Building on President Obama’s Memorandum to the Secretary of Labor:
Broadening the Gender Gap Analysis for Women in Computing & Information Technology

President Obama’s memorandum released on April 08, 2014 directed the Secretary of Labor to create a rule requiring the Office of Federal Contract Compliance Programs (OFCCP) and Equal Employment Opportunity Commission (EEOC) to collect “pay data from federal contractors, culminating in a data collection tool that will identify contractors who are likely to be out of compliance.” The Secretary of Labor has 120 days from the release of the Presidential memo – by August 6, 2014 – to create a “rule that would require Federal contractors and subcontractors to submit to DOL summary data on the compensation paid their employees, including data by sex and race.” The following describes our recommendations

I. Going Beyond Pay Data Collection: “A Broad Look”

The Secretary of Labor should broaden his requirements in writing a rule to federal contractors and subcontractors, moving beyond President Obama’s request to collect data on pay information by job category. Merely collecting data on the discrepancies themselves, will significantly limit the ability to assess the underlying causes of these discrepancies and recommend the most effective remedies. As a result, we strongly recommend that any rule created should incorporate what the Office of Federal Contract Compliance Programs (OFCCP) has termed a “broad look” at the key employment practices known to cause, as well as reduce, gender discrepancies in compensation. This broad look includes recruitment, retention, and promotion practices, detailed in section III.

Collecting this additional data is especially important when it comes to computing and information technology occupations, as these occupations are among the most male-dominated occupations in the current U.S. professional workforce. Research suggests that the kinds of unconscious biases that lead to pay inequities can be particularly salient in organizations dominated by a majority group. In addition, the dearth of women in these positions in the first place is a threat to national security and competitiveness. Given these factors we strongly recommend that both compensation data and the associated workplace practice data be collected from two kinds of organizations, listed in order of priority: 1) federal contractors where a security clearance is required for computing and information technology (IT) positions, and 2) all other federal contractors with significant computing and IT positions. Below we first describe our rationale for focusing on each of these groups and for prioritizing them in this manner. In Section III, we provide research to justify expanding the focus beyond pay data to also include additional data on organizational practices that will help diagnose the factors underlying discrepancies.

II. Rationale for Prioritizing These Organizations

Federal contractors requiring security clearances for computing and IT positions. We know that computing and IT positions are notoriously difficult to fill, and current workforce and education data show that this is likely to be the case for some time to come (DOL Occupational Projections and NCES Education Statistics and www.ncwit.org/csedjobs). Unlike IT corporations and contractors that do not require security clearances, federal contractors that require workers to have security clearances cannot rely on
hiring foreign nationals with H-1B1 visas. This constraint makes these already difficult-to-fill positions even more challenging. Because women are significantly underrepresented in these fields (only 26% of computing occupations are held by women – or as low as 19% when it comes to software developers – according to the DOL, Current Population Survey), they are an especially valuable pool from which to draw talent for these unfilled positions. As a result, increasing women’s overall participation and pay equity in computing/IT positions in companies with federal contacts requiring a security clearance will maximize efficiency by focusing on a field with both a greater need and a thinner existing talent pool. Such an effort also offers the dual benefit of increasing national security and improving gender diversity within this sector.

All federal contractors with significant computing and IT workforces. While some of these contractors may be able to draw from H-1B1 visa candidate pools, they still face significant difficulties in filling technical jobs. Likewise, women are still vastly underrepresented in these positions. As a result, increasing women’s participation and overall pay equity is also particularly important in these companies if we are to maximize U.S. competitiveness and innovation.

All private sector companies with significant computing and IT workforces. Collecting data from these organizations is important for broadening our understanding of the gender and IT landscape beyond federal contractors and increasing women’s participation and compensation in computing broadly speaking. While important, limiting data collection to federal contractors, prevents this greater understanding of one of the most pervasive and crucial fields in the U.S. economy.

III. Rationale for Expanding Pay Data Collection to Include Employment Practices

Women are significantly under-represented in IT whether or not they are employed by federal contractors. Numerous practices and unconscious biases throughout the stages of recruitment, retention, and promotion contribute to this state of affairs. Requesting federal contractors and other corporations to submit data not only on compensation by gender but also on metrics associated with these employment practices that ultimately affect pay discrepancies will allow for more accurate conclusions to be drawn on the gender wage gap.

It is important to note that in some discussions of appropriate data collection and analysis related to this executive order, language has been used indicating that an important goal is to separate the impact of “women’s career choices” from that of “structures in the workplace.” We want to stress, however, that any framing of these issues that positions “women’s choices” and “organizational structures” as distinct or separate factors is deeply flawed from the outset and will lead to faulty data collection, analysis, policy, and enforcement. Women’s (and men’s) choices are not made in a vacuum, they are made within these structures; we know from decades of research that, given different structures, women (and men) make different choices. As a result, trying to disentangle what results from “women’s choices” and what results from “organizational structures” is a misguided endeavor.

