.592
	(0.012)	(0.457)	(0.870)	(0.106)	(0.341)	(0.139)	(0.632)	(0.289)
AFAorWFA	14.833***	.066	6.329***	.062	2.351**	−.191	23.865	.077
	(0.000)	(0.569)	(0.000)	(0.166)	(0.022)	(0.130)	(0.114)	(0.915)
CoursesTaught	−.377	−.113	.221	−.006	.450	.050	−1.455	−.057
	(0.830)	(0.287)	(0.774)	(0.876)	(264)	(0.441)	(0.858)	(0.841)
Intercept	10.335*	.813**	2.369	.251**	.096	.419**	134.562***	5.426***
	(0.060)	(0.026)	(0.334)	(0.041)	(0.936)	(0.028)	(0.000)	(0.000)
Adj. R-squared	0.3882	0.3272	0.3746	0.1499	0.3078	0.2262	0.0960	0.1940
F probability	0.0000***	0.0488**	0.0040***	0.2698	0.0296**	0.0564	0.4267	0.4282
N	57	57	54	50	60	49	60	56

Ranking 4 vs Ranking 5

|								
PriorPublications ∗ Ranking 5	−2.588	−.078	−1.202	−.140	−.725	−.048	11.402	1.272
	(0.576)	(0.403)	(0.477)	(0.201)	(0.406)	(0.854)	(0.590)	(0.162)
RRs ∗ Ranking 5	5.939	.183**	1.406	.065	−.290	−.415*	21.235	−1.200
	(0.162)	(0.047)	(0.327)	(0.539)	(0.720)	(0.052)	(0.329)	(0.233)
AFAorWFA ∗ Ranking 5	–	–	–	–	–	–	–	–
CoursesTaught ∗ Ranking 5	−1.868	−.056	.563	.105**	−.119	−.010	−6.438	.389
	(0.365)	(0.311)	(0.402)	(0.040)	(0.786)	(0.941)	(0.541)	(0.353)
NumberApps	.075**	−.002***	.019*	−.000	.005	−.002	−.017	−.013***
	(0.045)	(0.001)	(0.090)	(0.649)	(0.297)	(0.176)	(0.882)	(0.004)
Ranking 5	1.608	.090	−2.708	−.238	−.030	.164	−5.963	−2.004
	(0.802)	(0.562)	(0.175)	(0.247)	(0.978)	(0.695)	(0.853)	(0.141)
PriorPublications	2.488	.093	.851	.025	.130	−.157	−21.355	−1.120
	(0.534)	(0.191)	(0.563)	(0.689)	(0.855)	(0.305)	(0.290)	(0.171)
RRs	−2.174	−.063	−.001	.036	.585	.215*	−13.992	1.100
	(0.542)	(0.369)	(0.999)	(0.537)	(0.378)	(0.099)	(0.469)	(0.222)
AFAorWFA	4.516	.155**	.631	−.105	−.440	−.079	−32.452***	−1.093**
	(0.179)	(0.032)	(0.609)	(0.247)	(0.296)	(0.736)	(0.003)	(0.023)
CoursesTaught	1.356	.038	.549	.002	.500	−.005	−.837	−.673*
	(0.349)	(0.231)	(0.272)	(0.915)	(0.113)	(0.925)	(0.925)	(0.066)
Intercept	4.553	.248**	.425	.241*	.025	.824***	143.073***	7.788***
	(0.377)	(0.011)	(0.792)	(0.052)	(0.975)	(0.002)	(0.000)	(0.000)
Adj. R-squared	0.2226	0.2850	0.2059	0.2025	0.1613	0.2088	0.2115	0.2874
F probability	0.2139	0.0008***	0.2344	0.1533	0.1006	0.0542*	0.0344**	0.0749*
N	67	67	62	60	67	54	64	65
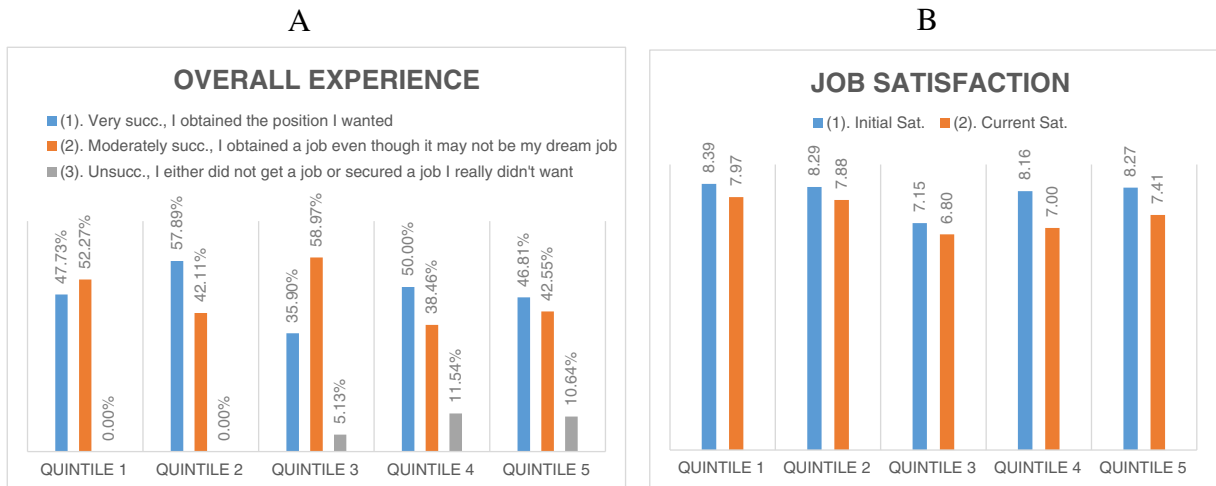
Fig. 3. Overall experience and satisfaction with outcome. Panel A reports the answers to the question: "How would you describe your first job market experience?" by quintile of school ranking, where Quintile 1 represents the first (top) quintile schools. The possible answers provided in the survey are presented on the graph from left to right in the following order: (1) Very successful. I obtained the position I wanted; (2) Moderately successful. I obtained a job even though it may not be my dream job; (3) Unsuccessful. I either did not secure a job or secured a job I really did not want. The bars on the chart represent the percentage of respondent who chose each of the three answers. Panel B reports the answers to the questions: (1) "How satisfied were you at the time of accepting the job?" and (2) "How satisfied are you with the job now?" by quintile of school ranking. The second question was only asked of the candidates who spent at least one year in the position and did not switch jobs since their first job market experience. Respondents were given a scale of 1 to 10 where 1 is the lowest and 10 is the highest level of satisfaction.

