

**Are Equity and Efficiency Competing Values?
Diversity Management's Impacts on Employment Equity and Organizational Performance**

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This manuscript examines equity and efficiency – two values that have been fundamental in the evolution of public administration – and the extent to which organizations can pursue both simultaneously. I focus on workforce diversity management programs, which frequently aim to accomplish objectives related to both equity (the “normative case” for diversity) and efficiency (the “business case” for diversity). I use a data set of 222 U.S. federal government subagencies to test whether the implementation of diversity management is associated with greater employment equity, higher performance, or both. Results demonstrate that organizations may be able to accomplish both objectives simultaneously, as diversity management corresponds both to higher performance and to better employment outcomes for women and people of color. Findings are stronger for performance than for employment equity, and within employment equity, findings are stronger for women than for people of color.

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Efficiency has long been a core value in public administration, and since the New Public Administration movement that emerged after the first Minnowbrook conference, equity¹ has been a central value as well. It has been argued that efficiency and equity represent fundamental trade-offs in governance (Browning and Johnson, 1984; Okun, 1975).² If policy can be boiled down to “who gets what, when, and how” (Lasswell, 1936), then we might assume that equity is achieved via the “how” – and policy provision will become less and less efficient as the “how” gets more involved. As David Rosenbloom (2005: 249) writes, “achieving social equity, reasonably defined, is not likely to establish Pareto Optimality. The public interest may be served, but there are apt to be winners and losers.”

In this paper I examine the extent to which equity and efficiency are competing values in one critical area of public administration: the policies and programs that agencies implement to address bureaucrat diversity. Diversity management is an interesting test case for the equity-efficiency trade-off because organizations often seek to further both equity *and* efficiency via their diversity initiatives. I will test whether diversity management implementation appears to yield greater benefits for equity or efficiency empirically using data from a sample of U.S. federal government subagencies. I begin my analysis with an overview of equity and efficiency as values that have been pursued in varying degrees in public administration’s history. I follow with a description of diversity management programs and research on their relationship with outcomes

¹ There is some disagreement about the extent to which “equity” and “social equity” represent the same underlying construct (Gooden and Myers, 2004; Rosenbloom, 2005; Svara and Brunet, 2005). Equity in employment outcomes for public-sector employees might be considered a concept that exists within a larger scheme of social equity. I agree with Svara and Brunet’s (2005: 254) assertion that “equitable administrative practices promote social equity,” particularly in the context of employment outcomes for public-sector employees. Definitional distinctions between the two concepts are useful to draw in some contexts, but I will use the terms interchangeably here.

² Some scholars use “equity” and “equality” interchangeably, while others draw a distinction. For example, Stone (2001: 32) defines equity as “distributions regarded as fair” and equality as “sameness” and uniformity of distribution. The difference can be boiled down to process vs. outcome, and public administration scholars have disagreed about whether social equity should be measured by outcomes or processes (e.g., Rosenbloom, 2005; Svara and Brunet, 2005).

related to equity and efficiency. After describing the data and method, I discuss the key findings and their relevance to research and practice.

Equity, Efficiency, and Public Administration

Luther Gulick argued that efficiency was “axiom number one in the value scale of administration” (1937: 10). Efficiency has not always been *the* most important value in public administration, but it is perennially among the core values of the field. Emphasis on efficiency in public administration began with the managerial approach to government that emerged in the late 19th century. Wilson (1887) and Goodnow’s (1900) calls for a politics-administration dichotomy aimed to make public administration efficient and business-like, an approach that would continue through the scientific management movement (Taylor, 1919) and the “principles” approach to managing government (Gulick, 1937). Only in the wake of World War II would the field begin to deviate from this as scholars recognized the limitations of the dichotomy (Appleby, 1949; Waldo, 1948). Research began to focus on the political nature of public administration, specifically as it affected decision-making (Allison, 1971; Lindblom, 1959), budgeting (Wildavsky, 1964), and policy implementation (Pressman and Wildavsky, 1973).

This emphasis on politics rather than management generated some of the first and most influential arguments for the role of social equity in public administration (Frederickson, 1971; Krislov, 1974; Mosher, 1968). The relevance of social equity was highlighted by new streams of research in the 1970’s and 1980’s, much of it focused on equity in employment outcomes. For example, research began to examine the role of a representative bureaucracy (Krislov, 1974; Meier, 1975; Meier & Nigro, 1976), the consequences of Affirmative Action and Equal Employment Opportunity policies (Kellough, 1989; Lewinsohn, 1974; Riccucci, 1990; Rosenbloom, 1977), and differences in pay between men and women (Kelly and Bayes, 1988; Lewis, 1985, 1986). Wise (1990) argues that the civil service is a crucial area in which to examine social equity because

government jobs provide an opportunity for the substantive representation of minority interests, in addition to providing material rewards for employees.

In the 1990's public administration began to shift away from its emphasis on politics and social equity. Worldwide government reforms loosely connected under the labels of Managerialism, New Public Management, and Reinventing Government brought a renewed focus on efficiency (Hood, 1991; Kettl, 2000; Osborne and Gaebler, 1992). This concern with efficiency has been highlighted by efforts to measure and manage the performance of government agencies, a movement that has preoccupied the field for the past twenty years (e.g., Boyne et al., 2006; Hatry, 2007; Moynihan, 2008; Poister, 2003; Radin, 2006). While not all performance metrics explicitly measure efficiency, there are elements of "doing more with less" across many of the measures that are used to assess agency performance. The value that has been placed on efficiency has also been demonstrated by calls to "run government like a business," which implies the existence of a bottom line (Osborne and Gaebler, 1992).

It is questionable whether this return to efficiency has come at a cost to social equity. Some argue that the reforms of the 1990's and 2000's have aimed to improve both efficiency *and* equity in government, with motivations rooted in both the market and the polis (Wise, 2002). If efficiency and equity are opposing forces in a zero-sum game, can they both be accomplished simultaneously? Frederickson (1971: 11) implies that they *can* in one of the earliest arguments for the importance of social equity:

New Public Administration seeks not only to carry out legislative mandates as efficiently and economically as possible, but to both influence and execute policies which more generally improve the quality of life for all. New Public Administrationists are likely to be forthright advocates for social equity and will doubtless seek a supporting clientele. By claiming that public administrators can implement policy "as efficiently and economically as possible" while still serving as "forthright advocates for social equity," Frederickson suggests that

these values complement each other. Kuttner (1984) agrees, arguing that the equity-efficiency trade-off is nothing more than a myth perpetuated by the advantaged in order to retain their wealth.

Context for the Study: Workforce Diversity Management Programs

Whether equity and efficiency constitute a fundamental trade-off is particularly important in the context of diversity management, where there has been a historic progression of approaches that wax and wane in their emphasis on the two values. Early diversity programs were rooted in Equal Employment Opportunity (EEO) and Affirmative Action (AA) regulations with a clear objective to promote social equity in employment (Kellough, 2006; Riccucci, 1990, 2002; Rosenbloom, 1977). The extent to which these initiatives have achieved social equity is widely debated (Naff, 2001; Riccucci, 2009), and there has been substantial backlash against EEO/AA legal protections as “reverse discrimination” and inefficient government intrusion (Kellough, 2006; Riccucci, 1997; Von Bergen et al., 2002). The focus on reform, efficiency, and performance in the 1990’s also made EEO/AA programs decreasingly palatable to administrators who were tasked to demonstrate results and achieve outcomes. A new approach to diversity – the *diversity management* paradigm – emerged as a compromise that deemphasized the role of EEO/AA programs and focused instead on post-hire management processes that would use diversity to improve responsiveness and performance (Thomas, 1990). By the late 1990’s, many federal government agencies had folded their EEO/AA programs into broader, more strategic “Diversity Management” initiatives (Kellough and Naff, 2004). This has created a dilemma for those who have a stake in diversity issues. Can organizations pursue equitable employment outcomes for disadvantaged groups if their diversity initiatives focus primarily on efficiency and performance?

A key consideration is the organization’s motivation for diversity management. Agencies can approach diversity through normative or strategic lenses, reflecting broader notions of whether

an organization places higher value on equity or efficiency. For example, in one motivation – what some call the *normative case* for diversity – proponents claim that creating diversity programs will lead to better employment outcomes for historically disadvantaged groups (Mathews, 1998; Naff, 2001; Naff and Kellough, 2003; Riccucci, 2009). As the culture of the organization shifts to focus more centrally on diverse employee values and needs, outcomes for these groups should begin to improve (Wise, 1990). The argument is normative, since improving employment outcomes for these groups is important not for strategic or pragmatic reasons, but rather because social equity is deemed to be an objective in and of itself (Marini, 1971; Riccucci, 2009; Rosenbloom, 1977). Diversity management programs may also be used as a means of remedying an organizational culture that has systematically disadvantaged minority employees in the past (Riccucci, 2002).

The second argument is often called the *business case* for diversity (for a review, see Kochan et al., 2003). It assumes that boosting workforce diversity and devoting resources to management programs will lead to performance gains. Originating in the for-profit sector, this approach to diversity also became popular in the public sector as reforms during the 1990's and 2000's elevated the role of performance and strategy (Kettl, 2000; Wise and Tschirhart, 2000). A focus on strategy and performance requires organizations to tie management processes to larger goals and objectives, which has led many organizations to consider how workforce diversity can be used to accomplish their missions. Indeed, organizations often highlight that employee diversity is a “strength,” which implies that diversity can be used as a lever to improve performance.

The relationships posited in both of these arguments represent empirical questions. To evaluate the normative case for diversity, one must ask whether diversity management improves work-related outcomes for employees from historically disadvantaged groups. To evaluate the business case, one would need to discern whether diversity management improves organizational performance. Research linking diversity management programs to work-related outcomes and performance has been scant, and the few studies conducted have yielded mixed results (Cox, 1993;

Naff and Kellough, 2003; Pitts, 2009; Sanchez and Brock, 1996). Public organizations have nevertheless begun to rapidly adopt formal diversity management programs (Kellough and Naff, 2004). Many agencies mimic the approaches that similar organizations have already taken (Pitts et al., 2009), while some agencies repackage their AA/EEO offices as “Diversity Management” offices (Kellough and Naff, 2004). Organizations must continue to adhere to AA/EEO guidelines, but the primary focus in many agencies has shifted away from an emphasis on the law and more toward an emphasis on management (Ricucci, 2002; Selden and Selden, 2001; Thomas, 1990; Wise and Tschirhart, 2000).

This shift in organizational priorities raises questions about what “diversity management” means and how it should be operationalized in empirical research. Diversity management is an ambiguous bundle of programs, policies, and initiatives that are not implemented consistently across agencies. In earlier research I defined diversity management as a framework involving three discrete components: recruitment and outreach, valuing differences, and pragmatic policies and programs (Pitts, 2006). These components reflect the three primary ways that an organization addresses employee diversity.

The *recruitment and outreach* function consists of organizational efforts to tap into multiple labor markets. Organizations that effectively manage diversity on this dimension are those that target potential applicants in ways that reach the widest possible range of communities. For example, organizations might build a “pipeline” of potential employees by engaging in outreach with schools that enroll a large number of students from underrepresented populations. Job openings would be announced in venues most likely to reach women and/or people of color, and agency recruitment websites would be translated into multiple languages (Rubaii-Barrett and Wise, 2007). Implementing these practices makes it more likely that an organization will attract highly qualified employees from diverse backgrounds, and this can provide benefits for both performance and equity. Performance benefits may accrue via greater innovation and creativity (Adler, 2004;

Richard, 2000; Richard et al., 2003), and equity improvements will be shown by increased representation of historically disadvantaged groups.