Below we briefly summarize the key practices that influence women’s compensation, as well as their participation in the computing workforce. We suggest that data about implementation of practices in these areas should be collected in analyzing federal contractors’ compliance to the President’s order:

a. Recruitment
A wealth of research has demonstrated that overt and subtle biases significantly influence interviewing and hiring procedures. For example, myriad studies have shown that both women and men are far more likely to say they would hire candidates with resumes that had
male names rather than female names, despite the fact that the resumes were identical. In addition, these biases also influence initial starting salaries and negotiation processes that ultimately affect pay compensation discrepancies down the road. Studies also have illustrated that these effects can be exacerbated when women make up a smaller proportion of the candidate pool, as is often the case in Computing and IT.\(^7\)

b. Retention
Forty-one percent of women leave technology companies after ten years of experience, compared to only 17% of men.\(^8\) Fifty-six percent of women in technology companies leave their organizations at the mid-level point in their career.\(^9\) Several organizational structures and practices have been identified as significant contributors to this attrition. One key barrier is the lack of appropriate mentorship or sponsorship, as well as an inattention to leadership development of highly qualified underrepresented talent. Inflexible schedules also are an important factor. Managers, especially in mid-level companies, sometimes “technically” offer flexible work schedules but make it difficult for women (and men) to access them either through their authority or through informal comments.\(^10\) In addition, those taking advantage of these flexible work programs are often stigmatized or penalized. All of these factors ultimately affect women’s compensation and ultimate retention.

c. Promotion
Almost half (46%) of technical women report that gender biases influences performance evaluations, and one in four report that women are seen as intrinsically less capable than men in their companies.\(^11\) Research on recommendation letters and performance evaluations confirms the prevalence of gender bias in these processes. Recommendation letters for men are longer and contain more “standout” language than letters for women.\(^12\) Men’s accomplishments are attributed to effort and individual skill, while women’s are more likely to be attributed to luck and easy assignments. Masculine norms embedded in leadership, along with the “double-bind” phenomenon – where women are penalized whether they exhibit less-aggressive or more-aggressive styles – also prohibit female advancement.\(^13\)

\[\text{IV. Recruitment, Retention, and Advancement: Additional Metrics Recommended for Data Collection}^{14}\]

The following are examples of metrics that the Secretary of Labor might include in a rule requiring the collection of data on employment practices for computing and IT positions:

- Number and percent of technical positions held by women*
- Number and percent of technical leadership positions held by women*
- Number and percent of technical new hires who are women
- Attrition rates for technical women and men
- Promotion rates for technical women and men
- Presence or absence of the following kinds of organizational practices
  - Initial blind review of resumes and performance evaluations
  - Leadership development programs that consciously develop diverse talent
  - Sponsorship (not just mentorship) programs
  - Unconscious bias training for managers
  - Flexible work practices and how accessible they really are

*Note that careful attention to the job titles used in data collection will be important. One possibility is that these need to be consistent with the Current Population Survey occupational titles. However, we know that corporations often struggle to align these titles with their own titles. In fact, they often use this discrepancy as a rationale for dismissing the relevance of national DOL data for their specific
companies. As a result, consideration of improving the job title categorizations might be something important to consider. The difficulty in establishing comparable job titles, however, is also a rationale for our argument in the next section – that company specific data be made public.

V. Ensuring Transparency in Results

We recommend that the aggregate data and the collection and analysis methodologies be made publicly available in order to allow for greater transparency in the auditing and analysis process. Transparency also allows the potential to compel greater attention to the content of subsequent Affirmative Action plans resulting from this data collection, incentivizing institutions to achieve greater substantive results.\textsuperscript{15}

We also recommend that to the extent possible, company-specific data be made public for the aforementioned groups. Alternatively data can be grouped by industry, and DOL can encourage companies to follow Google’s model and release their own data. The lack of this data has, to date, inhibited transparency and been a serious impediment to efforts at increasing women’s participation in computing. Access to such data is essential for benchmarking and measuring progress but companies currently are disincentivized from providing such data. Breaking with this historical silence, Google last month released its EEO-1 report\textsuperscript{16} and a diversity report\textsuperscript{17} to the public – the first disclosure of its kind in the tech sector. The results confirm what we already knew: the computing industry is largely white and male, especially in tech positions within these IT companies. Google’s willingness to break the silence, however, and publicly release its own data is a groundbreaking example of transparency that we encourage other companies to emulate. Consideration should be given to these companies by providing incentives or reducing penalties for publicly disclosing their data, so that they do not fear legal repercussions. Currently this fear is used to justify a lack of transparency. Improving transparency will go a long way toward making real headway in leveling the playing field and increasing diverse participation in these essential occupations.\textsuperscript{18}

VI. Summary

Pay inequality is a problem requiring further attention beyond wage discrepancy analysis, especially in Computing and IT positions, where women are faced with additional gender biases. It is therefore crucial that the Secretary of Labor create a rule with two additional stipulations:

1) The OFCCP and EEOC should require, to the extent possible, that the aforementioned kinds of organizations collect detailed data on employment practices and

2) The OFCCP and EEOC should make aggregate and company-specific data publically available (or require/encourage companies to do so) to enhance understanding of the gender wage gap.


3 McGowan, Kevin P. "ABA Speakers Discuss Causes, Remedies For Persistent Pay Gap Between Sexes." Bloomberg BNA.


7 Ibid

8 Ibid

9 Ibid

10 Ibid


12 Ibid


14 Ashcraft, Catherine. "Recruiting, Retaining & Advancing Technical Women: Data Collection and Climate Analysis Guidelines"


17 "Making Google a Workplace for Everyone." May 28, 2014

18 You can view Google’s interactive demographic chart on its website; below is a still of Google’s demographic breakdown by tech positions: