



Strategic Talent Acquisition and Firm Performance

Fourth Annual Searle Center Leadership Roundtable on Talent Analytics and Workforce Science

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Burning Glass Technologies*

The Small Picture: The Problem

Ineffectiveness in the labor market leads to Organizational Disruption

FORTUNE | Tech

SEAGATE

Layoffs and Management Shuffles Plague Tech Hardware Firm After Rough Earnings

Jonathan Vanian
Jul 25, 2017

8,100 Employees Laid-Off	17% Of Workforce 2016-2017
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Up to \$1.2 Billion
Cost of Layoff

Organizational Disruption

Diversify business in shrinking market

REUTERS

Bank of America to lay off more workers

#BUSINESS NEWS JUNE 15, 2017 / 12:27 AM / 3 MONTHS AGO

Fortune 1000 Bank to lay off more workers

June 15, 2017

8,000 Employees Laid-Off	3% Of Workforce 2016-2017
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Up to \$1.1 Billion
Cost of Layoff

Organizational Disruption

Retooling to respond to mobile banking

The Large Picture: The Cause

Disruption of Legacy Industries is Accelerating

~~Telco SMS Messaging~~

facebook



~~Music Player / Mobile~~



Apple®



~~Entertainment~~

NETFLIX



~~Energy Storage~~



~~Automobiles~~



~~Taxi~~



CEO's greatest concerns in 2017 are Disruption related to Availability of Skills

72%

CEO's are concerned about
**availability of key
capabilities**²

92%

CEO's say to succeed an org.
must **react rapidly** to the
market with **strategic
sourcing** from **internal
and external talent
pools**.¹

39%

Companies are **changing
into significantly
different entities**
in the next 3 years.¹

65%

CEO's believe **the next 3
years** will be **more
critical** than past 5. They
are **concerned** they are
not disruptors.²

Are Our People our Greatest Asset?

- Disconnect between HR and strategic decision makers
- Not much literature on the relation between human capital and firm performance
- Lack of data that can measure talent. Literature talks about skills, but uses education as a proxy

Main Research Question: How the skill composition of a firm affects its economic performance



Using Real-Time Labor Market Data to Measure Skills

Visit Online Job Sites

Collect & Deduplicate Job Postings

Read Postings to Generate Detailed Data



Laboratory Technician

Bayer MaterialScience (DMG) is one of the leading producers of polymers and high-performance plastics in North America and is part of the global Bayer MaterialScience business with nearly 14,700 employees at 30 sites around the world. Business activities are focused on the manufacture of high-tech polymer materials and the development of innovative solutions for products used in many areas of daily life. The main segments served are the automotive, electrical and electronics, construction, medical, and sports and leisure industries.

Job description The primary responsibility of this role is to produce and evaluate foam samples in the laboratory to support flexible foam application development, Bayer MaterialScience (BMS) product quality control, customer technical support, polymerization and process research & development programs, and flexible molded and slabstock foam research & development programs.

The incumbent will:

- Producing lab-scale foams, testing of polyols, isocyanates and additives for customer technical programs, process and product research programs and manufacturing support;
- Troubleshooting and maintaining equipment needed for bench foam production and routine foam processing & properly evaluation and supporting machine scale-up work;
- Maintaining appropriate logbooks and other records including computer documents utilizing Excel, Word and PowerPoint programs to support project work;
- Provide internet and other information searches as needed for problem solving;
- Performing stoichiometric calculations for foam production using computer programs or hand-calculations;
- Understanding and following OHS, OOP's and Responsible Care rules, regulations and guidelines while maintaining good housekeeping and a safe work environment through participation in safety programs;
- Capable of managing multiple tasks, working effectively with more than one technical supervisor, interacting with other functions such as manufacturing and research personnel, interfacing directly with customers if needed, and providing timely foam results to assure the

- Job Title & Occupation
- Employer & Industry
- Technical Skills
- Foundational Skills
- Certifications
- Educational Requirements
- Experience Levels
- Salaries

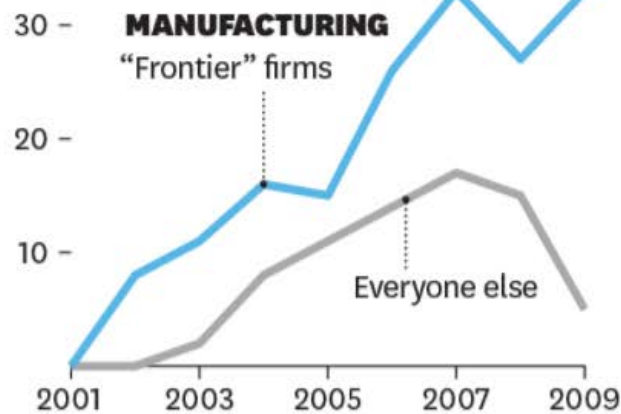
Related Literature: Superstar Firms

The Gap Between the Most Productive Firms and the Rest Is Growing

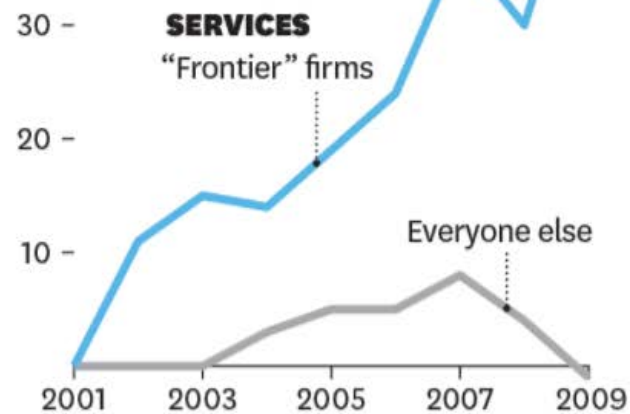
A look at labor productivity in manufacturing and services.

PERCENTAGE DIFFERENCE IN LABOR PRODUCTIVITY LEVELS FROM THEIR 2001 VALUES (INDEX, 2001=0)

40% -



40% -



SOURCE "THE FUTURE OF PRODUCTIVITY," OECD, 2015

© HBR.ORG

Related Literature: Superstar Firms

- Autor, David, David Dorn, Lawrence F. Katz, Christina Patterson, and John Van Reenen. "The Fall of the Labor Share and the Rise of Superstar Firms ." (2017)
- De Loecker, Jan, and Jan Eeckhout. "The Rise of Market Power and the Macroeconomic Implications." (2017)
- Bessen, James E. "Information Technology and Industry Concentration." (2017)

Bessen: *“Increasingly, it seems, top performing firms utilize new technologies productively while their rivals do not. ...perhaps, instead, top firms are better able to recruit and develop talented managers and workers skilled at working with the new systems.”*

Related Literature: Relation between Skills and Firm Performance

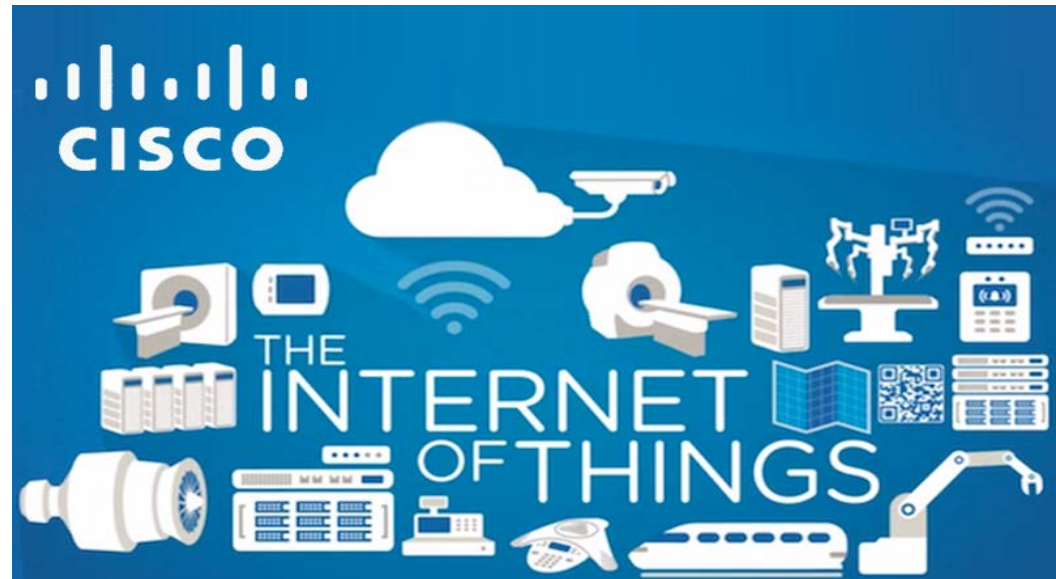
- Tambe, Prasanna. "Big data investment, skills, and firm value." *Management Science* (2014)
- Jin, Wang, and Kristina McElheran. "Economies before Scale: Productivity and Survival of Young Plants in the Age of Cloud Computing." (2017)
- Deming, David, and Lisa B. Kahn. "Skill Requirements across Firms and Labor Markets: Evidence from Job Postings for Professionals." (2017)

Deming and Kahn: "As a whole, the job skills have explanatory power in pay and firm performance regressions, beyond what is available in widely-used labor market data."

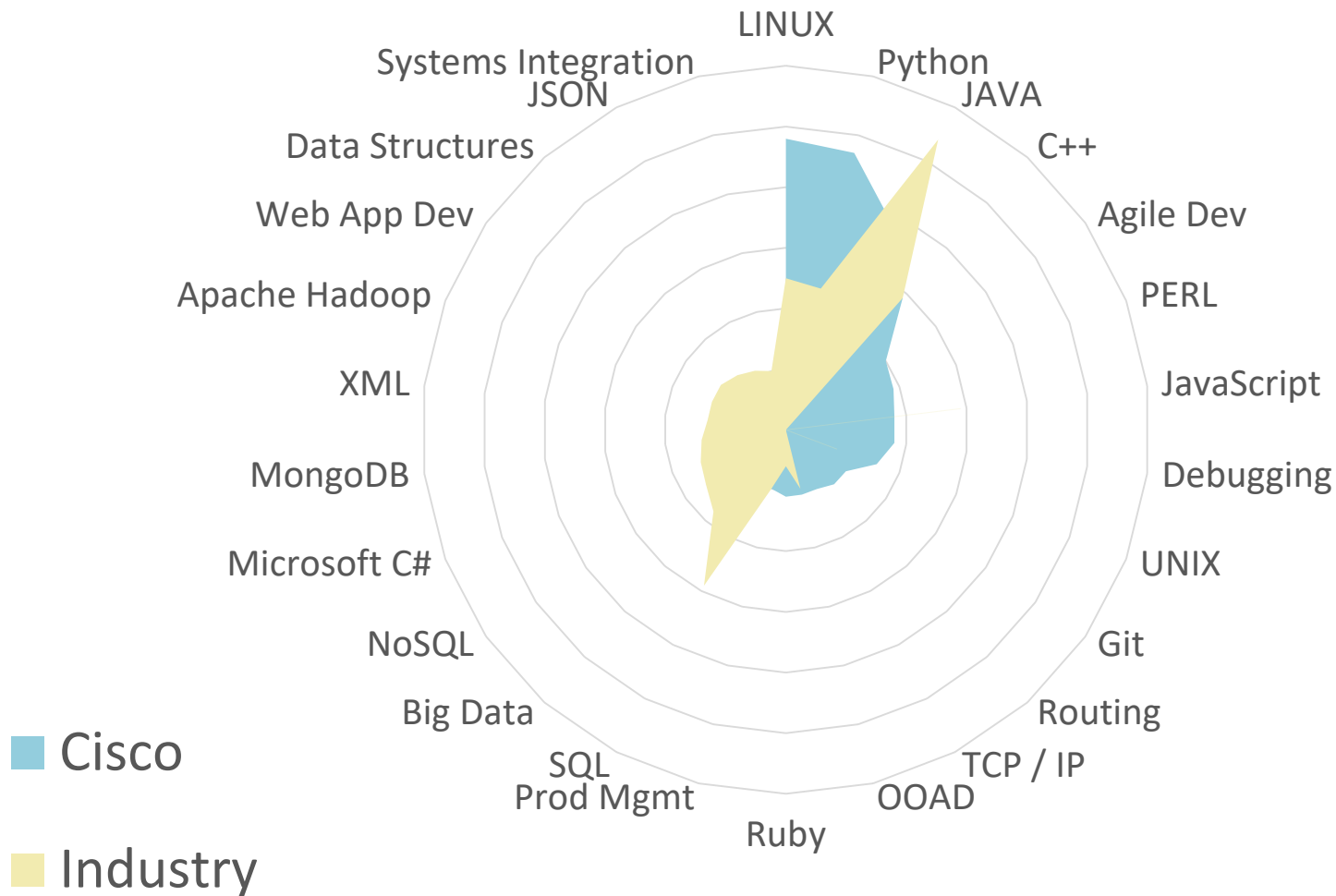
Relation Between Skills and Firms Performance

Talent Shape and Organizational Disruption

- 2016: Cisco Systems reveals plans to slash 5,500 jobs, in a move to restructure the company (700m in redundancy payments)
- Internet of Things, data security, data centers, cloud, and collaboration tools will be the focus on the company post-restructure
- Cisco increasingly requires “different skill sets” for the “software-defined future” than it did in the past, as it pushes to capture a higher share of the addressable market and aims to boost its margins

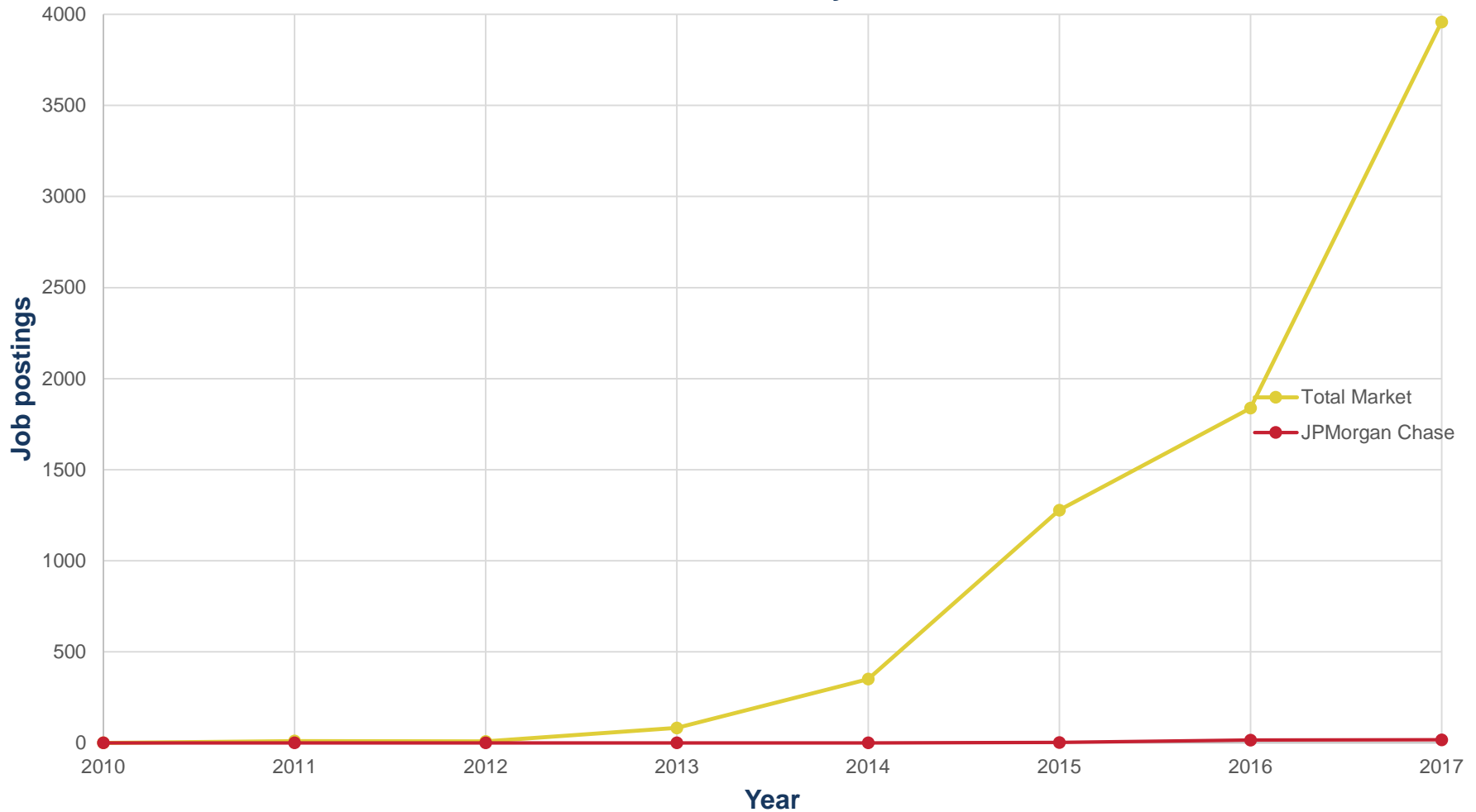


Talent Shape of a Firm (Cisco Engineering vs IoT Industry)