describe your first job market experience?" Three possible answers are available: (1) Very successful. I obtained the position I wanted, (2) Moderately successful, I obtained a job even though it may not be my dream job, and (3) Unsuccessful. I either did not get a job or secured a job I really didn't want. The responses as a percentage of total observations by quintile of school ranking are presented in Panel A of Fig. 3. No respondents from the 1st and the 2nd quintiles have reported that they were unsuccessful when they first went on the job market. The top quintile candidates' responses split roughly equally between "very" and the "moderately" successful. The second quintile candidates appear to be more satisfied with the job market experience; almost 60% reported that they were very successful. Third quintile candidates appear to be more likely to be moderately successful, 60%, versus 40% of responses in very successful category. The level of "unsuccessful" responses is roughly 11% for both the 4th and the 5th quintile graduates.

Additionally, to quantify the level of satisfaction, we ask the respondents to assign a numerical value to their happiness with the first placement (accepted offer) at the time when they first accepted the offer and after at least one year of employment. The scale ranged from 0 to 10 with 0 being the lowest and 10 being the highest level of happiness. Our results indicate that the level of satisfaction is generally very high for all graduates at the time of accepting the offer and after at least one year of employment (see Fig. 3 Panel B). The lowest level of happiness, 6.9, is reported by the 3rd quintile graduates versus average values of around 8 for the other four quintiles. The level of happiness drops in years following the employment.[20] Although the drop in satisfaction is most pronounced among the fourth and the fifth quintile graduates, the third quintile graduates are also the least satisfied in the longer term.