The *valuing differences* aspect of diversity management includes an organization's efforts to encourage cultural respect and understanding among employees. Educational programs, training, and culture-based team-building fall into this category. If these programs *do* increase multicultural learning, then the consequences for social equity are clear. The performance implications are more ambiguous. Foldy (2004) argues that organizational processes aimed at encouraging multicultural learning will lead to greater benefits from existing diversity, which suggests that agencies may see performance boosts if they implement these programs. Unfortunately much of the evidence on this point is anecdotal: empirical research has not produced much support for the effectiveness of values-based programs (Cox, 1993; Sanchez and Brock, 1996), and these types of diversity training sessions can sometimes promote majority backlash (Ricucci, 1997).

The *pragmatic programs and policies* dimension includes a series of strategic management tools that an organization can use to promote employee job satisfaction and overall performance. These policies ensure that employees are not disadvantaged by processes that prevent them from meeting their full potential. For example, mentoring programs for women and people of color help to ensure that employees from these groups have access to senior executives (Bozeman and Feeney, 2009; Fox and Schumann, 2001; Naff, 2004). Affinity groups permit employees from similar backgrounds – often organized by sex, race, ethnicity, or sexual orientation – to advocate for their interests in organizational decision-making. Flexible schedules permit people with family responsibilities to meet both work and family needs simultaneously (Facer and Wadsworth, 2008; Perry et al., 2006; Saltzstein et al., 2001). A mix of collaborative and individual work assignments ensures that those with different value paradigms are given equal opportunities to produce good work (Azevedo et al., 2002; Ho, 1987). The list varies by organization, but this dimension of diversity management reflects a strategy on the part of managers to assess employee needs and

create workplace policies that respond to them. There is the potential for positive shifts on equity and efficiency indicators.

There is very little empirical research on whether these diversity management strategies have a real impact on outcomes. Findings are mixed but slightly positive. For example, Pitts (2009) found that diversity management improved job satisfaction for people of color and perceptions of performance for all employees. On the other hand, Naff and Kellough (2003) found that diversity management did not affect promotions and separations for women and people of color. Choi (2009) shows that diversity management has the potential to affect outcomes, but a variety of mediating and moderating factors must be controlled for in order to produce accurate results. A series of studies using case study and/or qualitative methods have approached diversity management from a different perspective by examining why diversity management programs might *not* be effective (Rangarajan and Black, 2007; Riccucci, 1997; Soni, 2000). A third line of the literature on diversity management is more expository, such as Rubaii-Barrett and Wise's (2007) review of diversity-focused recruitment and outreach, and Mathews' (1998) description of diversity management programs in the context of larger human resource strategies.

The lack of evaluative research can be explained by a variety of factors. Such an empirical evaluation almost certainly requires survey data, archival research, and/or content analysis (Pitts and Wise, 2009). In order to collect the necessary data, researchers must convince organizations to "let them in," a proposition that is particularly shaky in an area like diversity. Few organizations want to run the risk of being exposed as having a subpar diversity management program or discriminatory organizational culture.

These fears align with the distinct differences between the normative and business cases for diversity. For example, organizations that implement diversity management to remedy a discriminatory culture will be hesitant to release information showing that their programs do nothing to level the playing field for underrepresented groups. On the other hand, organizations

that adopt diversity management as a strategic means of improving performance will not want to reveal to stakeholders that their efforts and expense do not result in stronger outcomes. The purpose of my analysis is to examine whether diversity management appears to systematically affect one of these types of outcomes more than the other. I compare the impact of diversity management on employment outcomes for historically disadvantaged groups (the normative case) with its impact on performance outcomes for programs and agencies (the business case).

Data

The data for this project were drawn from two sources: the Central Personnel Data File (CPDF) compiled by the U.S. Office of Personnel Management (OPM), and the 2008 Federal Human Capital Survey (FHCS), also administered by OPM. I have excluded the federal agencies that do not participate in CPDF data collection, and the resulting sample undercounts employees working in defense and energy policy areas. For the 2008 FHCS, OPM surveyed just over 400,000 full-time, permanent employees in 83 federal agencies, with a response rate of 51% ($N=212,223$). FHCS responses are weighted to ensure that they are representative of the U.S. federal government workforce as a whole.

The 83 agencies from which employees were surveyed are divided into 272 subagencies, and the subagency is the unit of analysis in this study. After eliminating subagencies that do not use the General Schedule (see below) and those for which CPDF data were not available, the final sample size is 222. The average subagency has 778.77 FHCS respondents, compared to 9,108.24 for the average agency. In most cases, the subagency value for any given variable is the average employee response to the question. Prior to calculating subagency scores, I imputed individual-level missing values for most variables by regressing them on a series of existing variables for which data were available (Little and Rubin, 1987). When observations were missing data on too many variables to generate predicted values, I imputed the data set mean.

Using the subagency as unit of analysis is preferable to using the entire agency for several reasons. First, there are too few agencies to create a sample large enough for analysis using regression. A second issue relates to aggregation. Most federal agencies are incredibly large organizations, and it is impossible to be sure that the characteristics present at the agency level are consistent throughout subagencies and work groups (Wise and Tschirhart, 2000). This is a particular problem when studying diversity issues, since people of color and women are often clustered into specific offices and functions within agencies (Guy and Newman, 2004; Riccucci and Sidel, 1997). The implementation of diversity management programs can also vary within an agency, so using the subagency as the unit of analysis permits a more precise estimate. Future research should combine data at the agency, subagency, and individual levels to explore through multilevel modeling.

Dependent Variables

In order to test the business case for diversity, I examine the extent to which diversity management affects subagency performance.³ I use a measure of perceived performance that represents the average employee response for each subagency on the following FHCS question: “How would you rate the overall quality of work done by your work group?” Responses were coded 1 for “very poor,” 2 for “poor,” 3 for “fair,” 4 for “good,” and 5 for “very good.” The average subagency score was 4.249, with a standard deviation of 0.128 and a range from 3.792 to 4.625. All descriptive statistics appear in Table 1.

