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Why Is Hiring Taking Longer?

New Insights from Glassdoor Data

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Overview

- 1 | The time required for hiring processes has grown dramatically in recent years, both in the U.S. and internationally. What factors are driving this trend? Which job seekers face the longest delays and why?
- 2 | This study presents a statistical analysis of trends in hiring times based on a unique data source: reviews of job interview experiences from Glassdoor.
- 3 | Based on a sample of 344,250 interview reviews spanning six countries, we examine a variety of factors affecting the length of interview processes: industry factors, company factors, country factors, differences in job titles, and even the changing mix of job interview “screening” methods used by employers.

Key Findings

There are large international differences in time required for interview processes. The average overall job interview process takes 22.9 days in the U.S. But jobs in France, Germany and the United Kingdom each take on average 4 to 9 days longer than in the United States and Canada.

Job interview processes are getting longer, both in the U.S. and abroad. Average interview processes have grown by 3.3 to 3.7 days since 2009. This trend remains even after controlling for differences in job titles, companies, industries and many other factors.

Hiring policies of employers can have a large effect on the length of the interview process. Choosing to require group panel interviews, candidate presentations, background checks, skills tests and more each have a positive and statistically significant effect on hiring times.

Personal characteristics of job seekers—including gender, age and highest level of education—have zero statistical effect on interview lengths. All of the recent growth in hiring processes appears to be driven entirely by economy-wide shifts in the composition of employers, job titles, hiring industries, and company HR policies.

Employee background checks, skills tests and drug tests are becoming more common among employers. This increased reliance on job candidate “screening” methods is a likely contributor to the recent trend toward longer interview times.

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Introduction

The time required for job interview processes varies dramatically throughout the economy. For software engineers, the typical job interview process takes an average of 21 days. By contrast, the typical hiring process for patent examiners takes more than four times as long at 88 days. What explains these differences? Are hiring delays due to differences in company HR policies? The personal characteristics of job seekers? Or broader economic trends throughout today's labor market?

This study presents new evidence on trends in time required for job interview processes based on a unique data source: Glassdoor job interview reviews.¹ The data provide insights into interview durations around the world, allowing us to statistically examine what factors explain patterns in hiring times. Previous analyses of Glassdoor data have documented an upward trend in hiring times in recent years.² This study carefully examines this question by statistically controlling for a large number of factors affecting interview times: company factors, trends in job titles, differences in hiring industries, job seeker characteristics and more. The findings shed new light on the striking diversity of hiring experiences faced by job seekers across industries and around the world.

Most economic research on hiring times has been focused on the employer's perspective—so called “vacancy durations” that measure how long it takes a company to fill an open job.³ There has been surprisingly little research on “interview durations” from the job seeker's perspective, and how company HR policies influence delays in job matching throughout the economy. This study helps fill this gap by providing new insights about the time required for job matching from the individual job seeker's perspective.

This study is organized into two sections. In Section I, we present seven basic patterns in job interview durations based on Glassdoor data. In Section II, we dig deeper into these patterns using a multivariate regression framework to statistically control for factors that affect hiring times, both in the U.S. and around the world. The results carefully identify which factors have contributed—or not contributed—to recent trends toward longer hiring processes in today's labor market.

¹ More information about Glassdoor job interview reviews is available at <http://www.glassdoor.com/Interview/index.htm>.

² See for example <http://economix.blogs.nytimes.com/2014/01/27/the-endless-interview-process/>, and <http://www.nytimes.com/2013/03/07/business/economy/despite-job-vacancies-employers-shy-away-from-hiring.html?pagewanted=all&r=0>.

³ For example, the technology recruiting company Dice publishes a monthly measure of U.S. job vacancy duration based on a method developed by Steven J. Davis, Jason Faberman and John Haltiwanger in “The Establishment-Level Behavior of Vacancies and Hiring,” *Quarterly Journal of Economics*, 2013 (see <http://dicehiringindicators.com>).

1. Patterns in Job Interview Durations

In this section, we summarize basic facts about job interview durations based on a sample of 344,250 interview reviews submitted anonymously to Glassdoor during the six-year period from February 2009 through February 2015.⁴ Several features of the data distinguish it from other publicly available information on time required for job matching:

- The data are international rather than U.S.-focused. This offers new insights on how cross-country differences in institutions and culture affect hiring times, in addition to differences in job titles, industries and company characteristics.
- They illustrate the time required for hiring processes from the job seeker's perspective rather than employers. Employer and employee measures are closely related, but capture distinct views of job matching. For example, one job "vacancy" from an employer's perspective frequently corresponds to several repeated "interview durations" for subsequent job applicants for the same job.
- The data are richly detailed, containing job interview characteristics, specific employer names, job titles, detailed geographic areas, and even job seeker demographic characteristics such as gender, age and education.⁵

Pattern #1: Around the World, Hiring Times Vary Dramatically

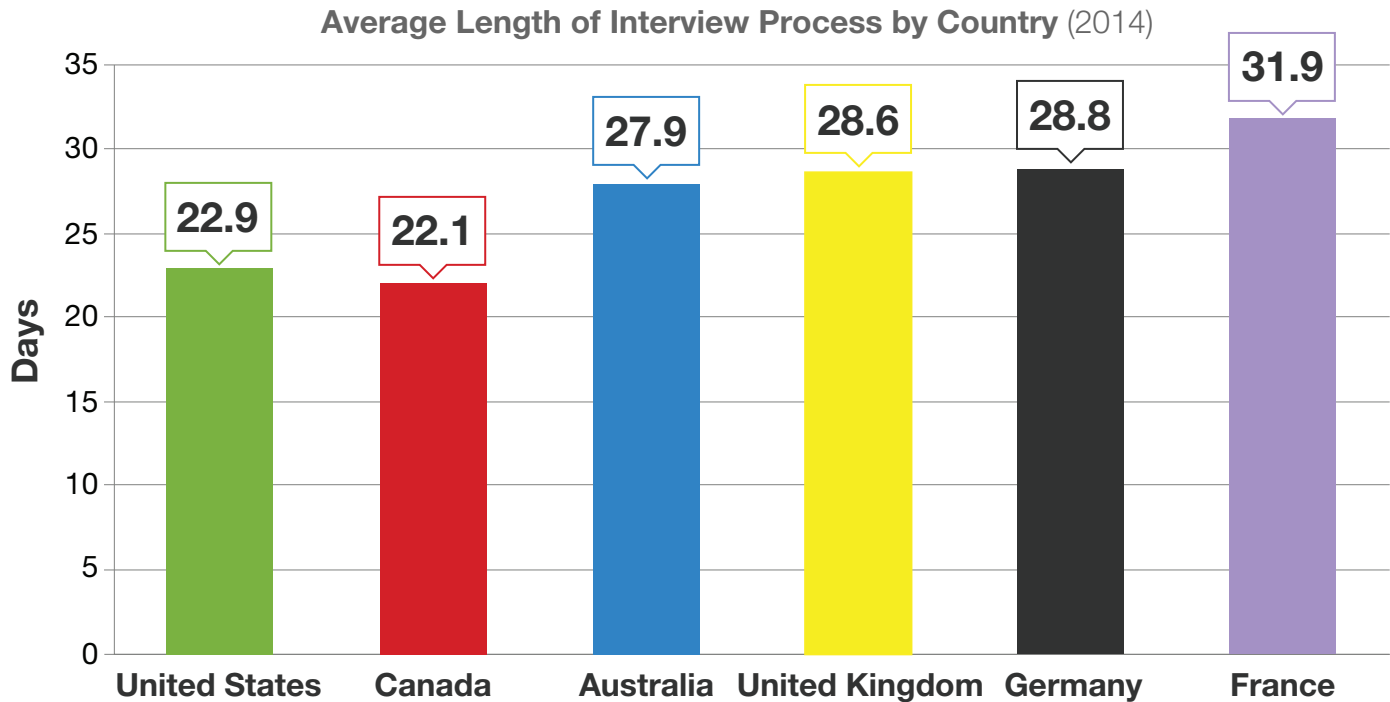
The time required for job interview processes varies widely around the world. In the United States, the job interview process takes an average of 22.9 days overall. Only job seekers in Canada report shorter hiring times at 22.1 days on average. By contrast, job seekers in France, Germany, the United Kingdom and Australia all report significantly longer job interview processes. French job seekers report the longest interview durations at 31.9 days, followed by Germany at 28.8 days, the United Kingdom at 28.6 days, and Australia at 27.9 days.

⁴ Data on the length of the hiring process is based on user responses to the question, "How long was the entire [interview] process?" from Glassdoor's job interview review questionnaire. User responses are coded in calendar days. The complete interview questionnaire is available at http://www.glassdoor.com/survey/start_input.htm?showSurvey=INTERVIEWS.

⁵ Demographic information is available for the subset of individuals who voluntarily contributed information on gender, age and educational background. This comprises 46 percent of the sample for education, 52 percent for gender, and 58 percent for age.

Figure 1 shows average days required for job interview processes for six countries based on Glassdoor data: the United States, Australia, Canada, France, Germany and the United Kingdom.

Figure 1. Average Length of Job Interview Processes Varies Widely by Country



Note: Data are from January 1, 2014 to December 31, 2014. Source: Glassdoor Economic Research.

According to academic research, part of the explanation for differences in hiring times across countries is due to differences in how efficiently labor markets match up employers and workers.⁶ For a variety of reasons, labor markets in some countries simply do a better job at matching job seekers and companies. This partly reflects differences in labor market regulations, culture and other institutions such as rates of unionization. Additionally, it reflects differences in what industries and job titles cluster together in different countries, as some jobs and industries inherently require longer hiring processes.

As we will see in Section II below, these large international differences in hiring times persist even after controlling for differences in companies, job titles, seasonal factors, and job seeker characteristics across countries. That suggests legal and institutional factors play an important role in explaining job interview durations around the world.

⁶ For example, see: <http://www.voxeu.org/article/labour-market-institutions-and-worker-flows-comparing-germany-and-us>.

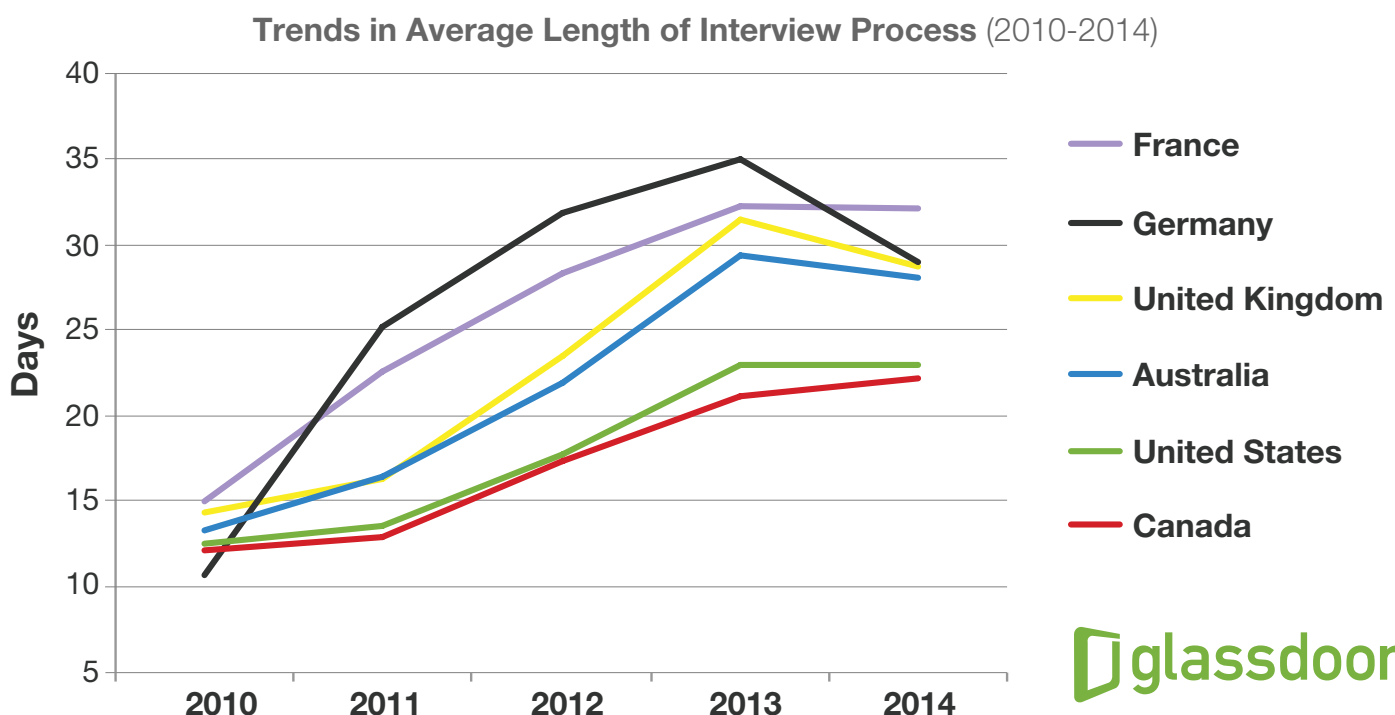
Pattern #2: Hiring Times Are Trending Up

There has been a striking upward trend in time required for job interview processes in recent years, both in the U.S. and around the world. In the U.S., average hiring times grew from 12.6 days to 22.9 days between 2010 and 2014. A similar upward trend is evident for all six countries we examined, with hiring times growing in Australia, Canada, France, Germany and the United Kingdom. Figure 2 shows average job interview durations for six countries from 2010 to 2014.

While the apparent upward trend is clear in Figure 2, it's important to note that simple plots of averages can be misleading. Many economic factors have shifted during this period including the mix of industries, jobs and geographic areas that are hiring. The simple averages in Figure 2 don't control for any of these factors. Second, all of the economies of these countries have been expanding during this period. How much of this trend is simply due to cyclical factors like changes in unemployment rates or labor demand? How much is due to actual changes in hiring processes?

As we will see in Section II below, once we carefully control for these confounding factors we still find an upward trend in hiring times of roughly 3.3 to 3.7 days since 2009. This represents a statistically significant increase, but is markedly smaller than is apparent from unconditional averages in Figure 2.

Figure 2. Trends in Average Length of Job Interview Processes Around the World



Source: Glassdoor Economic Research

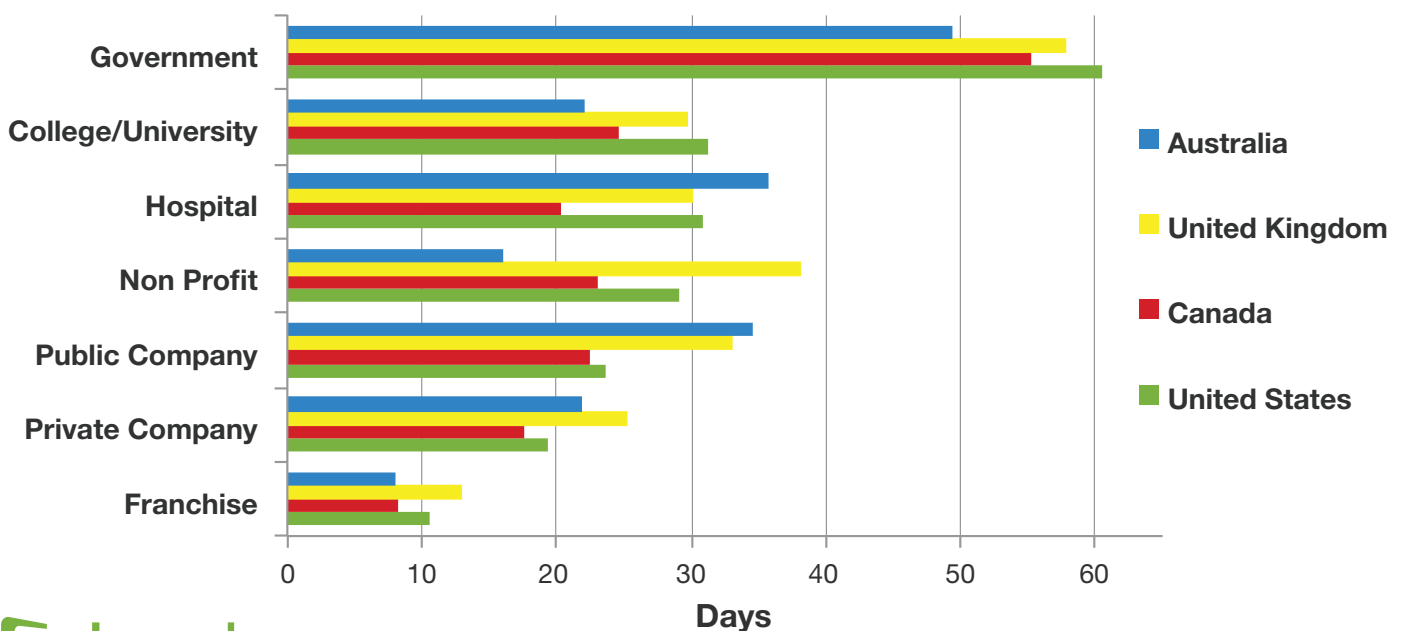
Pattern #3: Governments Hire Slowly, Franchises Hire Quickly

Some types of employers take much longer to screen job candidates than others, both in the U.S. and around the world. Government employers (which include various local, state and federal agencies) consistently hire most slowly, ranging from 49 days in Australia to 60 days in the U.S. At the opposite end of the spectrum, franchise employers (which include many retail and fast food establishments) have the shortest hiring processes by far, ranging from 8 days in Australia and the U.S. to 13 days in the United Kingdom.⁷

Job interview processes are significantly longer at publicly traded companies compared with their privately held counterparts. On average, interview processes take between 5 and 13 days longer at publicly held employers. Figure 3 shows the average length of job interview processes for seven types of employers across four countries: Australia, Canada, the United States and the United Kingdom.

These patterns reflect a combination of factors. First, government employers face strict legal and regulatory requirements on hiring processes that make them notoriously slow to hire, and this phenomenon has been well-documented in the academic literature on “job vacancy durations.”⁸ Second, public companies are in general significantly larger employers. As we will see below, large companies almost uniformly require longer job interview processes than small employers.

Figure 3. Some Employers Consistently Take Longer to Hire
Average Length of Interview Process by Type of Employer and Country



Note: Data are from January 1, 2013 to December 31, 2014. Source: Glassdoor Economic Research.

⁷ Insufficient data were available for France and Germany for this detailed analysis.

⁸ See for example, Steven J. Davis, Jason Faberman and John Haltiwanger (2013), “The Establishment-Level Behavior of Vacancies and Hiring,” *Quarterly Journal of Economics*, Volume 128, No. 2.

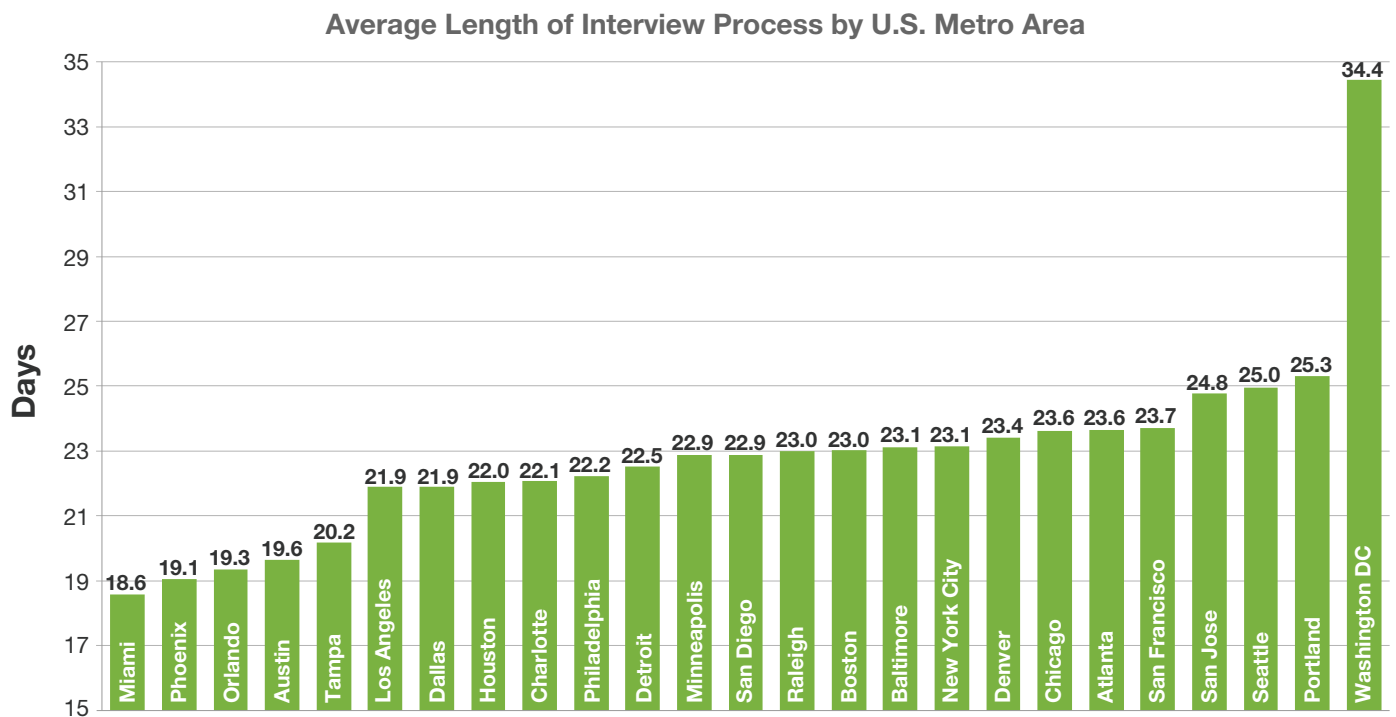
Pattern #4: Cities Matter

Hiring processes in cities reflect the mix of industries, jobs and employers that tend to cluster in them. In the U.S. for example, Silicon Valley is dominated by tech employers, federal government jobs are dominant in Washington, D.C., while energy jobs cluster in the oil-rich state of Texas. These patterns in the geographic spread of industries lead to stark differences in average interview process times throughout U.S. cities.

Among U.S. cities, the longest hiring processes are found in Washington, D.C. (34.4 days), largely reflecting the dominance of federal government jobs in the city. Close behind are Portland (25.3 days), Seattle (25.0 days), San Jose (24.8 days) and San Francisco (23.7), all of which are major technology hubs. The shortest interview processes are found in Miami (18.6 days), followed by Phoenix (19.1 days), Orlando (19.3 days), Austin (19.6 days) and Tampa (20.2 days). Figure 4 shows average interview durations for several major U.S. metropolitan areas.

These patterns reflect a well-known fact about job matching: high-skilled jobs that require judgment, creativity and technical skills generally require longer, more intense job screening processes. By contrast, lower-skilled, more routine jobs typically require little screening by employers, allowing for faster hiring processes.

Figure 4. Lengths of Job Interview Processes Vary Widely Among U.S. Cities



Note: Data are from January 1, 2013 to December 31, 2014. Source: Glassdoor Economic Research.

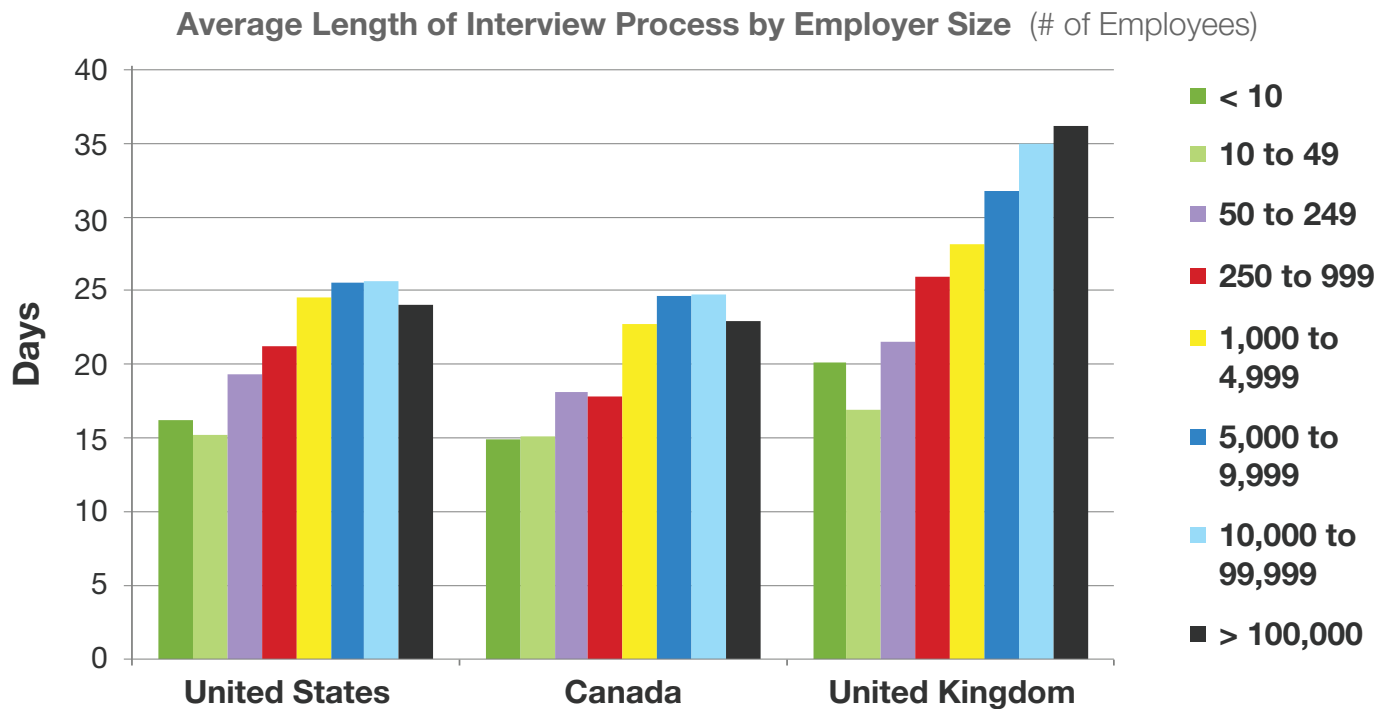
Pattern #5: Company Size Matters

A consistent finding in studies of “vacancy durations” is that jobs stay open longest at large companies. We find a similar pattern in interview durations based on Glassdoor data. Small companies tend to hire the quickest, and hiring processes steadily lengthen as companies grow both in the U.S. and internationally.

On average, job interview durations are shortest at companies with fewer than 10 employees, ranging from just 15 days in Canada to 20 days in the United Kingdom. Across all countries we examined, interview durations grow steadily along with company size reaching 23 to 36 days for companies with more than 100,000 employees. Figure 5 shows average days required for the interview process by company size for the U.S., Canada and the United Kingdom.

Why the longer hiring processes at big companies? First, larger employers typically have sharper division of labor, hiring more specialized and technical workers that require more careful screening of applicants. Second is the problem of growing bureaucracy: larger organizations typically have more administrative layers of candidate review and approval, markedly slowing down hiring decisions.

Figure 5. Bigger Companies Hire More Slowly Around the World



Note: Data are from January 1, 2013 to December 31, 2014. Source: Glassdoor Economic Research.

⁶ All calculations in Figure 2 are based on annual stock returns for ratings-weighted portfolios.

Pattern #6: Job Titles Matter

Hiring processes don't just vary by industry and country: they also vary dramatically by job title. This isn't surprising, as screening a new medical doctor or police officer shares little in common with interviewing for retail clerks or restaurant servers. In general, the more complex the job the more it requires intense screening of applicants, and this is reflected in Glassdoor data on interview durations.

The job titles with the longest interview processes are typically government, academic, or senior executive positions. Police officers reported the longest average interview duration (127.6 days), followed by patent examiners (87.6 days), assistant professors (58.7 days), senior vice presidents (55.5 days) and program analysts (51.8 days).

By contrast, the shortest job interview processes are typically found among more routine, lower-skill job titles. The shortest hiring times were for entry-level marketing jobs (3.9 days), followed by entry-level sales (5.4 days), servers and bartenders (5.7 days), entry-level account managers (5.9 days) and dishwashers (6.9 days).


Table 1 shows job interview durations for selected job titles with the longest and shortest times according to Glassdoor data. The left column shows the slowest-hiring positions, and the right column shows the fastest-hiring jobs.

In recent years, a growing number of studies in economics show a marked shift away from low-skilled, routine jobs and toward higher-skilled, less routine positions requiring judgment and technical skills.⁹ To the extent that more complex jobs require longer hiring times, this shift in the composition of job titles throughout the economy will be a contributing factor toward growing interview durations observed in the data.

⁹ See for example, David H. Autor and David Dorn (2013), "The Growth of Low-Skill Service Jobs and the Polarization of the US Labor Market," *American Economic Review*, Volume 103, No. 5.

Table 1. Job Titles with the Longest and Shortest Interview Durations


Job Title	Interview Process Length (Days)	Job Title	Interview Process Length (Days)
Police Officer	127.6	Model	7.8
Patent Examiner	87.6	Accounts Payable	7.4
Assistant Professor	58.7	Waiter	7.0
Senior Vice President	55.5	Line Cook	7.0
Program Analyst	51.8	Shift Leader	6.9
Managing Director	51.1	Dishwasher	6.9
Administrative Assistant III	49.2	Entry Level Account Manager	5.9
IT Specialist	48.1	Server/Bartender	5.7

 *Note: Reported job titles must have at least N = 30 reported interview durations. Data are from January 1, 2013 to December 31, 2014. Source: Glassdoor Economic Research*

In Table 2, we illustrate the diversity of hiring times even within the technology industry. The table shows job interview durations for a variety of tech-related job titles according to Glassdoor data. As above, the left column shows the slowest-hiring tech positions and the right column shows the fastest-hiring jobs.

Table 2. Tech Industry Jobs with the Longest and Shortest Interview Durations

Job Title	Interview Process Length (Days)	Job Title	Interview Process Length (Days)
Software Engineer	35.0	Financial Software Developer	19.9
Senior Applications Developer	28.3	User Experience Designer	19.3
Product Engineer	28.1	QA Engineer	17.9
Implementation Specialist	27.8	Junior Software Engineer	15.7
Hardware Engineer	27.0	IOS Developer	14.1
Quality Assurance	25.9	.NET Developer	14.0
Data Engineer	25.8	QA Tester	13.9
Database Administrator	25.5	Java Developer	12.5
Web Applications Developer	23.5	Web Designer	12.3
Data Scientist	23.2	Data Entry	8.5

 *Note: Reported job titles must have at least N = 30 reported interview durations. Data are from January 1, 2013 to December 31, 2014. Source: Glassdoor Economic Research*

Pattern #7: Job Candidates Are Facing More Interview “Screens”

A final stylized fact about job interviews is that candidates today are generally facing more “job screening” methods than in the past. These interview techniques are designed to assure candidates are a good fit for the job, including background checks, skills and personality tests, group panel interviews, candidate presentations, drug tests and more. Glassdoor interview reviews collect data on nine different interview methods, providing a rare window into the actual hiring practices followed by today’s employers.

For most interview methods, there has been little change in usage in recent years. The most commonly reported method in the U.S. is one-on-one interviews (68 percent) followed by telephone interviews (56 percent), both of which have changed little since 2010. The least commonly reported interview screens are IQ intelligence tests (6 percent) and candidate presentations (7 percent), which also have been stable in recent years.¹⁰

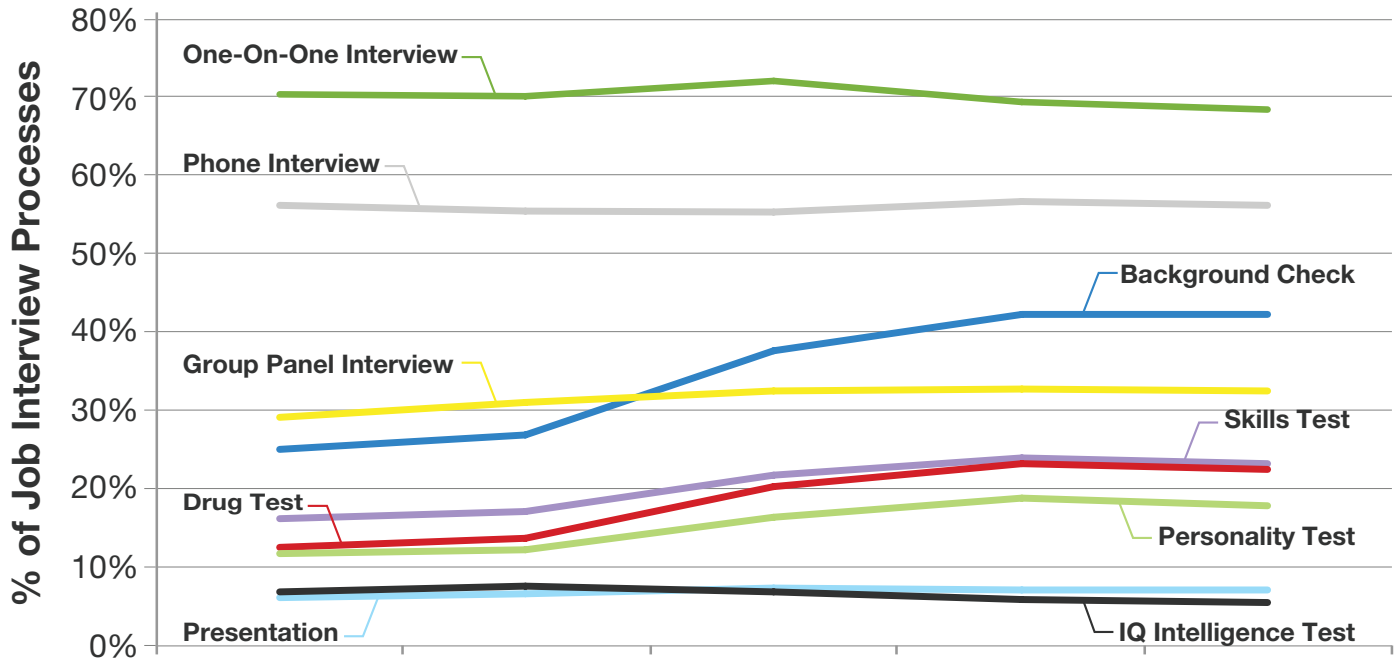
One interview method that has grown sharply in the U.S. is candidate background checks. The percentage of job seekers reporting background checks has grown from 25 percent in 2010 to 42 percent in 2014. Other interview methods that have grown recently include skills tests (16 percent in 2010 to 23 percent in 2014), drug tests (13 percent in 2010 to 23 percent in 2014) and personality tests (12 percent in 2010 to 18 percent in 2014).

Figure 6 shows trends in the percentage of U.S. job seekers reporting each of the nine interview techniques recorded by Glassdoor from 2010 to 2014. As we will see in Section II below, each of these additional employer “screens” adds a statistically significant amount to average time required for interview processes, in some cases adding a full week to the job interview process. To the extent that employers directly control their own hiring processes, this is one factor affecting time to hire that is entirely within the control of company HR departments.

¹⁰ For simplicity, we focus on U.S. employers only in this section. In the statistical analysis below, we include job interview screens for all six countries examined.

Figure 6. Trends in Job Interview “Screens” Used by Employers

Trends in U.S. Job Screening Methods (2010-2014)



Source: Glassdoor Economic Research

Can Economists Explain These Patterns?

Basic economic theory helps explain much of the patterns we see in Glassdoor interview data. The way economists think about job interviews is as a *screening process*.¹¹ Company hiring managers face a balancing act between two competing forces. On the one hand, firms want to carefully screen candidates to find the best possible job match for an opening. On the other hand, they want to fill the opening as quickly as possible, because an unfilled job means lost productivity and profits to the company. Thus, hiring managers face a trade-off between *job match quality* and *lost profits from unfilled jobs*.¹²

This tradeoff is clearly visible in the data. For more complex, highly skilled jobs that require judgment and skills that are hard to observe, getting the right candidate is more important than avoiding losses from an unfilled position. Conversely, for low-skilled jobs with easy-to-verify job characteristics, there is little payoff from extensive screening of candidates compared to the high cost of leaving positions unfilled; thus, employers hire for low-skilled jobs more quickly.

¹¹ For an overview of the economics of the hiring processes, see Derek Laing (2011) *Labor Economics: Introduction to Classic and the New Labor Economics* (WW Norton & Company), Chapter 13, available at <http://www.wwnorton.com/college/econ/labor-economics/ch/13/outline.aspx>.

¹² For a related line of research examining employer screening processes and employee performance, see Fali Huang and Peter Cappelli (2010), “Applicant Screening and Performance-Related Outcomes,” *American Economic Review Papers and Proceedings*, Volume 100, No. 2.

While this theory explains many patterns in the data, there are clearly other factors at work. One important factor is the *legal and institutional setting* faced by employers. Laws that make it more costly to hire and fire workers affect the speed and efficiency of job matching. This helps explain why tightly regulated government employers are slow to hire, and why hiring times vary so dramatically across countries. Research shows labor markets in France, Germany and the United Kingdom are significantly more heavily regulated than in the United States and Canada.¹³ While these regulatory structures provide important worker protections, they also have an unintended side effect of impeding the matching process between workers and employers.

2. Statistical Analysis: What Factors Explain Longer Hiring Times?

In this section we statistically examine how each of the factors discussed above have contributed to the growth in the length of interview processes in recent years. This analysis provides a unique view of how much growth in interview durations is due to hiring policies of company HR managers, how much is due to characteristics of job seekers themselves, and how much is due to broader economic trends beyond the control of job applicants and employers.

For our analysis, we use data from a sample of 344,250 job interview reviews posted on Glassdoor during the 72-month period from February 1, 2009 to January 31, 2015. Table 3 presents basic summary statistics for the data. Overall, the average job interview process length across all countries and years is 20.5 days. The data cover more than 74,000 unique job titles across roughly 62,800 employers, and include job interview reviews from six countries worldwide (U.S., Australia, Canada, France, Germany and the United Kingdom).

¹³ For an overview of international differences in labor market regulations, see *OECD Employment Outlook 2013*, Chapter 2, "Protecting Jobs, Enhancing Flexibility: A New Look at Employment Protection Legislation," available at <http://goo.gl/YcAZnx>.

Table 3. Summary Statistics for the Job Interview Durations Data

Variable	Observations	Mean	Std. Dev.	Min	Max
Year	344,250	n.a.	n.a.	2009	2015
Month	344,250	n.a.	n.a.	1	12
Length of Job Interview Process (Days)	344,250	20.5	31.3	1	365
One-on-One Interview	344,250	0.70	0.46	0	1
Phone Interview	344,250	0.56	0.50	0	1
Background Check	344,250	0.38	0.49	0	1
Group Panel Interview	344,250	0.33	0.47	0	1
Skills Test	344,250	0.23	0.42	0	1
Drug Test	344,250	0.19	0.39	0	1
Personality Test	344,250	0.17	0.38	0	1
Candidate Presentation	344,250	0.08	0.27	0	1
IQ Intelligence Test	344,250	0.06	0.25	0	1



Note: Data are from job interview reviews posted on Glassdoor dated between February 1, 2009 to January 31, 2015. Source: Glassdoor Economic Research.

Regression Model

We estimate the relationship between job interview durations and a variety of company, job title and other factors via a simple ordinary least squares (OLS) model,

$$d_{ijkt} = \beta_0 + \beta_1 \text{Company}_i + \beta_2 \text{Location}_j + \beta_3 \text{Job Title}_k + \beta_4 \text{Time}_t + \beta_5 \text{Other Controls}_{ijkt} + \varepsilon_{ijkt}$$

where d_{ijkt} is reported days for the job interview process at company i in location j for job title k at time t . The main explanatory variables are dummy indicators (also known as “fixed effects”) that control for specific company names, job titles and locations. For geographic locations, we control for all 50 U.S. states, the District of Columbia, and six countries internationally.

For the “time” variable in our model, we include monthly dummies that control for seasonal swings in hiring times and an overall linear time trend. The “Other Controls” variable includes dummy indicators for the outcome of the interview process (received a job offer and accepted, rejected, or didn’t get a job offer), and controls for the impact of a Glassdoor survey redesign in July 2012. As a robustness check, we also include individual job seeker characteristics such as gender, age, and highest level of education in some specifications; however, in all cases we found that demographic characteristics have zero statistical impact on hiring times.¹⁴

Key Results

Table 4 shows our main regression results. The rows show the impact on hiring times (in days) for each variable, and standard errors are reported in parentheses under each estimate. In the columns, we add and remove different sets of control variables, moving from the simplest model in Column 1 to the most complex and inclusive model in Column 4. Column 1 focuses only on U.S. job interviews and controls for state and industry fixed effects. Column 2 adds international data and controls for country-specific factors. Finally, Columns 3 and 4 add fixed effects controlling for individual employers and job titles, respectively.¹⁵

Time Trends: The first row shows the upward trend in interview durations, once all other factors have been accounted for. It is a positive and statistically significant upward trend of 0.031 to 0.052 days per month across the four columns. Over the 72-month period we examine, that amounts to between 3.3 and 3.7 additional days to the hiring process based on estimates from our preferred models in Columns 3 and 4.¹⁶ This trend is significantly smaller than appears from the raw data in Figure 2, but offers convincing evidence that job interview processes have indeed grown longer in recent years.

Company Size Matters: The second row shows the effect of company size on hiring times. Bigger companies have statistically significantly longer hiring processes: increasing by one size group (in terms of number of employees) adds an average of 1.3 to 1.4 days to the interview process.¹⁷ This is consistent with previous literature on job vacancy durations, which finds bigger firms across the board tend to hire more slowly than smaller employers.

¹⁴ The effect of including job seeker demographic characteristics was assessed via a simple F-test of joint significance, which failed to reject the null hypothesis of zero regression coefficients on demographic variables in all cases we examined.

¹⁵ We omit a fifth specification that includes an interaction between companies and job titles, due to severe over-fitting problems. That specification would have required estimation of coefficients for 222,592 dummy variables for unique job title and company combinations from just 344,250 observations, resulting in many coefficients being uniquely fit to a single observation.

¹⁶ Overall time effects are calculated as (72 months) x (0.046 days per month) = 3.3 days from Column 4, and (72 months) x (0.052 days per month) = 3.7 days from Column 3.

¹⁷ Size groups for companies (in terms of number of employees) correspond to the groups shown in Figure 5.

Countries Matter: Rows 3 to 7 illustrate the large differences in interview durations around the world. Even after controlling for all other factors, differences in law and culture among countries have a significant effect on hiring times. The coefficients in these rows represent how many extra days it take on average for interview processes in each country compared to the U.S.¹⁸ Job seekers in France face the longest hiring processes, requiring 6.1 to 9.0 extra days. German job seekers wait an extra 6.2 to 8.3 days, job seekers in the United Kingdom wait 4.3 to 5.9 extra days, and candidates in Australia wait an extra 2.9 to 3.9 days. In every case, these additional days required for interview processes are statistically significant. The only country without significantly longer hiring processes was Canada, which differed from the U.S. by just 0.6 days in one specification and zero in all others.

Table 4. Key Factors Contributing to Growing Job Interview Durations (All Coefficients in Days)

Variable	(1)	(2)	(3)	(4)
Time Trend (Per Month)	0.031*** (0.006)	0.032*** (0.005)	0.052*** (0.006)	0.046*** (0.006)
Company Size (# Employees)	1.350*** (0.034)	1.441*** (0.028)		1.313*** (0.038)
Australia		3.045*** (0.681)	3.938*** (1.124)	2.901*** (0.923)
Canada		-0.181 (0.250)	0.193 (0.432)	0.582* (0.312)
France		8.209*** (1.350)	6.122*** (1.690)	9.006** (3.536)
Germany		8.258*** (0.918)	6.788*** (1.320)	6.203*** (1.619)
United Kingdom		5.698*** (0.314)	5.941*** (0.495)	4.296*** (0.438)
No. of Observations	220,202	328,508	338,206	328,508
Adjusted R-squared	0.100	0.102	0.151	0.205
Month Dummies	X	X	X	X
State Dummies (U.S.)	X			
Country Dummies		X	X	X
Industry Dummies	X	X		X
Company Dummies			X	
Job Title Dummies				X



Note: *, **, and *** denote statistical significance at the 10, 5 and 1 percent levels. Standard errors in parentheses are heteroskedasticity robust. Source: Glassdoor Economic Research.

¹⁸ In all specifications, the U.S. is the sixth “excluded category” for country fixed effects.