To further investigate the effect of the job market package on the level of satisfaction at the time of accepting the offer, we run Eq. (1) with Initial Satisfaction as dependent variable and salary included as an explanatory variable (see Table 8).[21] The level of salary appears to be the dominating factor that explains the level of satisfaction of the first time hire. In our setting, salary likely proxies for a number of unobservable variables that are beyond the monetary compensation. It may proxy for the quality of other faculty, better facilities, better resources for research and other nonpecuniary benefits that affect new hire's satisfaction with her placement. Notably, the variables that proxy for candidates being graduates of the 4th and 5th quintile of school ranking are also significant while controlling for the salary level (see Model 1). This result may be explained by the fact that candidates from lower ranked schools are satisfied because they found a job. Throughout the job market process, they receive fewer interviews, fewer fly-out invitations, and fewer job offers. Therefore, if a candidate from a top school is confident about her prospects of finding a job, she derives satisfaction from securing a higher compensation; a candidate from a lower tier school may derive satisfaction from simply securing a job. This conclusion is supported by the fact that predominantly the candidates from the bottom two quintiles are sometimes unsuccessful in securing a job when first on the job market (see Figs. 2, 3, and Section 5.3). In addition, we find that candidates with prior publications are more satisfied with the job offer. This result suggests that prior publications serve

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[20] The drop in the level of satisfaction in the long-run is also evidenced in the answers to the question: "Have you changed jobs since the first placement or are you intending to change jobs in the near future?" A little over 47 and 41% of 2007 and 2008 job seekers responded affirmatively. Note that these data may be affected by the individual's not getting tenure at their first placement institutions. The affirmative responses of candidates who were on the job market in 2009, 2010, 2011, 2012, 2013, and 2014 are 33, 35, 25, 34, 38, and 30% respectively.

[21] Since the level of satisfaction after at least a year on the job is likely affected by a number of factors unobservable to us, we do not perform multivariate tests for the *Current Satisfaction* variable.

Table 8
Satisfaction at the time of first job acceptance.

The table presents the results for the tests of candidates' level of satisfaction at the time of accepting the first job. The dependent variable is Initial Satisfaction, which takes the value of 0 to 10 based on the answer of the survey respondent to the question: "On a scale of 0–10, how satisfied (where 0 is very unhappy and 10 is extremely happy) were you with your accepted offer at the time of acceptance?" The definitions of the explanatory variables are consistent with Table 1. The reported statistics from top to bottom are the coefficient and the p-values for them. The *, **, and *** represent significance at 10, 5, and 1% level, respectively. VIF ranges for models (1)–(3) are as follows: 1.15–2.18, 1.32–2.22 and 1.23–2.226.

Variable	Initial Satisfaction	
	(1)	(2)
Gender	−.137	−.351
	(.309)	(.302)
AgeMarket	−.019	−.006
	(.398)	(.791)
ImmigrationStatus	.081	.098
	(.785)	(.738)
Caucasian	−.073	−.079
	(.824)	(.816)
Ranking 1	.524	.469
	(.333)	(.387)
Ranking 2	.726	.633
	(.136)	(.181)
Ranking 4	.356**	.820*
	(.435)	(.075)
Ranking 5	1.228***	1.227***
	(.007)	(.007)
Salary	0.012***	0.013***
	(.004)	(.005)
Network		−.128
		(.665)
ConfidenceFlyout		.113
		(.245)
Personality		.013
		(.565)
Intercept	6.609***	.881***
	(.000)	(.007)
Adj. R-squared	0.1207	0.1317
F probability	0.0116**	0.0716*
N	182	177

as a signal of candidate's quality, and quality candidates tend to receive better job offers. Similarly, candidates who are confident at the fly-out stage are more satisfied with the secured job. This result could also be related to the candidate's quality as higher quality candidates may be more confident about their prospects of securing the job.