³ In some respects this is a measure of *performance* or *effectiveness* more than *efficiency*, which is often defined more narrowly (Hatry, 2007; Poister, 2003). However, in the broad context of values in governance, efficiency is often used to convey multiple and overlapping constructs that include effectiveness and performance. Given that an individual’s perception of work group performance almost assuredly involves an evaluation on efficiency grounds, and that “efficiency” often carries a broader definition than that used by public administration researchers, I use this variable to test the extent to which diversity management appears to result in greater efficiency.

This is a subjective performance measure that reflects the extent to which employees perceive that their work group performs well. This almost assuredly creates measurement error, since employees are likely to report artificially high performance for their own unit. However, I do not expect for that measurement error to be nonrandom, so there is no reason to expect that the results will be affected. Suitable objective performance data are not available across federal agencies, so I am unable to use a more objective measure in this analysis.⁴ Research has demonstrated that subjective and objective measures of performance are typically highly correlated (Boyne and Walker, 2004).

I use six dependent variables to test the normative case for diversity. All were obtained from CPDF data. First, I examine the turnover rate for people of color in each subagency. This variable measures the percentage of non-white employees who left their jobs over the course of the year, whether voluntarily or involuntarily.⁵ Subagency turnover for people of color ranged from 0.45% to 7.66%, with an average of 2.82%. Second, I consider the percentage of each subagency's new hires that are classified as non-white. The new hire rate for people of color ranged from 3.86% to 100%, with an average of 33.45%. Finally, I look at the average General Schedule pay grade for people of color in each subagency, which is a general measure of whether nonwhite employees choose to remain with their agencies and earn promotions to upper-level positions. Using this as a dependent variable requires me to drop from my sample the subagencies that use a different compensation system, but many of these are defense and intelligence agencies that I would omit anyway since they do not participate in the CPDF. The average pay grade for nonwhite employees ranged from 8.405 to 10.761 across all subagencies, with a mean of 9.321.

⁴ A notable exception is the Program Assessment Rating Tool (PART), which is a recent means of assessing program performance in federal agencies. Unfortunately PART scores are measured at the program level and many programs fall under the purview of multiple subagencies. An alternative would be to conduct an analysis of PART at the agency level, but since there are only 24 agencies with both demographic and performance data available, the sample is too small to examine using regression.

⁵ The data do not permit me to distinguish between voluntary and involuntary turnover. Even if they did, the numbers would be too small in many subagencies to generate an accurate assessment.

I examine all three of these variables separately for women. Subagency turnover for women ranged from 0.62% to 10.8%, with an average of 4.1%. The new hire rate for women ranged from 21.08% to 70.9%, with an average of 46.2%. The average pay grade for women ranged from 9.012 to 10.466 across all subagencies, with a mean of 9.302.

Independent Variables

In the model predicting performance, I include a series of variables that measure diversity management, the existence of a performance-oriented culture, training and development opportunities, employee job satisfaction, and employee demographics. In the models predicting employee outcomes for women, I include diversity management, training and development, job satisfaction for women, and employee demographics. The models predicting outcomes for people of color are the same as those for women, except I substitute the job satisfaction value for people of color instead of women.

Diversity Management

I use a question from the Federal Human Capital Survey to assess the extent to which diversity management is adopted and implemented in each subagency. I use the average employee response to the statement, "Policies and programs promote diversity in the workplace (for example, recruiting minorities and women, training in awareness of diversity issues, mentoring)." Respondents indicated whether they strongly disagreed (1), disagreed (2), neither agreed nor disagreed (3), agreed (4), or strongly agreed (5). By averaging employee scores for each subagency, I am able to aggregate respondents' assessments in a way that should iron out any measurement error associated with individual employee attributes. Subagency averages ranged from 3.182 to 4.192 on this question, with an average score of 3.755 and a standard deviation of 0.175.

Table 1: Descriptive Statistics

<i>Dependent Variables</i>	<i>Mean</i>	<i>S.D.</i>	<i>Min.</i>	<i>Max.</i>
Organizational performance	4.249	0.128	3.792	4.625
Turnover rate [women]	0.041	0.018	0.006	0.108
Turnover rate [nonwhite]	0.028	0.015	0.004	0.077
Percentage of new hires who are women	0.462	0.184	0.211	0.709
Percentage of new hires who are nonwhite	0.335	0.225	0.039	1.000
Average GS pay grade [women]	9.302	0.385	9.012	10.466
Average GS pay grade [nonwhite]	9.321	0.445	8.405	10.761
<hr/>				
<i>Independent Variables</i>	<i>Mean</i>	<i>S.D.</i>	<i>Min.</i>	<i>Max.</i>
Diversity management	3.755	0.175	3.182	4.192
Job satisfaction [all employees]	3.738	0.177	2.861	4.233
Job satisfaction [women]	3.711	0.188	2.766	4.250
Job satisfaction [nonwhite]	3.704	0.209	2.500	4.667
Performance Culture Index				
Promotions in my work unit are based on merit.	2.925	0.194	2.364	3.549
In my work unit, steps are taken to deal with a poor performer who cannot or will not improve.	3.335	0.244	2.273	3.938
Employees are rewarded for providing high quality products and services to customers.	2.855	0.246	2.175	3.479
Pay raises depend on how well employees perform their jobs.	3.236	0.223	2.425	3.778
Awards in my work unit depend on how well employees perform their jobs.	3.028	0.195	2.417	3.497
In my work unit, differences in performance are recognized in a meaningful way.	4.080	0.108	3.661	4.455
I am held accountable for achieving results.	3.116	0.222	2.449	3.750
Training and Development Index				
I am given a real opportunity to improve my skills in my organization.	3.669	0.217	2.861	4.194
Supervisors/team leaders in my work unit support employee development.	3.726	0.191	3.078	4.259
My training needs are assessed.	3.344	0.243	2.394	4.014
How satisfied are you with the training you receive for your present job?	3.447	0.230	2.405	4.118
"I like the kind of work I do." [social desirability control]	4.160	0.126	3.750	4.727
Racial/ethnic diversity	0.462	0.104	0.072	0.674
Employee age profile (average score on ordinal question, "What is your age group?")	3.386	0.218	2.561	3.844
Employee tenure (avg. score on ordinal question, "How long have you been with your current agency?")	4.933	0.246	3.638	5.491
Subagency hierarchy (avg. score on ordinal question, "What is your supervisory status?")	1.886	0.308	1.211	2.969
Percentage of employees who are female	0.448	0.027	0.386	0.617
Subagency size	7,212	11,183	203	220,052

Performance Culture

In the model predicting performance I include a variable that taps into whether a subagency emphasizes performance as a core element of its organizational culture. I measure this by combining the average employee responses on seven FHCS questions (α : 0.946):

- Promotions in my work unit are based on merit.
- In my work unit, steps are taken to deal with a poor performer who cannot or will not improve.
- Employees are rewarded for providing high quality products and services to customers.
- Pay raises depend on how well employees perform their jobs.
- Awards in my work unit depend on how well employees perform their jobs.
- In my work unit, differences in performance are recognized in a meaningful way.
- I am held accountable for achieving results.

I combined these variables by using factor analysis to generate a factor score for each subagency (Table 2).

Table 2: Factor Analysis Results for Performance Culture

<i>Variable</i>	<i>Loading</i>	<i>Uniqueness</i>
Promotions in my work unit are based on merit.	0.931	0.134
In my work unit, steps are taken to deal with a poor performer who cannot or will not improve.	0.822	0.325
Employees are rewarded for providing high quality products and services to customers.	0.895	0.199
Pay raises depend on how well employees perform their jobs.	0.844	0.287
Awards in my work unit depend on how well employees perform their jobs.	0.946	0.105
In my work unit, differences in performance are recognized in a meaningful way.	0.963	0.073
I am held accountable for achieving results.	0.737	0.457

Eigenvalue: 5.420

Training and Development

I control for training and development opportunities in all of my models, since it affects not only overall performance but also individual-level issues like turnover and promotion. To control for the

impact of employee training and development, I used the average employee response to the following four FHCS questions (α : 0.943):

- I am given a real opportunity to improve my skills in my organization.
- Supervisors/team leaders in my work unit support employee development.
- My training needs are assessed.
- How satisfied are you with the training you receive for your present job?

I used factor analysis to generate a factor score for each subagency (Table 3).

Table 3: Factor Analysis Results for Training & Development

<i>Variable</i>	<i>Loading</i>	<i>Uniqueness</i>
I am given a real opportunity to improve my skills in my organization.	0.935	0.127
Supervisors/team leaders in my work unit support employee development.	0.876	0.232
My training needs are assessed.	0.845	0.287
How satisfied are you with the training you receive for your present job?	0.953	0.092

Eigenvalue: 3.263

Job Satisfaction

I include a variable for job satisfaction in all of my models. In the business case model this variable is the average subagency score for the following FHCS Likert-type variable, where ‘1’ represented strong disagreement and ‘5’ represented strong agreement: “Considering everything, how satisfied are you with your job?” The mean subagency score was 3.738, with a standard deviation of 0.177 and a range of 2.861 to 4.233.

I substituted average job satisfaction *for women* in the models predicting hire rate, turnover rate, and average pay grade for women. The mean subagency score for women ranged from 2.766 to 4.250, with an average of 3.711. Similarly, I used average job satisfaction score *for people of color* in the models predicting non-white hire rate, turnover rate, and average pay grade. The mean subagency score for nonwhite employees ranged from 2.500 to 4.667, with an average of 3.704.

Employee Demographics

I control for the demographic profile of each subagency with six variables, all of which are included in each of the models. I measure racial/ethnic diversity by using a Blau Index of Dissimilarity, a commonly used measure of racial/ethnic heterogeneity in social science research (Choi, 2009; Pitts, 2005). The Blau Index ranges from 0 to a number that approaches 1, depending on the number of racial/ethnic categories:

$$D_i = 1 - \sum p_j^2$$

D_i measures racial/ethnic diversity for each subagency (i) by taking the sum of the proportions of employees (p) in each racial/ethnic group (j). In this study, the highest possible score is 0.8, since OPM uses five racial/ethnic categories: African-American, American Indian, Asian-American, Hispanic/Latino, and White. A score of 0.8 represents a subagency whose employees are spread evenly among these five categories. A score of 0 represents a subagency whose employees all belong to the same racial/ethnic category. Racial/ethnic diversity ranged from 0.072 to 0.674, with a mean score of 0.462 and a standard deviation of 0.104. Data were obtained from the CPDF.

Age data were not available by subagency in the CPDF, so I used the average response to the FHCS question, "What is your age group," coded 1 for ≤ 29 years old, 2 for 30-39, 3 for 40-49, 4 for 50-59, and 5 for ≥ 60 . Subagency scores ranged from 2.561 to 3.844, with an average of 3.386 and a standard deviation of 0.218. For employee tenure, I used the average response to the FHCS question, "How long have you been with your current agency," coded 1 for < 1 year, 2 for 1-3 years, 3 for 4-5 years, 4 for 6-10 years, 5 for 11-20 years, and 6 for > 20 years. Subagency scores ranged from 3.638 to 5.491, with a mean of 4.933 and a standard deviation of 0.246. I controlled for hierarchy by taking the average employee pay grade. The average subagency score was 1.886, with a standard deviation of 0.308 and a range of 1.211 to 2.969. I also controlled for the proportion of

the subagency that was female⁶ (\bar{x} : 0.448, s : 0.027), and subagency size (\bar{x} : 7,212.418, s : 1,183.442), all from the CPDF.

Models

I test the impact of diversity management in two sets of models. The first aims to test the business case for diversity, or whether diversity management results in efficiency gains:

$$\text{performance}_i = \beta_0 + \beta_1 \text{diversity management}_i + \beta_2 \text{performance culture}_i + \beta_3 \text{training}_i + \beta_4 \text{job satisfaction}_i + \beta_5 \text{race/ethnicity}_i + \beta_6 \text{gender}_i + \beta_7 \text{age}_i + \beta_8 \text{tenure}_i + \beta_9 \text{hierarchy}_i + \beta_{10} \text{job affinity}_i + \beta_{11} \ln(\text{size})_i + \epsilon_i$$

The second set of models examines the normative case for diversity, or whether diversity management leads to greater social equity in civil service positions. I run these models separately for women and people of color:

$$\text{turnover}_{ij} = \beta_0 + \beta_1 \text{diversity management}_i + \beta_2 \text{training}_i + \beta_3 \text{job satisfaction}_{ij} + \beta_4 \text{race/ethnicity}_i + \beta_5 \text{gender}_i + \beta_6 \text{age}_i + \beta_7 \text{tenure}_i + \beta_8 \text{hierarchy}_i + \beta_9 \ln(\text{size})_i + \epsilon_i$$

$$\text{new hires}_{ij} = \beta_0 + \beta_1 \text{diversity management}_i + \beta_2 \text{training}_i + \beta_3 \text{job satisfaction}_{ij} + \beta_4 \text{race/ethnicity}_i + \beta_5 \text{gender}_i + \beta_6 \text{age}_i + \beta_7 \text{tenure}_i + \beta_8 \text{hierarchy}_i + \beta_9 \ln(\text{size})_i + \epsilon_i$$

$$\text{pay}_{ij} = \beta_0 + \beta_1 \text{diversity management}_i + \beta_2 \text{training}_i + \beta_3 \text{job satisfaction}_{ij} + \beta_4 \text{race/ethnicity}_i + \beta_5 \text{gender}_i + \beta_6 \text{age}_i + \beta_7 \text{tenure}_i + \beta_8 \text{hierarchy}_i + \beta_9 \ln(\text{size})_i + \epsilon_i$$

I use Ordinary Least Squares regression to test the models described above. I use robust standard errors clustered on the agency to take into account the nesting of subagencies within larger agencies. In the model predicting performance I include two control variables that are not part of the equity models. First, I include a variable that controls for the extent to which the subagency culture focuses on performance. This ensures that the diversity management variable does not reflect “performance management” more broadly defined, which is particularly important in the

⁶ Most employees did not report their sex, leading to roughly 140,000 missing values at the individual level. Since it is included strictly as a control variable, I imputed a sex-neutral value (0.5) for each of these employees in order not to lose such a large proportion of the data set. I imputed values prior to aggregating data to the subagency level. I ran all models with both versions of the data set (i.e., with only cases for which gender was reported and then again with all cases, including imputations). Results did not differ systematically across the sets of results.

performance model since “training/development” is the only other management variable in the equation. Second, I include a variable for job affinity⁷, measured as “I like the kind of work I do.” This helps to control for the impact of single-source bias, particularly insofar as “happy employees are happy employees” and likely to respond either positively or negatively to all items regardless of whether it is accurate (Doty and Glick, 1998; Podsakoff and Organ, 1996). I do not use this control variable in the models predicting equity outcomes, since those dependent variables are drawn from a different data set and are not attitudinal.

Findings: Diversity Management and Performance

The results from the model predicting performance are presented in Table 1. The first column depicts the unstandardized coefficients and standard errors for each of the independent variables. The second column shows fully standardized coefficients for ease of interpretation, since many of these variables are measured on scales. The independent variables collectively predict about 65% of the variation in performance.

Findings suggest that there is strong support for the business case for diversity. The relationship between diversity management and performance is positive and statistically significant at the 0.01-level. The standardized coefficient indicates that increasing diversity management by one standard deviation corresponds to a 0.181-standard deviation increase in performance. This is hardly a trivial relationship – it shows that an investment in diversity management generates almost a 20% return in improved performance. The standardized coefficient for diversity management is the third highest of all in the model, indicating that it has one of the strongest substantive impacts. This is particularly noteworthy when one considers that the model controls for performance culture, a variable so closely linked to performance that it has the potential to act as a dominant variable and mask the impacts of other factors.

⁷ This question has also been used as part of intrinsic motivation, job satisfaction, and organizational involvement scales by other researchers (e.g., Bertelli, 2006, 2007; Fernandez, 2008).

Table 4: Diversity Management and Performance

Dependent Variable: Aggregate Perceptions of Work-Group Performance

	<i>Unstandardized Coefficients</i>	<i>Standardized Coefficients</i>
Diversity Management	0.304** [0.098]	0.181
Performance Culture	0.041* [0.020]	0.116
Training & Development	0.019*** [0.005]	0.206
Average Employee Job Satisfaction	-0.030 [0.049]	-0.039
Racial/Ethnic Diversity	-0.134* [0.055]	-0.130
Female Employees (%)	0.036+ [0.020]	0.087
Average Employee Age	0.020 [0.041]	0.019
Average Employee Tenure	0.005 [0.046]	0.011
Hierarchy	-0.021 [0.020]	-0.018
Organizational Size (ln)	-0.022** [0.007]	-0.143
Average Employee Job Affinity	0.027*** [0.008]	0.195
Constant	1.991*** [0.437]	
Number of Observations		222
Adjusted-R ²		0.648

Clustered robust standard errors in brackets

*Statistical significance: *** p<0.001, ** p<0.01, * p<0.05, + p<0.10 (two-tailed)*

While I include it primarily as a control variable, it is important to highlight the negative relationship shown for racial/ethnic diversity and performance. Increasing subagency diversity by one standard deviation corresponds to a 0.130-standard deviation *decrease* in performance, a relationship that is statistically significant at the 0.05-level. Even though diversity management appears to generate performance gains, employee diversity – at least along racial/ethnic lines –

appears to correspond to performance drawbacks. On the other hand, the percentage of women who work in the subagency has a (marginally) positive impact on performance. Increasing the percentage of women by one standard deviation corresponds to a 0.087-standard deviation increase in performance, and this is marginally significant at the 0.10-level (two-tailed test).

The negative relationship between racial/ethnic diversity and performance is not surprising in light of recent empirical research in public administration (Pitts, 2005; Pitts and Jarry, 2007, 2009). However, the conflicting findings for race/ethnicity and gender raise questions about intersectionality (Bearfield, 2009). If more female employees improve performance, but greater racial/ethnic diversity detracts from it, what impact would we expect to see from increasing the percentage of nonwhite women? Further analysis on this point exceeds the scope of this paper, but future research should consider how race/ethnicity and gender within organizations *either* work together *or* work against each other to improve performance outcomes.

Findings: Diversity Management and Employment Outcomes for Women

Results from the models predicting employment outcomes for women are presented in Table 5. The results show that diversity management leads to better employment outcomes for women across all three categories. Increasing diversity management by one standard deviation (0.175 points) corresponds to a decrease in turnover of 0.735 percentage points, a relationship that is statistically significant at the 0.001-level. This result is particularly strong when one considers that the range for turnover across subagencies is fairly small – 0.62% to 10.80%. Women are more likely than men to leave the workforce for work-family balance purposes (Lewis and Park, 1989; Saltzstein et al., 2001), and these results suggest that diversity management programs may make it easier for them to balance their priorities without leaving the organization altogether.

Table 5: Diversity Management and Outcomes for Women

	<i>Dependent Variables</i>		
	<i>Turnover</i>	<i>New Hires</i>	<i>Pay Grade</i>
Diversity Management	-0.042*** [0.008]	0.114** [0.041]	0.233*** [0.055]
Training & Development	-0.038*** [0.005]	0.052*** [0.009]	0.006*** [0.001]
Average Employee Job Satisfaction (Women)	-0.088+ [0.046]	0.108* [0.032]	0.017+ [0.009]
Racial/Ethnic Diversity	0.061 [0.088]	0.096 [0.091]	-0.016 [0.016]
Female Employees (%)	-0.022 [0.021]	0.121*** [0.024]	0.066*** [0.022]
Average Employee Age	0.097*** [0.021]	0.003 [0.031]	0.239*** [0.032]
Average Employee Tenure	0.256*** [0.033]	0.044 [0.033]	0.450*** [0.029]
Hierarchy	-0.179 [0.212]	0.812 [0.571]	-0.227 [0.193]
Organizational Size (ln)	-0.087 [0.107]	0.000 [0.098]	-0.001 [0.131]
Constant	0.695+ [0.356]	0.311 [0.190]	0.030 [0.204]
Number of Observations	222	222	222
Adjusted-R ²	0.267	0.385	0.309

*Unstandardized coefficients shown; clustered robust standard errors in brackets
Statistical significance: *** p<0.001, ** p<0.01, * p<0.05, + p<0.10 (two-tailed)*

Results are similarly strong for the percentage of new hires who are women. Increasing diversity management by one standard deviation corresponds to a 1.995-percentage point increase in new hires who are women. This relationship is statistically significant at the 0.01-level. This likely reflects at least three interrelated causal paths. First, it could be that subagencies with strong diversity management programs are more likely to engage in the strategic recruitment and outreach of women. Such efforts would yield a larger number of applications for women, which would likely yield a larger number of female hires. Alternatively, it could be that women are seeking information about diversity management programs when they choose the organization in which

they work. Organizations with strong diversity management programs would then be more likely to attract women who were specifically in search of an agency that effectively managed diversity. Finally, it could also be that diversity management infiltrates the organizational culture in ways that indirectly influence hiring practices. Research aiming to understand how information about diversity management practices is communicated to applicants would help to clarify why these programs result in more new female hires.

The results in Table 5 also demonstrate that diversity management has the potential to influence women's pay, although the impact does not appear to be substantial. Increasing diversity management by one standard deviation corresponds to an increase in average pay grade of 0.041 points. While this relationship is statistically significant at the 0.001-level, it is not substantively noteworthy. Across the subagencies in this sample, the average General Schedule pay grade for women is 9.302. Even if one were to increase diversity management by three standard deviations – a massive jump – the average pay grade would move only from 9.302 to 9.424. This is an interesting finding when considered in conjunction with the other two findings for women. Diversity management appears to lead to less turnover and more new hires, but it does not seem to affect pay in a meaningful manner. This potentially reflects job segregation in the federal workforce, where women may select into “emotional labor” jobs that have historically been undervalued (Guy and Newman, 2004; Lewis, 1985). The persistent gaps in pay between men and women may also be too entrenched for diversity management programs to remedy very quickly (Guy, 1993, 1994; Lewis, 1998; Lewis and Oh, 2009).

Findings are mixed for other independent variables that one might expect to affect these outcomes. For example, average job satisfaction for female employees is only marginally significant in two of three models, and the percentage of employees who are women is not significant at all in predicting turnover. The explanatory power of the three models is mixed. I am able to explain only 26.7% of the variation in the turnover of women, which likely reflects the extent to which a myriad

of factors related to home, work, and family affect women's decisions to leave their jobs. I am able to explain slightly more variation in women's pay, but this model is potentially limited by my inability to control for the types of jobs in each subagency. The strongest model is that for the new hires who are women, where I am able to predict almost 40% of the variation.

Findings: Diversity Management and Employment Outcomes for People of Color

The results from the models linking diversity management and employment outcomes for people of color are presented in Table 6. The pattern of results is weaker than those for women, but nonetheless point to social equity benefits that stem from diversity management programs. For example, diversity management seems to correspond to lower turnover among people of color. A one standard deviation increase in diversity management corresponds to a decrease in turnover of 0.525 percentage points, a relationship that is statistically significant at the 0.001-level. While not as strong as the relationship between diversity management and turnover among women, this is still noteworthy given that nonwhite turnover ranges only from 0.45% to 7.66% across all subagencies in the sample.

The relationship between diversity management and the nonwhite new hires is only marginally significant. Increasing diversity management by one standard deviation corresponds to a 0.413 percentage point increase in new hires who are nonwhite. Given that nonwhite new hire rates range from 3.86% to 100% across all subagencies, this impact – even if statistically significant – would not be substantively important. The relationship is similar for the model predicting the average nonwhite pay grade. The impact of diversity management is statistically significant at the 0.05-level, but it is substantively minimal. Increasing diversity management by one standard deviation corresponds to an increase in average pay grade of 0.017 points. To repeat the illustration made above for women, this would mean that increasing diversity management by some *three* standard deviations would shift the average subagency from 9.321 to 9.372.

Table 6: Diversity Management and Outcomes for People of Color

	<i>Dependent Variables</i>		
	<i>Turnover</i>	<i>New Hires</i>	<i>Pay Grade</i>
Diversity Management	-0.030*** [0.005]	0.024+ [0.014]	0.098* [0.048]
Training & Development	-0.409 [0.252]	0.031*** [0.008]	0.004*** [0.001]
Average Employee Job Satisfaction (Nonwhite)	-0.183** [0.065]	0.096** [0.036]	-0.219+ [0.121]
Racial/Ethnic Diversity	-0.092 [0.064]	0.034 [0.025]	0.005 [0.025]
Female Employees (%)	-0.097 [0.521]	0.009 [0.019]	0.006 [0.005]
Average Employee Age	0.102*** [0.023]	0.076 [0.088]	0.205*** [0.031]
Average Employee Tenure	0.241** [0.052]	0.009 [0.043]	0.306*** [0.045]
Hierarchy	-0.285 [0.555]	0.514 [0.890]	-0.514 [0.652]
Organizational Size (ln)	0.002 [0.003]	0.006 [0.058]	0.043 [0.099]
Constant	0.502 [0.409]	0.214** [0.098]	0.006 [0.010]
Number of Observations	222	222	222
Adjusted-R ²	0.338	0.377	0.355

*Unstandardized coefficients shown; clustered robust standard errors in brackets
Statistical significance: *** p<0.001, ** p<0.01, * p<0.05, + p<0.10 (two-tailed)*

Interestingly, the racial/ethnic diversity of the agency did not affect these employment outcomes in any of the three models. The average nonwhite employee job satisfaction variable seems to discourage turnover and increase new nonwhite hires, but it detracts from the average nonwhite pay grade (although the relationship is only marginally significant). The three models predicting nonwhite outcomes are similar to those for women in their predictive power.

Implications and Next Steps

These results demonstrate that diversity management has a positive impact on both performance and employee equity outcomes. There is evidence that these programs are achieving objectives related to both the business *and* normative cases for diversity. Not only does diversity management appear to provide the performance-oriented benefits that agencies highlight in order to obtain buy-in from skeptical stakeholders, it also improves employment outcomes for women and people of color. This is a rare occasion where the objectives of the New Public Management and those of the New Public Administration appear to be met at the same time. At least in this case, the classic “equity-efficiency trade-off” appears not to exist.

Public administrators should use these findings to inform their adoption and implementation of diversity management initiatives. While these results demonstrate that both performance and social equity can benefit from diversity management, they also show that results are not necessarily the same for women and people of color. The benefits that accrue to women appear to be stronger than those that accrue to people of color, which means that diversity management programs may need to be tweaked in order to ensure that all possible service recipients benefit. Public administrators should also be cautious not to assume that these results imply that the diversity “problem” is solved. A continued focus on diversity management practices will be necessary in order to sustain the progress shown here in employment outcomes for women and people of color. Moreover, while these are two of the highest profile groups that diversity management programs tend to address, there are multiple other minority groups – people with disabilities, nonnative speakers of English, and LGBT employees, for example – who stand to benefit from diversity management.

Of course, these results must be considered in the context of a few methodological limitations. I am able to use only perceptions of performance as a dependent variable, and were they available, objective measures might not demonstrate the same relationship. I also use a

perceptual measure for diversity management, which might be affected by nonrandom social desirability problems.⁸ These relationships exist for U.S. federal government subagencies, but they may not apply to other nations, levels of government, or sectors. Even within the U.S. federal government I have excluded data on non-GS employees and those working in agencies that do not participate in CPDF data collection. Aggregating all nonwhite employees sacrifices my ability to make conclusions that are as detailed as I would like, and future work should disaggregate these groups in order to determine whether these same patterns exist across all racial/ethnic populations. Multilevel modeling that takes advantage of data at the individual, subagency, and agency levels would be another logical next step in the literature.

Future research should focus on unpacking some of the causal paths that these relationships take, and well-crafted qualitative work would be perhaps the most fruitful avenue for accomplishing this (e.g., Foldy, 2004). Research should also consider how race, ethnicity, and gender converge in ways that affect diversity management programs and performance. My analysis considers race/ethnicity and gender as independent dimensions of diversity, but as they intersect with each other, the impacts may not be additive. Other elements of this research – job satisfaction, training and development, and the demographics of the agency – might affect outcomes in ways that interact with diversity management. Exploring nonlinearities would be a positive next step for quantitative researchers, particularly those who are able to gather data sets that are large enough to handle tough empirical tests. As with almost any other research topic in public administration, progress will rely on our ability to continue building high-quality, representative data sets – qualitative or quantitative – that will permit better and more systematic empirical testing.

⁸ White and male employees may systematically underreport diversity management programs because they do not know about them, since they are less likely than women and people of color to be targeted as participants. Alternatively, white and male employees may systematically overreport diversity management programs because they make a false assumption that they exist, since women and people of color are more likely to seek them out and recognize when they are not available.

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