DIVERSITY MANAGEMENT IN THE U.S. FEDERAL GOVERNMENT:

DETERMINANTS AND OUTCOMES OF

DIVERSITY AND DIVERSITY MANAGEMENT

by

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(Under the Direction of HAL G. RAINEY)

ABSTRACT

Over the past several decades, the American workforces have been increasingly diversified by conferring greater access to jobs on women and minority. The government has provided equal employment opportunities for all members of society. As public organizations have more diverse employee populations, they have to face a new challenge to have the increasingly diversified workforce work well together. Recently, managing for increased diversity in workgroups is receiving greater attention in public management. Nevertheless, a relatively small literature in public administration appears to have been devoted to exploring the impacts of diversity on organizational effectiveness in public organizations.

This study contributes to the literature on diversity in public administration by investigating the impacts of diversity and various contextual factors influencing the relationships between diversity and its consequences. I use the data from the 2004 demographic data of federal employees and a large federal survey conducted in 2004 to test three primary models in this study – determinants of diversity, diversity and organizational performance, and diversity and affective consequences.

The results of the determinants model indicate that the type of policy responsibility of the agency and task professionalization are important predictors of workforce diversity. The regulatory agencies have significantly lower levels of race and age diversity. The distributive agencies also have a negative association with race diversity. Interestingly, gender diversity is positively associated with white-collar occupations, suggesting that gender is well-balanced across the white-collar occupations in the federal workforce. The findings of the consequence models demonstrate that racial diversity is related negatively to organizational performance. When moderated, however, by diversity management policies and practices, and team processes, diversity relates positively to organizational performance. In a similar vein, the results of the affective consequences model note that effective diversity management positively moderates job satisfaction in racially diverse organizations. Job satisfaction partially mediates the moderating effects of diversity management and demographic context on the turnover intentions of employees. The findings about the moderating effects of other contextual factors are mixed, suggesting that more variables should be controlled to achieve an accurate pattern of the effects of diversity and contextual factors on turnover.

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To my God,

my husband, Shi-In

and

my parents for their love and devotion

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CHAPTER ONE

INTRODUCTION

In the last half of the twentieth century, the American workforces have been increasingly diversified by conferring greater access to jobs on women and minority. The Civil Rights Reform Act in 1964 instituted numerous legal requirements and initiated affirmative action programs to provide equal employment opportunities for all members of society. Consequently, the demographic composition of the American workforce is experiencing unprecedentedly high diversity or heterogeneity within organizations. Further, public organizations, through Equal Employment Opportunity (EEO) and Affirmative Action programs, have more successfully diversified their workforces than have private businesses. Especially in regard to public employment, an important implication of this is that diversity and representation not only "politically integrate a diverse nation with a measure of legitimacy" (Brewer, 2002, p.1), but also achieve "bureaucratic or administrative responsibility and social justice" (Kellough, 1990, p.557; Krislov, 1967; Krislov and Rosenbloom, 1981; Saltzstein, 1979; Thompson, 1976).

Diversity in the workplace has become a central issue of modern organizational management, as organizations increasingly operate in a culturally diversified context (Milliken and Martins, 1996). Scholars in the field have growing interests in understanding how diversity in organizational groups affects outcomes such as organizational performance, employee satisfaction, and turnover. The concept of managing for diversity has been broadened from a political term for affirmative action programs to a way to enhance organizational efficiency and

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effectiveness (Wise and Tschirhart, 2000). Recently, managing for increased diversity in workgroups is receiving greater attention in both public and private organizations. Managers have devoted a significant amount of resources and time to enhancing the positive effects of diversity in workgroups on organizational effectiveness.

Numerous scholars in organizational management have argued for the importance of diversity management. Cox (1993) argued that managing diversity is at the center of the modern organizational management from three perspectives – as a moral imperative, as a legal requirement, and as a factor in organizational performance. In most organizations, the representation of culturally diverse groups in the employee population and especially at higher levels tends to be skewed in the way that minority groups are underrepresented. Thus, managing diversity as a moral imperative is a social responsibility objective, or one of the important goals of organizations, such as promoting fairness and social justice for minorities in society. In the United States, since the Civil Rights Act of 1964, many legal requirements have been established to ensure equal employment opportunities for all members of society. Managers have to seriously consider managing diversity initiatives to observe legal requirements. Diversity as a factor in organizational performance has two types of diversity effects on organizational effectiveness – motivational effects and cultural diversity effects. Employees are likely to be motivated to contribute to their organizations when they perceive fair and equal treatment. Heterogeneous workgroups can take advantage of benefits from cultural diversity to perform better than homogeneous groups.

The U.S. federal government has played a leading role in enhancing diversity in the workforce by employing both women and racial minorities (Johnston, 1988). Previous research

attested that public organizations have more successfully diversified their workforces than have private organizations, by recruiting members of historically underrepresented social groups (e.g., Cornwell and Kellough, 1994; Foldy, 2004; Riccucci, 2002). As a result, public employee populations are becoming older and more diversified with respect to race and gender (Bond, Galinsky, and Swanberg, 1998; Johnston and Packer, 1990; Pitts, 2005a). While government has successfully increased diversity in the workforce via affirmative action and Equal Employment Opportunity (EEO) programs, it has to face the new challenge of managing the increasingly diversified workforce effectively to have it work well together and improve organizational performance. Governmental devotion to diversity has provided great opportunities for female and minority employees, as well as aged employees, to work in organizations, but these employees still suffer from exclusion from meaningful involvement in their organizations, failing to contribute to and/or benefit from them (Barak, 2000). Nevertheless, public organizations do not seem to make sufficient effort to develop skills and strategies to manage diversity effectively. Rather, diversity in public organizations has been considered to offer equal employment opportunities to historically discriminated minority groups of the society rather than to enhance organizational effectiveness as in the private sector. Public management scholars and public managers have increasingly realized the importance of managing diversity in public organizations.

On the other hand, in the field of business management, numerous studies have already been conducted about the effects of enhanced diversity on an organization and employees. Scholars have explored the potential effects of diversity on individual and organizational outcomes. Managers in the private sector have developed missions, programs, and strategies to

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manage the diversified workforce successfully. However, the results of previous research are not consistent about the direct effects of diversity on organizational outcomes, suggesting that there exists a more complex relationship between diversity and organizational effectiveness than often realized (e.g., Jackson, Joshi, and Erhardt, 2003; Milliken and Martins, 1996; Williams and O'Reilly, 1998; Wise and Tschirhart, 2000). For example, recent research has proposed that there exist mediating and/or moderating effects of contextual factors, such as team processes, organizational culture, demographic characteristics of group members and supervisors, and multidimensional diversity. Moreover, given that public organizations operate in distinctive political environments featuring higher levels of political influences from external sources caused by more complex relationships among multiple stakeholders or political actors, research on diversity in public organizations must be a great challenge to diversity researchers and theorists.

The present study will improve our understanding of how workforce diversity in public organizations affects organizational effectiveness at the individual and organizational levels, including organizational performance, job satisfaction, and retention of employees. Also explored in this study is the question of how managerial efforts as well as other contextual variables moderate the relationship between diversity and organizational outcomes in the context of public organizations. Given that much of the recent research on diversity has been conducted in the field of business management, the current study, which uses the data about the federal government and federal employees, will help us understand the impacts of diversity in public organizations.