Talent Shape and Technology Adoption

Blockchain: Trends by Year



Talent Shape and Technology Adoption

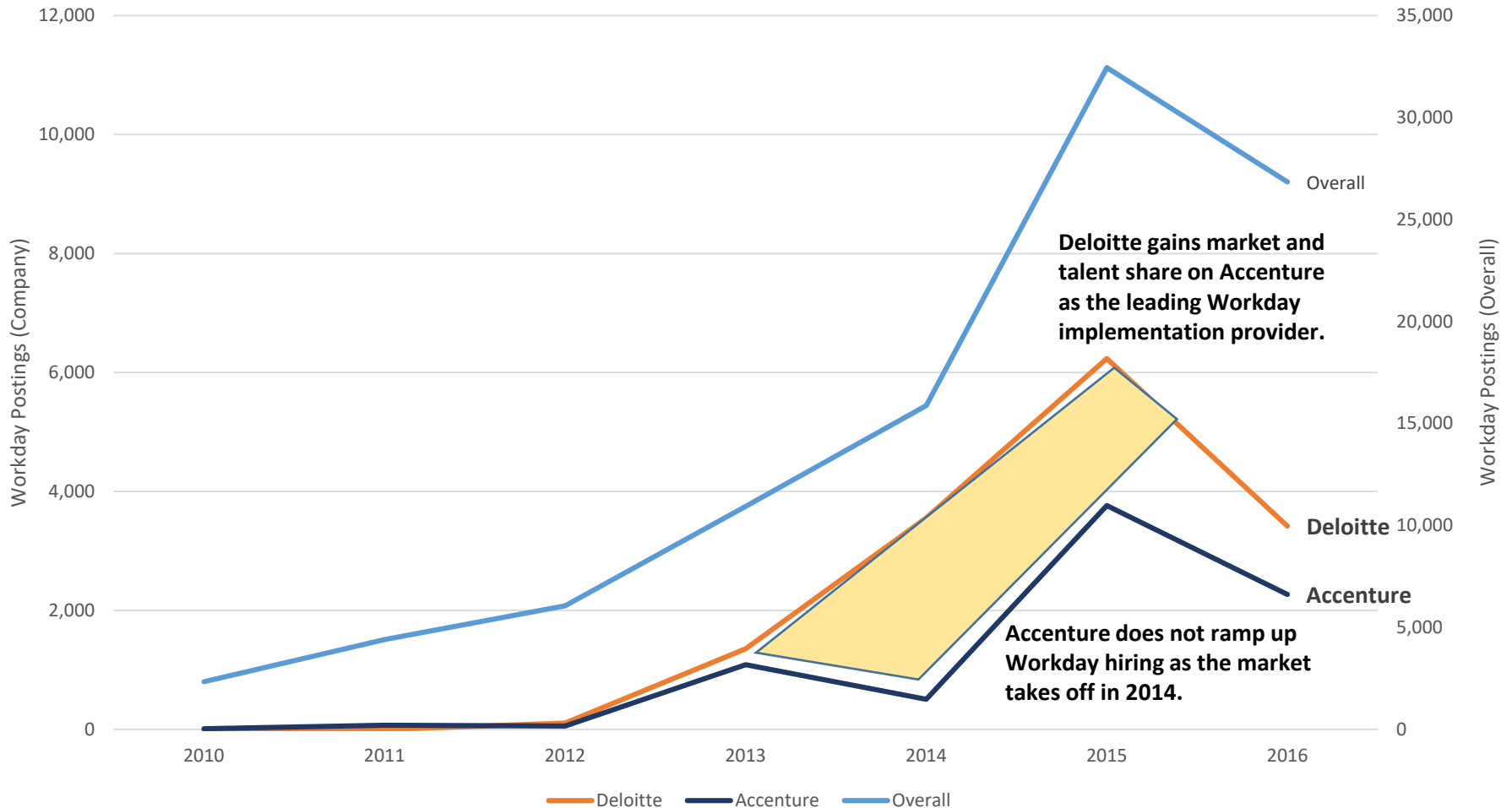
September 12, 2017: Co. Chief Executive James Dimon trashes the digital currency bitcoin as a fraud that will blow up



October 16, 2017: JPMorgan launches payments network using blockchain technology

Talent Shape and Financial Outcomes

Advertised Workday Skill Demand for Implementation Partners



Talent Shape and Financial Outcomes

2016: Accenture to Acquire Workday Consulting Firm DayNine



Conclusions

- **Provided some evidence on the relation between disruption, innovation, technology adoption, and talent. This offers a different framework, which does not focus only on product**
- **The above, together with related literature, indicate that there exists a connection between firm's performance (short and long term) and talent acquisition. Need a more formal study**
- **This will help bridge the gap between HR and strategic decision makers**