6. Responses to selected questions

To gain a better understanding of the job market and the former candidates' priorities and feelings toward their experience on the job market, we ask them several other questions. We report the responses to a few selected questions in the following subsections.

6.1. Priorities of candidates in selecting a job

We ask the former candidates to provide us with the main criteria that they used when selecting the first job. Fig. 4 presents the responses broken down by the school ranking. The hiring school ranking was selected (as highest or second highest) priority by 91% of the respondents from the top tier schools. Interestingly, only between 50 and 60% of the second and third tier candidates selected ranking as an important factor when it comes to job selection. About 30% of fourth and fifth tier candidates were concerned about the ranking. Location of the placement appears to be most important for the bottom two quintiles of graduates, 60% of respondents from both suggested that location is a top determinant. Salary level and the cost of living appear to be more important to the lower quintiles. More candidates from the third, fourth and fifth quintiles are concerned about the level of teaching and research loads at hiring institutions ("Optimality" column of the chart).

6.2. Contributors to success

Fig. 5 displays the results of what attribute candidates perceive to have contributed the most to their success in the market. Results are broken down by the school ranking. Teaching experience and prior publications are overwhelming top choices for candidates from the bottom quintile of school ranking. Work in progress, Ph.D. school ranking, and the advisor are the top choices for the majority of respondents from the top ranked schools. Real world experience appears to be completely irrelevant for the top
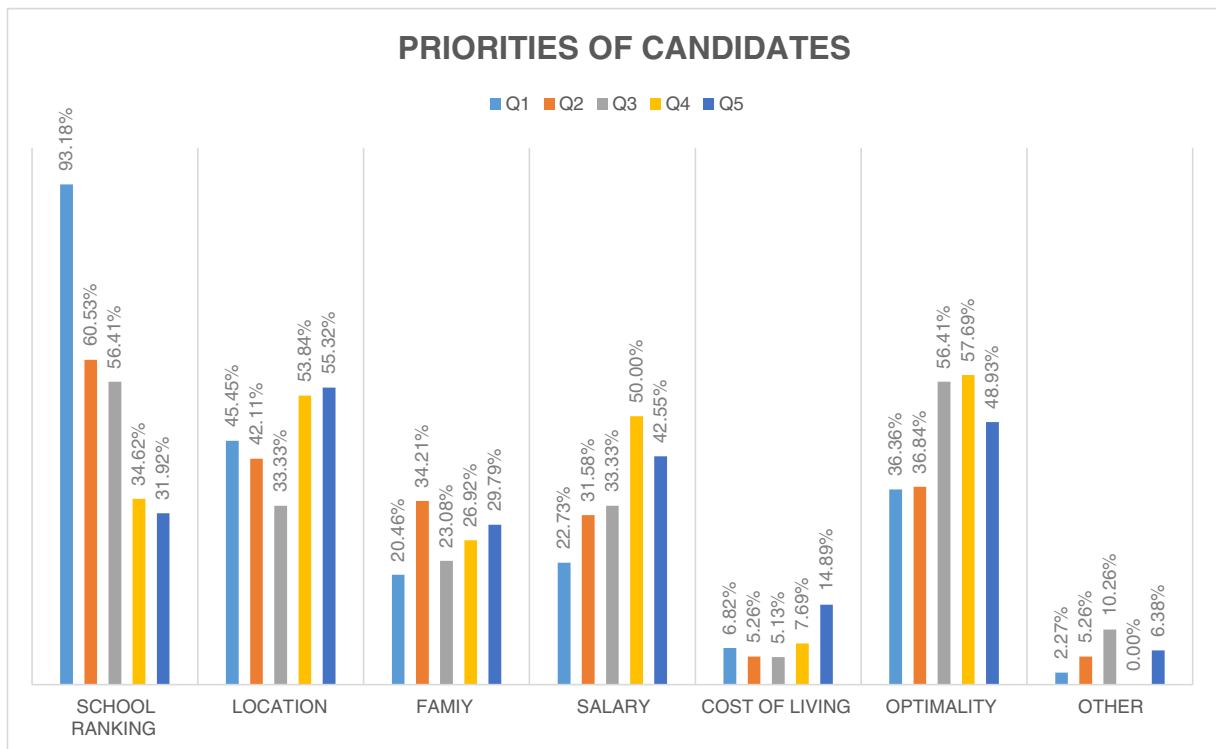
Fig. 4. Priorities of candidates when selecting a job. The figure presents the percent of respondents from each quintile of school ranking (left to right first to fifth quintile) who chose the given factor as the first or the second most important priority when selecting a job. The question asked is: "Before you went on the job market, what were the main factors that you considered for a successful placement? Rank the following factors in the order of importance (where 1 is the most important and 7 is the least important) when you started looking for a job." The possible answers provided in the survey are: school ranking, location, family, salary, cost of living, optimality of the research and teaching requirement, and other. Under other, respondents had an option to type in their primary factors if those provided were not sufficient.

candidates, but was selected as a contributor by some bottom tier respondents. It is noteworthy that about 40% of top school candidates chose prior teaching experience as a contributor to their success.

We also asked the candidates specifically about the role of his/her advisor in the job market. The results indicate that advisors from top ranked schools are much more likely to advocate for their candidates. As such, 65.91% of the respondents from the first quintile of school ranking said that their advisor proactively reached out on behalf of the candidate to prospective employers.[22] The percent of respondents that reported advisor proactively advocating for the candidate drops monotonically as the quintile of school ranking drops. The percentages of advisors who called on behalf of their students is 50%, 48.7%, 34.62%, and 34.04% respectively for the second, third, fourth, and fifth quintiles.

6.3. Respondents' recommendations to future candidates

Lastly, we asked candidates what they would recommend to future candidates to better-prepare them for the job market. The summarized responses to this question are provided in Appendix B.

The recommendations of the candidates from the top three quintiles revolved around research: producing quality research and being able to present it well. The most common recommendations included: Have a good job market paper and present it well; practice the presentation of the job market paper before going in the market; polish your presentation skills by attending conferences; try to have a solo job market paper (or a solo invitation to resubmit a paper to a journal or a solo publication); work with a reputable advisor. The recommendations of the candidates from the two lowest quintiles also revolved around research; however, their recommendations focused more on having a publication prior to going to the market, regardless of its quality. Additionally, candidates in the lowest quintiles also valued social and communication skills. Their most common recommendations included: Get a paper published and have a strong pipeline; develop good social and communication skills; speak in perfect English; have your dissertation proposed before the job market.

Appendix B lists the most common recommendations and the number of participants that provided that particular recommendation in each quintile. The total count of recommendations differs from the number of participants in each quintile as some participants offered more than one recommendation, and some participants did not offer any recommendations.

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[22] These results are based purely on the responses to survey question of whether the advisor called prospective employers. It is possible that the candidate is unaware of the advisor making the calls on his/her behalf.
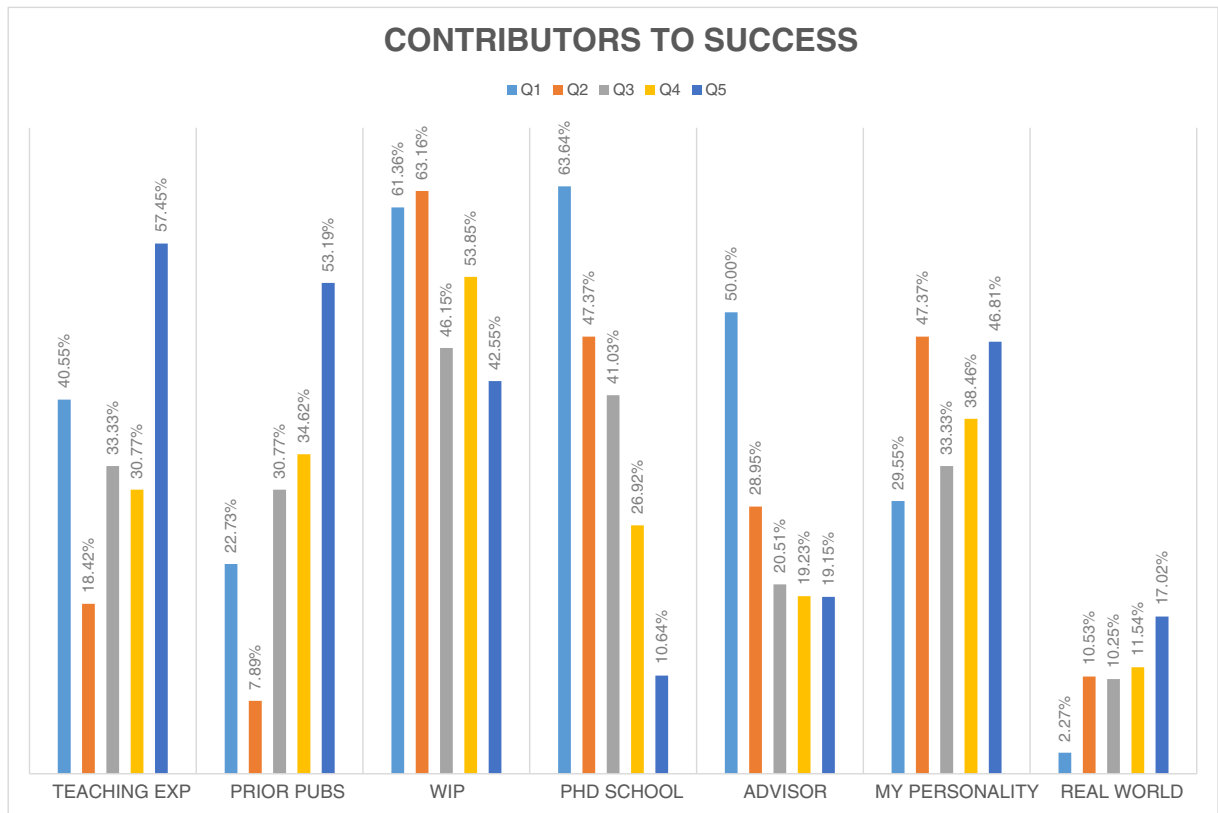
Fig. 5. Factors contributing to success on job market (as perceived by the respondents). The figure presents the percent of respondents from each quintile of school ranking (left to right first to fifth quintile) who chose the given factor as the first or the second largest contributor to their success on the job market. The question asked is: "Rank the following factors (where 1 is the highest and 7 is the lowest) as you feel they contributed to your success on the job market" The possible answers provided in the survey are: teaching experience, prior publications, work in progress (WIP), Ph.D. school ranking, the reputation of my advisor, my personality, real world experience.

7. Conclusion

We conduct a survey of recent (2007–2015) first time Ph.D. in finance job market participants to determine the factors that contribute to a successful placement. We divide the job market process into several stages and define empirical proxies that measure success at each stage. We find that the graduate school ranking is the central determinant of success on all stages of the job search. Candidates from top schools receive more conference interviews, fly-out offers, job offers, and ultimately secure higher monetary compensations and lower teaching loads. Other factors, such as prior publications, current invitations to resubmit a paper to a journal, Caucasian race (or perception of language barriers) of the candidate, prior participation in academic conferences, and the network effect positively contribute to the success at various stages of the job market. Through diligent work before and throughout the Ph.D. program, future candidates should aim at building job market packages that contain the above mentioned factors.

We also provide a discussion of selected survey questions. The responses suggest that there is a wide difference in the priorities of the candidates from different level schools as it pertains to candidate's employer selection criteria. Candidates of top schools are most concerned with the ranking of the schools they place at, while candidates of bottom ranked schools are more concerned with the geographical location and monetary compensation associated with the position. When asked about the factors that contribute to the success of the candidates, the ranking of the Ph.D. granting school is a dominant response by the top school graduates. Prior teaching experience and existence of publications is an overwhelming favorite for the graduates of lower ranked schools.

There is much heterogeneity among the candidates that graduate from different level schools in terms of their objectives, credentials, and the outcomes of the job market process. A fairly high level of satisfaction with the outcomes of the first job search is a characteristic that unites them.

Acknowledgments

Appendix A. Ranking of U.S. Ph.D.-granting universities

The ranking is maintained by Arizona State University and can be accessed at http://legacy.wpcarey.asu.edu/fin-rankings/rankings/results.cfm.
The ranking is based on the number of publications in the following finance journals: Journal of Finance, Journal of Financial Economics, Review of Financial Studies, and Journal of Financial and Quantitative Analysis. We obtain the rankings for Ph.D. granting institutions and group them by quintile of ranking for the period of 2003–2013.

Quintile				
1	2	3	4	5
New York University	U. of Washington	Rutgers University	Kansas University	University of Rhode Island
Harvard University	Indiana University	U. of California at Irvine	Temple University	Old Dominion University
University of Chicago	Emory University	U. of Wisconsin at Madison	University of Buffalo	Southern Illinois University
University of Pennsylvania	Yale University	Carnegie Mellon University	Washington State University	U. of Wisconsin at Milwaukee
Duke University	University of Utah	University of South Carolina	University of Tennessee	Florida Atlantic University
University of California at LA	Purdue University	Georgia Tech	Florida State University	West Virginia U.
University of Michigan	Arizona State U.	Tulane University	University of Alabama	Auburn University
Columbia University	University of Georgia	University of Missouri	U. of Texas at San Antonio	Kent State University
University of Texas	U. of Minnesota	Drexel University	University of Central Florida	Oklahoma State University
MIT	Baruch College	Louisiana State University	University of Memphis	Wayne State University
Ohio State University	Rice University	University of Oregon	Texas Tech University	U. of Massachusetts — Boston
Stanford University	University of Rochester	Virginia Tech	University of Connecticut	UNC at Charlotte
UNC at Chapel Hill	Penn State University	George Washington University	Brandeis University	Florida International University
U. of California at Berkeley	University of Florida	University of Pittsburgh	U. of Texas at Arlington	University of New Orleans
Northwestern University	Michigan State U.	Syracuse University	University of Texas El Paso	Golden Gate University
Cornell University	Texas A&M University	University of South Florida	University of Mississippi	Illinois Institute of Technology
University of Maryland	University of Houston	Oklahoma University	University of Nebraska	Cleveland State University
Washington U. at St. Louis	Vanderbilt University	University of Colorado — Boulder	Binghamton University	Louisiana Tech University
Boston College	University of Arizona	University of Kentucky	University of Arkansas	University of North Texas
U. of Southern California	University of Iowa	U. of Massachusetts — Amherst	Rensselaer Polytechnic Institute	U. of Texas Pan American
U. of Illinois at Urbana-Champaign	U. of Texas at Dallas	University of Cincinnati		Mississippi State University
	Georgia State University			

Appendix B. Respondents' recommendations to future candidates

The appendix presents the responses to the following open-ended question of the survey: "What would you recommend to future first time job market participants?" by quintile of graduate school ranking.

	Number or respondents that offered the given recommendation					
Recommendation	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	Total
Develop a strong job market paper	19	13	4	1	0	37
Attain some presentation experience	12	9	8	2	1	32
Work with a reputable adviser	6	1	3	0	1	11
Develop a strong pipeline	6	5	9	3	14	37
Develop a strong network and interpersonal skills	5	5	10	4	7	31
Practice interviewing	4	2	3	1	4	14
Get a publication prior to the market	3	5	8	5	10	31
Get an R&R prior to the market	3	2	6	4	1	16
Have a solo paper/Focus in a narrow area	3	0	0	0	0	3
Obtain some teaching experience	0	1	4	1	6	12
Learn about the schools interviewing you	0	0	1	0	2	3
Send customized cover letters	0	0	1	0	0	1
Obtain a certification (e.g. CFA, CFP) prior to the market	0	0	0	1	0	1
Propose before going on the market	0	0	0	0	1	1

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