Impact of Interview Methods: In Table 5, we show how various job interview “screens” used by employers affect hiring times, including background checks, group panel interviews, skills tests and more. As expected, of the nine interview methods we examined every one had a positive and statistically significant effect on interview process times. Telephone interviews add 6.8 to 8.2 days; group panel interviews add 5.6 to 6.8 days; one-on-one interviews add 4.1 to 5.3 days; background checks add 3.1 to 3.4 days; and so on. In every case, additional layers of candidate screening add to hiring times, illustrating the basic tradeoff between candidate match quality and job vacancy durations.

Unlike our other findings, these results highlight factors that are directly within the control of employers. Unlike industry or geographic factors, the choice of which and how many interview methods to employ can be directly influenced by company hiring managers. These estimates provide a useful way to quantify the time cost incurred from each job interview method, allowing hiring managers to more intelligently design HR policies by weighing the costs and benefits of various screening techniques.

Table 5. Impact of Various Hiring Policies on Days for the Interview Process

Variable	(1)	(2)	(3)	(4)
Phone Interview	7.879*** (0.134)	8.176*** (0.112)	7.945*** (0.144)	6.848*** (0.140)
One-on-One Interview	4.575*** (0.158)	4.641*** (0.130)	5.267*** (0.153)	4.104*** (0.156)
Group Panel Interview	6.488*** (0.153)	6.774*** (0.128)	6.002*** (0.155)	5.618*** (0.155)
Presentation Required	3.665*** (0.287)	4.131*** (0.239)	4.167*** (0.281)	2.729*** (0.288)
IQ Intelligence Test	4.446*** (0.329)	4.028*** (0.276)	3.460*** (0.314)	2.641*** (0.310)
Job Skills Test	0.641*** (0.171)	0.758*** (0.142)	0.786*** (0.169)	1.524*** (0.171)
Personality Test	0.872*** (0.193)	0.947*** (0.160)	0.949*** (0.188)	1.320*** (0.187)
Drug Test	0.347* (0.200)	0.271 (0.174)	0.757*** (0.228)	0.598*** (0.211)
Background Check	3.425*** (0.164)	3.277*** (0.139)	3.379*** (0.166)	3.093*** (0.163)
No. of Observations	220,202	328,508	338,206	328,508
Adjusted R-squared	0.100	0.102	0.151	0.205
Month Dummies	X	X	X	X
State Dummies (U.S.)	X			
Country Dummies		X	X	X
Industry Dummies	X	X		X
Company Dummies			X	
Job Title Dummies				X



Note: *, **, and *** denote statistical significance at the 10, 5 and 1 percent levels. Standard errors in parentheses are heteroskedasticity robust. Source: Glassdoor Economic Research.

Industries Matter: Table 6 shows our final set of regression estimates. It shows how the structure of different industries affects interview durations, once all other factors have been controlled for. As noted above, being a government employer has a large and statistically significant effect on interview process times. Public sector interviews require an extra 21.9 to 28.8 days on average compared to a typical non-government job.¹⁹ The second-longest interview durations are in aerospace and defense, which requires an extra 5.3 to 6.2 days. Similarly, mining and metals jobs require an extra 4.1 to 7.0 days; oil and gas require an extra 3.3 to 4.6 days; non-profits require an extra 3.2 to 4.7 days; and education jobs require an extra 2.8 to 3.8 days.

The shortest hiring times were in the retail industry, which requires 2.4 to 8.5 fewer days than typical jobs. Similarly, restaurant jobs require 1.8 to 8.4 fewer days; consumer services jobs require 2.4 to 6.0 fewer days; and real estate jobs require 2.0 to 4.2 fewer days. As the mix of hiring industries shifts over time, these estimates help quantify how average hiring times throughout the economy are likely to be affected in coming decades.

Table 6. Industries with Longest and Shortest Job Interview Processes

Variable	(1)	(2)	(4)
Government	26.563*** (1.056)	28.814*** (0.887)	21.901*** (1.219)
Aerospace & Defense	5.276*** (0.848)	5.708*** (0.740)	6.198*** (0.992)
Mining & Metals	4.120* (2.493)	6.988*** (2.145)	5.935** (2.519)
Oil, Gas, Energy & Utilities	3.315*** (0.615)	3.576*** (0.511)	4.617*** (0.739)
Non-Profit	3.154*** (0.710)	4.014*** (0.601)	4.706*** (0.844)
Education	3.041*** (0.481)	2.762*** (0.404)	3.837*** (0.638)
Manufacturing	0.615 (0.392)	0.306 (0.328)	2.612*** (0.479)
Real Estate	-3.358*** (0.735)	-4.230*** (0.599)	-1.966** (0.866)
Consumer Services	-4.945*** (0.669)	-5.992*** (0.548)	-2.405*** (0.749)
Restaurants, Bars & Food Services	-7.176*** (0.405)	-8.443*** (0.343)	-1.771*** (0.639)
Retail	-7.465*** (0.349)	-8.475*** (0.291)	-2.351*** (0.473)
No. of Observations	220,202	328,508	328,508
Adjusted R-squared	0.100	0.102	0.205
Month Dummies	X	X	X
State Dummies (U.S.)	X		
Country Dummies		X	X
Job Title Dummies			X



Note: *, **, and *** denote statistical significance at the 10, 5 and 1 percent levels. Standard errors in parentheses are heteroskedasticity robust. Source: Glassdoor Economic Research.

Conclusion

In recent years, a growing number of anecdotes have pointed to longer delays faced by job seekers during the hiring process. In this study, we provide the first statistical evidence of this trend based on a unique data set from Glassdoor job interview reviews.

Our findings suggest the job interview process has indeed grown significantly longer in recent years, both in the U.S. and around the world. We have identified a wide variety of factors: industry characteristics, international differences in law and culture, the growing complexity of job characteristics, changing job seeker demographics, shifts in employer job interview methods and more.

While most factors we examined are beyond the control of individual job seekers and employers, one important set of factors is not: the number and type of job interview “screening” methods chosen by company HR management. Of the nine job screening methods we examined, all have a positive and statistically significant effect on job interview durations.

Our results highlight a well-known tradeoff faced by hiring managers. Longer interview processes may lead to more carefully screened candidates, but only at the cost of foregone productivity due to vacant positions. As employers balance this tradeoff between screening and hiring delays, our results help quantify the impact of today’s hiring policies on the time required for successful job matching throughout the economy.

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19. The excluded industry category in Table 6 is “Accounting and Legal Services.” All estimates in the table reflect average days required for the job interview process compared to job interviews in that industry.

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