This dissertation is composed of seven chapters. Chapter 2 presents a discussion of the theoretical development and the background of diversity and representative bureaucracy. More specifically, important theoretical frameworks, including theoretical development of representative bureaucracy, various definitions of diversity from different perspectives, and the distinction between two concepts, are discussed in this section. Then, I review the previous literature on representative bureaucracy and diversity in workgroups and its impacts on individual, group, and organizational outcomes. The empirical research is organized into three parts: research on three constructs of representative bureaucracy, the direct effects of diversity on various individual- and organizational-level consequences, and the moderating and mediating effects of contextual variables on the relationships between diversity and outcomes. In Chapter 3, I describe the trend of diversity in the federal government. To do so, I examine the variation of employment by agency, including the executive branch departments and selected independent agencies, and by grade levels, including the higher-level positions and Senior Pay levels. I focus primarily on the race/ ethnicity and gender of employees. The variation of the federal employment is measured from two perspectives: diversity and representation. In Chapter 4, I explore predictors that determine the level of diversity of an organization in the context of public organizations. For this, I identify the determinants that are associated with the levels of diversity in terms of race, gender, and age of federal agencies. In Chapters 5 and 6, I investigate the effects of diversity with regard to race, gender, and age, and moderators including diversity management, organizational culture, team processes, and demographic composition of workgroups on individual- and organizational-level outcomes. I test two separate models about three individual or organizational outcomes – organizational

performance, job satisfaction, and turnover of employees. To test moderating and mediating

effects, I employ hierarchical regression models and the test procedure for mediation. In

Chapter 7, I discuss findings and implications as well as address future research directions.

CHAPTER TWO

LITERATURE ON DIVERSITY AND REPRESENTATION

The primary purposes of this chapter are to define two related but distinct concepts –

diversity and representation – in public management and to review the literature and consider

important issues related to these two themes. First, I review previous research on these two

concepts and seek to define and distinguish them. Second, I review theoretical developments

related to these two issues. Empirical findings will also be reviewed and evaluated. Finally, I

evaluate the literature and suggest further research that should be conducted to fill holes in the

literature.

2.1 Diversity and Representation in Public Management

Two main streams of the recent research on public organizational diversity are

representative bureaucracy and research on impacts of diversity. In the field of public

administration, the issues concerning representation or representative bureaucracy[1] have been

more frequently discussed than the effects of diversity in the workforce. While much research

on diversity in the fields of business management, social psychology, and organizational

behavior has been devoted to investigating the impacts of diversity on organizational

performance and effectiveness, diversity scholars in public administration concentrated more

on the normative perspective that diversity and representation contribute to politically

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[1] The underlying rationale of representative bureaucracy is to provide equal employment opportunities for women and minorities who were historically discriminated against, by comprising bureaucracies to reflect the composition of the whole population.

integrating a diverse nation and accomplishing bureaucratic responsibility and social justice

(Brewer, 2002; Kellough, 1990; Krislov, 1967; Krislov and Rosenbloom, 1981; Pitts, 2005a;

Saltzstein, 1979; Thompson, 1976; Wise and Tschirhart, 2000). Further, most research in public

administration has been more interested in understanding whether the governmental

bureaucracy representative of the whole population achieves its goals by benefiting historically

underrepresented social groups than organizational effectiveness (Pitts, 2005a). However, given

that supporting these groups is part of the organizational goals the government and public

organizations aim to accomplish, positive outcomes of representation should be considered as

part of organizational performance of these organizations. From this point of view, it might be

argued that representation and its effects on organizational outcomes could be in the same line

of research as analysis of diversity impacts.

Two concepts – diversity and representation – have been used frequently without being

clearly distinguished. Some scholars have sought to define conceptual differences between

them. Blau's (1977) concepts of differentiation provide some ideas that help us understand the

conceptual differences between diversity and representation. Blau (1977) defines two generic

forms of differentiation: heterogeneity and inequality. Heterogeneity, or horizontal

differentiation, refers to "the distribution of a population among groups in terms of a nominal

parameter"[2] (Blau, 1977, p. 9). Inequality, or vertical differentiation, refers to "the status

distribution in terms of a graduated parameter"[3] (Blau, 1977, p. 9). Blau (1977) conceptualized

inequality as "the average difference in status between any two pairs relative to the average

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[2] Nominal parameters include sex, race, religion, ethnic affiliation, clan, occupation, place of work, place of residence, industry, marital status, political affiliation, national origin, and language (Blau, 1977, p. 8).
[3] Graduated parameters include education, income, wealth, prestige, power, socioeconomic origin, age, administrative authority, and intelligence (Blau, 1977, p. 8).

status" and attempted to measure inequality by using the algebraic specification of the Gini index.[4] He operationalized the degree of heterogeneity as a probability that two randomly chosen persons in a population do not belong to the same group. In other words, the larger the number of groups and the more evenly the population is divided among them, the greater is the heterogeneity. On the other hand, according to Blau's conceptualization (Blau, 1977), inequality is hard to define since inequality is a relative term, for example, much inequality in one sense may imply little inequality in another. Thus, the criterion of the degree of inequality is that the greater the average status distance between all pairs of persons relative to their average status, the greater the inequality.[5]

More recently, Pitts' (2005b) distinction aids us in understanding how these two related, but different concepts can be distinguished. Diversity is associated with the presence of differences in terms of many attributes, for example, race, sex, and social status, no matter how the differences seems to be minor (Pitts, 2005b; Triandis et al., 1994). The level of diversity is

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[4] Blau (1977, p. 9) argued that inequality in a society should be defined as the average difference in status rather than absolute status differences. Although the Gini index represents mean status distance relative to mean status, it is not apparent in the formula calculating it (Alker and Russett, 1966). Blau (1977) and van de Geer created an alternative formula for the Gini index.

$$2\sum s_i f_i (p_{bi} - p_{ai}) / 2\sum s_i p_i$$

where s_i is mean status in a category, p_i is the fraction of the population in that category, and P_{bi} and P_{ai} are the fractions of the population whose status is below and above that category, respectively. Thus, $P_i + P_{bi} + P_{ai} = 1.00$ for every category. The sum is taken over all categories. The numerator is mean status distance, or absolute inequality, and the denominator is twice mean status. The ratio of the two is relative inequality (Blau 1977, p. 57-58).

[5] Inequality must be distinguished from status diversity. "Status diversity refers to the graduated-parameter equivalent of heterogeneity" (Blau, 1997, p. 10). While it is easy to distinguish perfect equality from a state of inequality, given two different, unequal distributions of some social reward, it is not easy to decide which distribution is the more equal (Allison, 1978). A social structure is delineated by its parameters, which are attributes of people in the society that influence their role relations and thereby differentiate their social positions (Blau, 1977). Two kinds of variables can be derived from these parameters. One variable refers to the attributes of individuals such as occupation, religion, income, and wealth. The other variable refers to new variables the distributions of these attributes produce such as the social structural characteristics in terms of the occupational distribution and the income distribution in society. The structural analysis focuses on these variables characterizing structural conditions and on their influences on social associations (Blau, 1977). The structural analysis of various forms of differentiation, interrelations, the conditions leading to them and changes in them, and their implications for social relations (Blau, 1977) can substantially contribute to understanding of human conduct and relations.

determined by the extent to which variations in some dimensions of diversity exist among parts of a whole, regardless of how the composition of the target population looks like. On the other hand, representation refers to how well the composition of bureaucracies reflects that of the target population in terms of attributes of diversity. The level of representation does not rely on the extent of the overall variations, but rather it depends on the extent to which the bureaucracies and the target population are similar in terms of diversity dimensions.

Nevertheless, there are significant conceptual overlaps of representation and diversity. In this research, I assume that the concept of diversity focuses on the existence of heterogeneity of group members in terms of parameters or attributes of people in the society, while representation is more concerned about equality, that is, the equal representation of each group mirroring the composition of the population of the society. I will provide a deeper consideration of these two concepts in this chapter.

2. 2 Representative Bureaucracy

Originally, representative bureaucracy was established to ensure that an unelected, specialized, hierarchical, and politically powerful bureaucracy would act accountably and responsively for the public in democratic societies. The early scholars, including Kingsley, Mosher, and Krislov, contended that representative bureaucracy is a potential solution to the tension between bureaucracy and democracy. Van Riper (1958) defined representative bureaucracy as "one that must consist of a reasonable cross section of the body politic in terms of occupation, class, geography, and the like, and must be in general tune with the ethos and attitudes of the society of which it is a part" (Van Riper, 1958, p. 552). The underlying tenet of

representative bureaucracy states that civil servants tend to hold attitudes and values similar to those of the people they represent, thereby leading them to make similar decisions under comparable circumstances (Selden, 1997). People are likely to have the similar attitudes, beliefs, and values, when they have the same demographic backgrounds, and may experience the similar processes of socialization.

The study of representative bureaucracy has moved from a normative study to focus on theoretical development in empirical studies. This change reflects an attempt to find evidence to support the theory. While much of the early literature focused on theoretical argument and development to which Kingsley, Mosher, and Krislov have contributed, the recent literature has sought to find empirical evidence to support the theory of representative bureaucracy. The issues of the empirical research include 1) the extent to which passive representation has been adopted in governmental organizations and 2) the linkage between passive representation and active representation. More recently, as governmental organizations have been increasingly diversified to represent a diverse nation, the effective management of diversity in employee populations has become a critical concern in the modern public administration.

2. 2. 1 Theoretical Development of Representative Bureaucracy

As discussed earlier, the underlying logic of representative bureaucracy posits that shared attitudes and values between governmental bureaucracies and the people they represent can ensure the bureaucracies to make decisions that resemble the decisions that those they represent will make under similar contexts (Selden, 1997). In general, people who share the same social and demographic characteristics tend to have similar attitudes and values. If the

government bureaucracy is composed in the way that it can mirror the composition of the whole population, the values and interests of all groups in society can be reflected in important decision-making processes and policies (Selden, 1997).

Since Kingsley (1944) coined the term in his study of the British bureaucracy, representative bureaucracy has become one of the most controversial concerns in public administration and policy. His argument about representative bureaucracy is the very antithesis of Weber's model of bureaucracy.[6] Kingsley contended that the civil service, per se has its own values, attitudes, and culture (Dolan and Rosenbloom, 2003). Based on the impacts of social class composition and orientation of the administrative class in the British bureaucracy study, Kingsley (1944) concluded that bureaucracies must be composed to represent the social groups they serve in order to be democratic. Mosher (1982) contributed to further development of the theory of representative bureaucracy, by introducing two distinctive spheres of representative bureaucracy – "passive/descriptive bureaucracy" and "active/functional bureaucracy." Mosher suggested that passive representation refers to composing bureaucracies as they look like the groups they serve in terms of education, family income and social class, race, religion, father's occupation, and similar factors. Active representation implies that civil servants advocate the interests and the desires of groups that have the same demographic backgrounds as theirs (Mosher, 1982; Selden, 1997). However, very little has been known about the relationship between people's backgrounds and socialization before employment and their attitudes and behavior in office, suggesting that there exist a good many other intervening variables between

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[6] Weber described the bureaucrats as "a discretionless, single cog in an ever-moving mechanism which prescribes to him an essentially fixed route of march" (Weber, 1958, p. 228). He also argued that bureaucracy is strictly controlled by the decisions of the top and various rules and consequently bureaucrats in the middle and lower levels have no discretion and independence to represent the public.

them. Nevertheless, while passive representative bureaucracy does not necessarily ensure democratic decision-making, it must have important implications as independent and symbolic values in a democratic society. Krislov (1974), as another important contributor, contended that passive representative bureaucracy is not only related to equal opportunity but also concerned with administrative legitimacy and performance.[7] He also noted that bureaucracy still has greater potential to be representative of the whole society than other components of government (Krislov, 1974). Therefore, two meanings of representative bureaucracy need not be perfect to achieve democratic bureaucracy as Mosher argued. Rather, Krislov focused on the potential and capacities of civil servants in a bureaucratic organization, while arguing against Weber's dehumanized bureaucracy model. In particular, the composition of bureaucracy similar to that of the population has great potential advantages for the stability of society and the increased responsiveness of bureaucracy. Thus, scholars have argued that in order to achieve active representation, bureaucracy should empower employees and promote participation and cooperation, while reducing hierarchical authority and impersonality (Dolan and Rosenbloom, 2003). Further, representational participation will increase diversity in an organization and may lead to functional effectiveness. Finally, he argued that the public bureaucracy should be a role model for promoting the representation of minorities and women in private firms and in a whole society. From this point of view, representative bureaucracy, per se has a normative value when adopted successfully.

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[7] Krislov argued that "a major task of governance is to gain support for policies. No matter how brilliantly conceived, no matter how artfully contrived, government action usually also requires societal support. And one of the oldest methods of securing such support is to draw a wide segment of society into the government to convey and to merchandise a policy" (Krislov, 1974, p. 4-5).

In recent years, consensus among scholars has grown that potential linkages between passive and active representation exist. Meier (1993a), in his research, argued for the potential connection between active and passive representation. Passive representation in itself has important implications, given that different demographic backgrounds are related to different socialization experiences, which influence individuals' attitudes and values. In addition, the research suggests that there are other benefits of passive representation. A bureaucracy that reflects the diversity of the general population implies "a symbolic commitment to equal access to power" (Gallas, 1985; Kellough, 1990; Meier, 1993c; Mosher, 1982; Selden, 1997; Wise, 1990). Nevertheless, scholars still do not appear to fully agree on the linkage between passive and active representation.

2. 2. 2 Passive Representation and Linkage to Active Representation

As discussed earlier, representative bureaucracy theory is composed of three primary components – passive representation, potential for active representation (values and attitudes), and active representation (Selden, 1997). A number of empirical studies on representative bureaucracy focus on passive representation in bureaucracy and the potential linkage from passive to active representation. Representative bureaucracy theory suggests that "a bureaucracy that is broadly representative of the nation as a whole is expected to produce policy outputs that reflect the political will of the populace" (Dolan and Rosenbloom, 2003, p. 31). Then, the first step in the research on representative bureaucracy is to assess the degree of which bureaucracies of government reflect the social and demographic composition of the population. The next step will be to examine whether civil servants who represent citizens with

the same social and demographic backgrounds as theirs will yield policy outcomes more favorable to people they represent. The passive representation category includes research on the extent to which bureaucracy reflects the demographic characteristics of society; the potential for active representation category includes research on potential and determinants of linking passive to active representation; and the active representation category includes the research on active representation and its impact on policy outcome.

Passive Representation. The passive (or descriptive) representation concerns the origin of individuals in bureaucracy and the degree to which they mirror the whole society (Mosher, 1982). As discussed before, the rationale underlying passive representation is that the civil servants who have similar demographic and social backgrounds, such as race, sex, social class, experiences, education, are likely to have similar attitudes and value systems with those they serve. As a result, bureaucrats' choices and decisions in policy process will reflect well those of the citizens they represent.

Concerning the question, "what factors among social and demographic characteristics significantly influence an individual's attitudes and values?", the literature has reached a consensus that race and ethnicity are possibly the most influential demographic characteristics for comparing public representation in the United States (e.g., Cayer and Sigelman, 1980; Dye and Renick, 1981; Herbert, 1974; Krislov, 1974; Kranz, 1976; Meier, 1975; Meier, 1993c; Nachmias and Rosenbloom, 1973; Rosenbloom and Featherstonhaugh, 1977; Rosenbloom and Kinnard, 1977; Selden, 1997; Smith, 1980; Thompson, 1976; Thompson, 1978). Scholars have also argued that gender is also important and should be considered in the American

bureaucratic setting (e.g., Cayer and Sigelman, 1980; Daley, 1984; Davis and West, 1985; Dometrius and Sigelman, 1984; Dye and Renick, 1981; Hale and Kelly, 1989; Kranz, 1976; Krislov, 1974; Meier, 1975; Meier, 1993c; Nachmias and Rosenbloom, 1980; Rosenbloom and Kinnard, 1977; Selden, 1997; Smith, 1980; Thompson, 1978). In fact, even in the twentieth century women and racial minorities in the United States suffered from great discrimination in getting and securing employment with the federal service (Aron, 1987; Rosenbloom, 1977; Shafritz et al., 1992).

Passive representation within a bureaucracy is prerequisite for active representation. In that sense, exploring how broadly a bureaucracy represents the whole population of the nation has significant implications. A number of previous studies have explored the extent to which women and minorities who had previously been discriminated against and underrepresented have been integrated into bureaucracies. Public personnel policies and a number of laws and administrative remedies have focused on ensuring equal opportunity to access to public sector jobs, in order to make the workforce in government more reflective of the diversity of the population. In particular, women and minorities who have been historically underrepresented and discriminated against benefit from equal opportunities to access to public employment.

Empirical findings show that the representation of the previously underrepresented groups in bureaucracy has improved to a great extent. The proportion of female employment in the public sector has increased to the equivalent level of the female proportion in the population. However, there still remains doubt about the concentration of women in lower-level positions, compared with men. Empirical evidence of this concern is inconsistent. Sigelman (1976) conducted research on "the quantity and the quality of female employment" in state and

local governments. He found that while women were well represented at least in proportion to their share in the labor market in every state, they were still concentrated in lower-levels jobs. Cornwell and Kellough (1994) examined employment shares of women and racial/ethnic minorities by the federal agency and their percent changes between 1982 and 1988. The findings demonstrate that female and minority employment shares tend to be higher in agencies with a greater proportion of lower-level jobs. However, the percentage of female employment in technical jobs, unlike that of African-American and Hispanics, turned out to be positively influenced by the percentage of technical jobs. In the study of Greene, Selden, and Brewer (2000), women in most groups except Asian-American – African-American, Hispanic-American, White Non-Hispanic American, Asian-American, and Native American – are found to hold lower-level jobs in state governments compared with men. Conversely, the most recent study by Dolan (2004) shows that women in the Senior Executive Services (SES), even though the percentage is less than that in the whole population, have been awarded virtually identical access to power and authority and equal involvement in important decision-making and policy formulation with male employees. The findings argue against skepticism that female employees in SES were appointed just for the symbolic reason to pursue affirmative action goals.

Turning to the representation of racial/ethnic minorities in bureaucracies, the representation of African-American and Hispanics, as well as sexual representation, has been a critical concern of the government's personnel policies. Eisinger (1982), in his study that compares the percentage of blacks in a city population with the percentage of blacks with city public sector positions, found that the size of the city black population and the local political

influence of blacks are the important determinants of representation of blacks in the public sector jobs. Greene, Selden, and Brewer (2000) examined the stratification of representative bureaucracy that refers to information that reflects distribution over the hierarchy. The findings show that African-American groups and Native American groups tend to hold the lower-level jobs, while White Non-Hispanic male groups and Asian-American groups are concentrated in higher-level jobs. Hispanic-American groups are found to be far less represented compared with other groups. Similarly, Cornwell and Kellough (1994) found that racial minorities – Blacks and Hispanics – are concentrated in the lower-level jobs in the public sector.

Potential Linkage to Active Representation. The second domain of representative bureaucracy theory posits that a demographically representative bureaucracy will produce policy outcomes that equally support the desires of all of the social groups (Dolan, 2002). Saltzstein's (1979) model[8] describes the linkages "between social origins and values," "between values and behavior," and "between behaviors and policy outcomes." However, there still exists uncertainty about such linkages between social origins and attitudes, and between values and final policy outcomes. According to organizational socialization theory, organizations should imbue all employees with a common set of assumptions, perspectives, and values that places organizational loyalty above personal opinions, in order to make administrative decisions correspond with the values and attitudes of the organization at large (Dolan, 2002; Downs, 1967; Romzek, 1990; Simon, 1947).

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[8] "Social origins → Values and attitudes → Behaviors and actions → Policy outcomes" (Saltzstein, 1979).

Many scholars have sought to find empirical evidence concerning the linkage between passive and active representation. However, the linkages between social origins, attitudes, behaviors, and policy outcomes still remain unclear. Meier and Nigro (1976) assessed the impact of social and demographic origins and agency affiliation on the attitudes of bureaucrats. The findings reveal that social and demographic backgrounds, such as gender and race, are not good determinants of attitudes; rather, agency affiliation turned out to be a more influential factor on bureaucrats' attitudes. Although the result of this research does not support representative bureaucracy theory, it needs more careful consideration because it suggests that there is a potential relationship between policy area and social origins. Thompson (1978), in his study of public personnel officials from federal, state, and local bureaucracies, examined civil servants' attitudes toward recruiting and hiring minorities. The findings show that while demographic backgrounds such as gender and race were poor predictors of an individual's receptivity to hiring minorities, the relationship between social origins and receptivity to hiring minorities was found to be statistically significant.

However, Rosenbloom and Featherstonhaugh (1977) and Dolan (2002) found countering evidence. Rosenbloom and Featherstonhaugh (1977) examined whether or not the social and demographic origins of civil servants influence their attitudes even after years of employment in government. The findings suggest that black public servants tend to emphasize values and perspectives which are most closely related to those of blacks as a social group more than whites do. Dolan (2002) assessed the impact of organizational socialization and gender on bureaucratic behavior. The results reveal that both factors affect the spending attitudes of female administrators in the SES. Female employees in the SES tend to prefer

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significantly more spending than do men on many issues related to women, which indicates

that agency socialization, even though it is clearly at work because women and men within

each department share attitudes in fairly consistent and predictable ways, has not wiped out the

role gender plays in shaping personal attitudes and preferences (Dolan, 2002). Relying on

Saltzstein's (1979) model of the linkages between social origins, values, behavior, and policy

outcomes, Riccucci and Meyers (2004) examined the linkage between social origins and

attitudes or values, which are critical antecedents to actions and ultimate policy outcomes. They

analyzed survey data of female and African American frontline welfare workers. According to

their findings, the frontline workers' attitudes and values are significantly affected by their

social origins, such as gender and race. Further, the association between social origins and

attitudes is stronger when employees have greater discretion in their decisions on clients and

welfare policies. This result suggests that administrators' discretion on policy decisions plays a

critical role in strengthening the linkage between passive and active representation.

Active Representation. The third sphere of representative bureaucracy theory is active

(or functional) representativeness wherein civil servants actively support the interests and

desires of those whom they represent by producing favorable policy outcomes for them

(Mosher, 1982). Administrators' attitudes will substantially affect their eventual policy

decisions, if individual administrators from different social and demographic backgrounds hold

different attitudes, which significantly affect their decision-making. In spite of theoretical

justification, active representation does not necessarily seem to be linked to passive

representation. Then, how can passive representation translate into active representation? Many

scholars of representative bureaucracy have devoted their efforts to understanding the potential

linkage between passive and active representation.

Recent research on active representation suggests that administrative discretion may

work as a key factor that connects passive representation to active representation. An

administrator should have discretion to produce policy outcomes that reflect the values and

beliefs of particular groups and advance their interests. Meier and Bohte (2001) investigated

the role of civil servant discretion in linking passive and active forms of representation by

using a sample of six hundred school districts in Texas. They tested the hypothesis that

organizational structures that promote minority teachers' discretion allow them to take specific

action to improve the performance of minority students. The results reveal that the performance

of minority students improves under organizational structures promoting the discretion of

minority teachers, suggesting that discretion strengthens the linkage between passive and active

representation. Sowa and Selden (2003), in their study of the federal loan program, tested the

hypothesis that minority administrators who perceive themselves as having significant

discretion about administrative processes and on policy outcomes will be more representative

of minority needs and interests. The results show that loan officers who perceive they have

significant discretion tend to advance interests of minorities more than others who do not. This

reaffirms that the presence of discretion positively affects active representation, linking passive

representation to active representation.

In addition to discretion, there are some other factors that are necessary for active

representation. For example, Keiser and colleagues (2002), in their study of gender

representation in public education, found that policy issues related to women as well as

discretion of bureaucrats significantly facilitate the transfer of passive representation to active

representation for gender. Their findings demonstrate that female math teachers are positively

related to female students' math performance, which has been considered as gender issues in

education. In a similar vein, Wilkins and Keiser (2004) found that in gender-related policy

areas,[9] for example child support programs, passive representation is more likely to lead to

active representation for gender. The number of female supervisors, who exercise the

discretionary power on the policy processes, is also an important factor that promotes the link

between passive and active representation, but this process occurred only when the program

outcomes directly benefit women. Indeed, Wilkins' (2006) findings indicate that behaviors of

female supervisors in child support enhancement are significantly different from their male

counterparts'. For instance, female supervisors tend to prioritize issues related to supporting

families and spend more time benefiting women. This active representation for gender works

better when a larger number of female supervisors are present in field offices.

Further, Keiser and colleagues (2002) argue that institutional factors, such as

stratification and hierarchy, also affect the link between passive and active representation, for

example, more female teachers and administrators at the low levels of hierarchy positively

influence female students' math scores and this effect was stronger in less hierarchical

organizations. Bell and Rosenthal (2003) probed the logical linkage between passive and active

representation by researching roles of female staff in Congress. In conclusion, they describe

some specific conditions in which passive representation can translate into active

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[9] They operationalized them as "policy areas where women benefit from policy outputs, when the gender of the bureaucrat changes the client-bureaucrat relationship, or when the policy area is on the agenda of women's interest groups" (Wilkins and Keiser, 2004, p. 98).

representation, such as demand of interest groups for active representation, necessary resources such as interest, expertise, and status, and political salience as well as staff discretion.

If passive representation translates into active representation, how does active representation occur? A number of studies of passive representation confirm that passive representation has been successfully implemented in governmental bureaucracies in the United States. Then, the next step of the research will be to probe whether active representation actually occurs in accordance with passive representation and how it occurs. Meier and Bohte (2001) demonstrated that minority teachers positively affect the performance of minority students by taking actions that benefit minority students. Hindera (1993) confirmed active representation in the American context by examining the policy impact of three ethnic and racial groups of federal civil servants – black, white, and Hispanics – when they implement federal equal employment opportunity policy. He found that a higher percentage of African Americans in the Equal Employment Opportunity Commission (EEOC) district offices had a significant positive effect on the number of charges filed on behalf of that group. It suggests that passive representation of African American is linked significantly with policy outputs that benefit the group.

According to some studies, active representation is more likely to occur at the street level. Meier (1993a), in his study of Latino students in the school district, found that active representation is more likely to occur in the lower levels of bureaucracy wherein administrators can directly contact clients and deliver services and goods. According to the result, minority bureaucrats who exercise discretion directly in relations with clients tend to be more actively engaged in benefiting minority clients. Hindera's (1993) study reaffirms that the street level

minority administrators in the EEOC district offices produce policy outcomes that are favorable to the interests and needs of minorities. Riccucci and Meyer (2004), in their study of welfare agencies, found that the social origins of the frontline workers who had direct contact with clients of the TANF program significantly affected their attitudes and beliefs about clients and welfare policies.

2. 2. 3 Evaluation of Representative Bureaucracy

Scholars have developed the theoretical justification for the linkage between passive and active representation and empirically tested it, but it still seems weak for some reasons. First, similar social backgrounds do not necessarily result in similar socialization experiences. Even though social origins, such as the family, education, and social class, certainly influence individuals' attitudes and value systems, there exist many other factors to affect them. Meier (1993b) argued that because numerous idiosyncratic factors formulate a person's attitudes and values, social origins and demographic backgrounds can only roughly explain a person's socialization experiences. Second, the linkage between social backgrounds and attitudes and values is weak. Throughout the lifetime, an individual experiences continuing socialization process, which makes it difficult to predict a person's values from the person's social backgrounds. Bureaucracies may take advantage of the socialization process by socializing their members to prioritize values and attitudes of the bureaucracies regardless of an individual's background (Downs, 1967; Selden, 1997). According to Barber (1970), different personality may lead people to hold different values, even though they share the same social origins. Third, some scholars have argued that representation will be effective when

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bureaucratic agency has authority to make policy decisions, such as bureau and division levels, rather across the entire bureaucracy (Meier, 1993b). They contend that in order to make representation work, it is necessary for every bureau to represent the whole population and its decisions should appeal to a more representative bureaucracy (Meier, 1993b).

Some scholars express concern about a trade-off between efficiency and effectiveness, on one hand, and responsiveness, on the other (Pfiffner, 1987). In fact, the tension exists between those camps who emphasize neutral competence and merit principle based on professionalism and those who support equal employment opportunity and representation of diverse social groups (Dolan and Rosenbloom, 2003). Even though different interests, attitudes, and values can improve the ultimate effectiveness of administration by reflecting the desires of the whole population, they will lead to great conflicts among interests and values of different social groups in the process of decision-making, waste of time due to delay, and many other forms of inefficiency in the administrative process. The impact of diversity and representation on the efficiency and effectiveness of an organization requires further study.

More recently, some scholars have explored how representation and diversity in bureaucracy influence the performance of the public sector. Foldy (2004) argues that while public organizations successfully accomplished higher levels of race diversity than did private organizations, they are experiencing difficulties related to managing increased diversity within the organizations. While the recent research suggests that the "diversity perspective" moderates the performance of a diverse group (Ely and Thomas, 2001; Thomas and Ely, 1996), the integration and learning perspective posits that heterogeneous groups perform better when they believe cultural diversity can provide a good source of new ideas and work experiences (Foldy,

2004). However, further study needs to complement the integration and learning perspective with more generic learning frames and skills.

The attempts to ensure that the composition of bureaucracy reflects that of the population have increased the diversity within bureaucracies. Increased diversity in bureaucracy will influence the performance of public organizations in some ways. The findings in research about this issue seem to be inconsistent. Pitts (2005a) sought to understand the impact of racial integration of federal agencies on organizational performance by using the data of the Texas school districts. He found that the representation and diversity of teachers have a significant positive impact on the performance of minority students in school, which is associated with the performance of teachers. It implies that ethnic representation can positively influence performance outcomes.

2. 3 Diversity in Public Management

Workforce diversity and diversity management have been one of the most critical concerns increasingly discussed and debated in the field of organizational management and organizational behavior. The findings of previous research on diversity in groups suggest that diversity offers both a great opportunity for organizations and an enormous challenge (Milliken and Martins, 1996; Shaw, 1981; Tsui, Egan, and Xin, 1995). Some studies argue that more heterogeneous workgroups tend to consider a greater range of perspectives and to produce more high-quality solutions than homogeneous groups (Cox, Lobel, and McLeod, 1991; Hoffman and Maier, 1961; McLeod and Lobel, 1992; Milliken and Martins, 1996; Ruhe, 1978; Watson, Kumar, and Michaelsen, 1993). Others contend that heterogeneous groups are less

likely to be integrated in work processes (O'Reilly, Caldwell, and Barnett, 1989), and the levels

of dissatisfaction and turnover of heterogeneous groups are likely to be higher than

homogeneous groups (Jackson et al., 1991; Wagner, Pfeffer, and O'Reilly, 1984).

2. 3. 1 Defining Diversity

In the organizational literature, diversity is commonly defined as differences in

ethnicity/ race, gender, age, and disability (Barak, 2000; Cox and Blake, 1991; Fernandez,

1991; Jackson, 1992; Loden and Rosener, 1991; Thomas, 1991) as well as educational and

functional background. Some scholars have elaborated the concept of diversity in

organizational perspectives. Cox (1993) defines diversity as identities such as race, ethnicity,

gender, nationality, religion, and other aspects of diversity derived from membership in groups

that are socio-culturally distinct. That is, they "collectively share certain norms, values or

traditions that are different from those of other groups" (Cox, 1993, p. 5-6; Foldy, 2004).

According to Larkey's definition (1996), diversity refers to differences in a person's

perspectives leading to different behaviors and differences in social identity and group

membership. The basic premise is that "members in a group tend to share a set of symbols,

values, and norms that construct their views on the world and behaviors" (Barak, 2000, p. 50;

Baugh, 1983; Collier and Thomas, 1988; Triandis, 1972). Loden and Rosener (1991, p. 18)

define diversity as "otherness or those human qualities that are different from our own and

outside the groups to which we belong, yet present in other individuals and groups."

Diversity has manifold dimensions such as age, education, ethnicity, gender, national

origin, race, religion, and sexual orientation. According to the review of Jackson, Joshi, and

Erhardt (2003), there are a variety of attributes recently studied in diversity research – gender, age, race and ethnicity, education (content or level), functional background, tenure (in job/team or in organization), cognitions/ mental levels, personality, cultural values, and nationality. Among these diversity attributes, gender (35)[10], age (28), tenure (23), race and ethnicity (21), and education (20) are attributes of diversity recently most frequently studied.

Some scholars (e.g., Cummings, Zhou, and Oldham, 1993; Jackson, 1992; Jackson, May, Whitney, 1995; Maznevski, 1994; Tsui, Egan, and O'Reilly, 1992) have categorized different types of diversity. The way of distinguishing between diversity on easily observable attributes ("visible diversity"), such as race/ ethnicity, gender, or age and diversity, and heterogeneity on less observable attributes ("invisible diversity"), such as religion, education, functional or professional background, tenure in the organization, socioeconomic background, or personality characteristics or values, has been frequently used (Barak, 2000; Cummings, Zhou, and Oldham, 1993; Jackson, May, and Whitney, 1995; Milliken and Martins, 1996; Thomas, 1991; Tsui, Egan, and O'Reilly, 1992). In addition, Thomas (1991) expanded the concept of diversity to various dimensions such as life-style, geographic origin, and personality as well as the fundamental dimensions of personal differences. His expanded definition of diversity is beyond the traditional approach to Affirmative Action (AA) that has sought to include and assimilate social minorities such as women and minorities into the mainstream of the society (Thomas, 1991). However, these two kinds of attributes of diversity cannot be mutually exclusive (Milliken and Martins, 1996). For example, racial/ ethnic differences may

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10 The numbers in parentheses denote frequencies that the attribute was studied.

be associated with differences on underlying attributes such as values or socioeconomic background.

Another way of distinction is to distinguish between the primary dimensions of diversity and the secondary dimensions of diversity. The primary dimensions of diversity are defined as those immutable human characteristics or those affecting early socialization and the whole life, which include age, ethnicity, gender, physical abilities/ qualities, race, and sexual/ affectional orientation (Loden and Rosener, 1991). The secondary dimensions of diversity refer to those mutable human differences, which include educational background, geographical location, income, marital status, military experience, parental status, religion, and work experiences (Loden and Rosener, 1991). While primary dimensions construct an individual's identities and personalities and significantly affect attitudes and behaviors of individuals in society and the workplace, secondary dimensions do not influence the underlying characteristics of individuals so strongly as primary dimensions do. Nevertheless, these two dimensions of diversity closely interact with each other, enhancing the breadth of an individual's personal identities and often resulting in more complex differences within groups (Loden and Rosener, 1991; Milliken and Martins, 1996).

Blau (1977) categorized attributes of diversity into two groups of parameters – nominal and graduated parameters. Nominal and graduated parameters consist of two basic types of structural parameters (Blau, 1977). While a nominal parameter such as sex, race, religion, and occupation "divides the population into subgroups with distinctive memberships in terms of a parameter," a graduated parameter such as income, wealth, education, and power "differentiates people in terms of a status rank-order" (Blau, 1977, p. 7). While a nominal

parameter does not have inherent ranking-order among the groups, a graduated parameter does

not draw boundaries between social ranks. By these parameters, two kinds of social positions

can be distinguished: membership in a group and rank or status. While if characteristics of

people affecting their role relations classify them categorically, the nominal categories are

defined as groups, if they classify them in rank order, they are defined as status (Blau, 1977).

Gentile (1996) categorized diversity in organizations into three types – structural

diversity, business diversity, and workforce diversity (Gentile, 1996; Ospina and O'Sullivan,

2003). Workforce diversity is defined as a broad range of differences in employees' identities in

terms of gender, race/ethnicity, age, religion, sexual orientation, disability, and social status

such as economic and educational backgrounds, and geographic origins as well as behavioral

differences related to their work (Cox, 1993; Loden and Rosener, 1991; Ospina and O'Sullivan,

2003). In the past decades, approaches to workforce diversity have changed from the most

essential form of comprising the workforce in a way of reflecting the demographic composition

of the whole population, to managerial strategy to induce workforce diversity to contribute to

organizational effectiveness. The recent approach to diversity management has viewed

workforce diversity as "an imperative for organizational effectiveness" and "a requirement to

gain competitive advantages rather than a moral mandate toward equity and justice" (Ospina

and O'Sullivan, 2003, p. 244).

2. 3. 2 Diversity Effects

Two schools of perspectives have shaped research on the impacts of diversity (Ely,

2004; William and O'Reilly, 1998). One perspective, based on information and decision-

making theories, argues that diversity can benefit organizations by providing a broad range of ideas, functional skills, and insights that come from differences and eventually improving organizational capabilities to solve problems and make better decisions (Cox, 1993; Cox and Blake, 1991; Ely, 2004). The other perspective, based on social categorization and social identity theories (Tajfel, 1981; Turner, 1987) and the similarity-attraction paradigm (Byrne, 1971), contends that diversity may burden organizations with high costs of coordination and conflict resolution, compromising organizational effectiveness, given that people tend to distinguish between ingroup and outgroup members, which may cause conflicts and miscommunication (Ely, 2004). Although both of these perspectives on the impacts of diversity were supported by research conducted in carefully designed laboratory settings (Ely, 2004; William and O'Reilly, 1998), the external validity of these findings is still questionable, suggesting that researchers should take the complex effects of contextual factors into more careful consideration.

Potential Benefits of Diversity. Proponents of workforce diversity have argued that workforce diversity, associated with diversity in a workgroup's cognitive bases, positively affects organizational effectiveness, performance and productivity. Ely's (2004) information and decision-making theories suggest that diversity would contribute to performance improvement. Teams heterogeneous on characteristics tend to have a greater breadth of perspective available in a decision-making process and can take advantage of diversity in information sources and perspectives, and creativity and innovativeness in decision making (Ely, 2004; Hambrick and Mason, 1982; Wiersema and Bantel, 1992). Minority perspectives

enable organizations to take into consideration the prevalence of alternatives including non-traditional ideas and solutions in work settings, contributing to making high-quality decisions in challenging situations (McLeod and Lobel, 1992; Nemeth, 1992; Richard, 2000). Work teams composed of people with a wide range of functional backgrounds tend to share information more actively and produce better outcomes than functionally homogeneous teams (Bunderson and Sutcliffe, 2002). Further, an organization that has the higher level of heterogeneity in its belief structure is likely to face high complexity and low consensus in decision-making processes, which will improve problem-solving ability of the organization (Dutton and Duncan, 1987). In a similar vein, Katz (1982) and Weick (1969) suggest that a highly diversified team perform better than a homogeneous team in highly challenging situations.

Ely and Thomas (1996, 2001) proposed the "diversity perspective," which represents a set of perspectives on the role of diversity in groups. The tenet underlying this perspective posits that diverse groups, when they believe that culturally heterogeneous identities and experiences provide resources for new ideas and experiences relevant to work, tend to take advantage of differences, learn from them, and eventually improve performance. Different life experiences affect individuals' values, approaches, and perspectives in different ways, which differentiates their ways of defining a problem, considering alternative solutions, and making a final decision from those of homogeneous groups (Foldy, 2004).

Thomas and Ely (1996) identified three perspectives of workforce diversity – a discrimination-and-fairness paradigm, an access-and-legitimacy paradigm, and a learning-and-effectiveness paradigm. The discrimination and fairness perspective represents correcting past

inequities, by recruiting and retaining employees from groups historically discriminated against,

such as women and racial minorities. However, this perspective does not assume that various

dimensions of diversity, such as diversity in terms of race/ ethnicity and gender, may

significantly affect organizational effectiveness (Foldy, 2004). The access and legitimacy

perspective contends that diversity enhances the legitimacy of organizations by comprising the

workforce in the way that it looks like the population (Ospina, 2001, 2003). But it still does not

seriously consider potential organizational consequences that diversity can bring in

organizations. Transcending the first two paradigms, the learning and effectiveness perspective,

that is, "the emerging paradigm connecting diversity to work," lets the organization internalize

differences among employees so that it learns and grows because of them (Thomas and Ely,

1996, p. 85). This perspective suggests that when an organization acknowledges potential of

diversity as a source of growth and learning and utilizes it in a constructive way, diversity can

significantly contribute to organizational effectiveness (Foldy, 2004).

Potential Costs of Diversity. Scholars argue that diversity can not only be "a mother

lode of creativity," but also "a quagmire of conflict," depending on the way that the

organization manages costs caused by differences (Chatman and Flynn, 2001; Chatman et al.,

1998; Foldy, 2004, p. 531; Jehn, Northcraft, and Neale, 1999). They are concerned about the

intrinsic problems that heterogeneous groups should handle regarding coordination, motivation,

and conflict management (Gladstein, 1984; Jehn, 1995; Jehn, Northcraft, and Neale, 1999).

Diverse groups may experience a lack of communication or miscommunication and disabling

conflict when they are not properly managed. Thus, diverse workgroups typically take more

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time and efforts to accomplish tasks than homogeneous workgroups (Moos and Speisman, 1962; Schneider and Northcraft, 1999). Further, diverse groups may suffer from a lack of integration within the groups (Greenhaus, Parasuraman, and Wormly, 1990; Kanter, 1991; Miller, 1988). Previous research indicates that individuals from diverse groups commonly experience exclusion from the group's internal information networks and from important decision-making processes (Cox, 1993; Ibarra, 1993; Pettigrew and Martin, 1989). To solve these problems, diverse groups or organizations are likely to be burdened with high costs of coordination and resolution of conflicts.

Byrne's (1971) similarity-attraction theory suggests that people prefer similarity in their interactions (Schneider, 1987; Tsui, Egan, and O'Reilly, 1992). Individuals are more likely to feel comfortable when they are in a group composed of people they perceive as more similar to them. When individuals are in diverse groups, they tend to feel less safe and to trust each other less. Lower trust increases the possibility of conflicts within groups. Theories of selection (Chatman, 1991) and socialization (Van Maanen and Schein, 1979) promote similarity in values and demographics as the basis for maintaining effective work environments (Jehn, Northcraft, and Neale, 1999). Groups tend to include individuals who feel familiar or comfortable and exclude those who do not. Thus, "homosocial reproduction" for organizational stratification (Kanter, 1977, p. 63), representing that managers or groups with power tend to hire their own kind, can result in exclusion of women and minorities from organizations or positions with power (Foldy, 2004; Schneider and Northcraft, 1999).

In a similar vein, social categorization and social identity theories developed by Tajfel (Tajfel, 1978, 1981; Turner, 1987) and Turner (1987) and the similarity-attraction paradigm

(Byrne, 1971) suggest that people tend to classify themselves and others into various social

categories such as organizational membership, religious affiliation, gender, and age cohort

(Ashforth and Mael, 2001; Tajfel and Turner, 1985). Members from the same social category

in a group tend to draw the lines to confirm affiliation and distinguish members of their own

social category from others (Billig and Tajfel, 1973; Ely, 2004; Kramer, 1991; Tajfel, 1981).

However, such favoritism based on similarity decrease interaction and integration within or

between groups composed of people from different social categories and instigates

discrimination and self-segregation, resulting in conflicts and miscommunication.

2. 3. 3 The Context of Diversity

Recently, diversity researchers have argued that there may be numerous contextual

factors that mediate or moderate the relationship between diversity and organizational

effectiveness. The potential contextual factors, for instance, include team processes – teamwork

and cooperation (e.g., Bunderson and Sutcliffe, 2002; Ely, 2004; Watson, Kumar, and

Michaelsen, 1993); demographic characteristics of leaders (supervisors and executives) (e.g.,

Jackson and Joshi, 2004); organizational strategies (e.g., Ely, 2004; Richard et al., 2004;

Wiersema and Bantel, 1992)[11] –innovation-oriented or non-growth-oriented; characteristics of

work groups – shared goals; organizational age and tenure; human resource policies and

practices – policies supporting diversity; and the leader's skills managing diversity. The present

study tests contextual variables which are considered more important than others such as team

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[11] While the human capital in a culturally diverse workforce should be beneficial to growth-oriented organizations, which profit from innovation and flexibility, the process and coordination costs associated with diversity should be detrimental to non-growth-oriented organizations, which profit more from efficiency (Ely, 2004).

processes, diversity management practices and policies, leadership and managerial capacity, and organizational culture.

This research also considers political contextual factors, by which public organizations are assumed to be affected, such as political influences, political constraints from internal and external sources, and policy responsibility. Political characteristics of public organizations may influence the relationship between diversity and organizational outcomes in ways different from private business organizations.

2. 3. 4 Empirical Findings

Table 2.1 provides a summary of empirical findings of diversity research. No consistent evidence about the main effects of workforce diversity on organizational outcomes has been found. Williams and O'Reilly (1998) reviewed forty years of diversity research, but could not find consistent direct effects of diversity on organizational outcomes. They proposed that theorists of diversity should develop a more complex framework and a more accurate conceptualization of diversity in order to improve our understanding of the diversity impacts. In particular, they called for more careful research on the impacts of contextual variables, effects of mediators and moderators, and various types of diversity and multidimensional diversity.

Milliken and Martins (1996), in their review of six years (1989-1994) of research on diversity, evaluated the recent management research on the effects of different types of diversity in group composition at various organizational levels to find evidence of common patterns. They found that the literature has common threats to validity related to the possible

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roles of mediating variables. Four types of mediating variables, which are the short-term

consequences of diversity, were identified. These mediators include affective consequences of

diversity, cognitive consequences of diversity, symbolic consequences of diversity, and

communication-oriented consequences of diversity.[12] Milliken and Martins assumed that these

mediators can potentially influence the long-term outcomes of diversity at the individual, group,

and organizational level, which include individual, group, and organizational performance and

turnover.

More recently, Jackson, Joshi, and Erhardt (2003) evaluated sixty-three studies of the

effects of diversity on organizations, which were published between 1997 and 2002. They

identified common characteristics of recent diversity research, creating a multi-level

framework for the dynamics of diversity. First, recent studies conducted research on various

attributes of diversity – age, race/ ethnicity, gender, cultural values, educational level and

content; functional background, tenure, cognitions/mental models. Second, most studies

assumed that diversity may influence affective reactions and social processes within teams and

organizations and social processes. In turn, these studies may also explain how diversity affects

organizational performance. Third, researchers considered the roles of context in the effects of

diversity. Recent studies examined the effects of contextual factors such as task characteristics,

organizational culture, team processes, strategic context, and others. Fourth, studies

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[12] Affective consequences of diversity include satisfaction, commitment, identification with the group, role ambiguity/ conflict, social integration, perceived discrimination, and supervisor's affect for subordinates; cognitive consequences of diversity include innovation, range of perspectives, and number and quality of ideas; symbolic consequences of diversity include behavior of lower level employees; and communication-oriented consequences of diversity include communication with group members and external communication. These four types of short-term consequences of diversity may affect long-term consequences such as turnover and performance in individual-, group-, and organizational levels (Milliken and Martins, 1996).

investigated the impacts of diversity at different levels of analysis, such as the individual, dyad, work group, or the organization level, and some studies employed multiple or mixed levels of analysis (Jackson, et al., 2003).

Diversity and Organizational Performance. Many empirical studies have found that workforce diversity positively influences organizational performance. Watson, Kumar, and Michaelsen (1993) compared performance and interaction of culturally homogeneous groups to those of heterogeneous groups for 17 weeks. They found that newly formed culturally diverse groups interacted and performed less effectively than homogeneous groups at the first time period. At the final time period, however, diverse work groups performed on the same level or even better than homogeneous groups on two task measures – the range of perspectives and alternatives generated. Pelled, Eisenhardt, and Xin (1999) confirmed that workforce diversity, mediated by task conflicts, enhances group performance on cognitive tasks. When group members met different and even opposing perspectives, they were encouraged to probe into issues more deeply and develop better understanding of problems, finally resulting in alternative solutions (Pelled, Eisenhardt, and Xin, 1999; Tjosvold, 1986). Cox, Lobel, and McLeod (1991) examined how different cultural norms and values among ethnic groups affect their work-related behaviors. The findings suggest that individuals with high collectivistic tradition such as Asians, Blacks, and Hispanics had a more collectivist-cooperative orientation to a task than Anglo individuals. Ethnically diverse groups tend to act more cooperatively than all-Anglo groups, resulting in higher competitiveness and performance than homogeneous groups. Pitts (2005a) assessed the impacts of racial diversity and representation of public

managers and street-level bureaucrats on organizational performance, using data drawn from all Texas school districts for five years (1995-1999). He found that ethnic representation among teachers is positively related to performance of students in school, while diversity is negatively associated with performance of students. Diversity and representation of managers were not significantly related to organizational performance. The results suggest that representation among street-level bureaucrats has a greater effect on organizational performance than does representation among managers in public organizations. Krishnan and Park (2005) studied the effects of gender diversity and representation of top management teams (TMT) of 679 firms from the 1998 *Fortune 1000* list on organizational performance. They found that firms with more diversified and representative TMTs in terms of gender show better performance than others. More specifically, the proportion of women on TMTs is positively related to the return on assets (ROA) averaged over a 3-year period (1998-2000), which was the proxy measure of organizational performance. The effects of diversity are moderated by environmental characteristics which include munificence, dynamism, and complexity. Weighted industry performance, TMT turnover, and organizational size were controlled to accurately assess the effect of diversity on organizational performance in that study.

In contrast, other researchers have found that workforce diversity does not have substantial impact on organizational performance (e.g., Fiedler, 1966; Kilduff, Angelmar, and Mehra, 2000; Pate, Watson, and Johnson, 1998), or at least that the impact is conditional, affected by context (e.g., Andrew et al., 2005; Richard, 2000). According to recent research conducted by Andrews, Boyne, Meier, O'Toole, and Walker (2005), ethnic diversity and representation of the workforce are not significantly associated with higher levels of

performance in the context of English local government. Rather, ethnic diversity of the workforce higher than that of the local population has consistently negative relationship with consumer perceptions of performance, even after audited performance was controlled (Andrew et al, 2005). The research also shows that the impact of workforce diversity on organizational performance is conditional on the strategic stance of organizations.

Diversity and Affective Consequences. The affective consequences of diversity include job/ organizational satisfaction and organizational commitment, which will influence longer-term consequences of diversity such as turnover or absenteeism. Previous studies argued that increased diversity may negatively affect the psychological dimension of employees, for example a lack of organizational commitment and integration among members (Tsui, Egan, and O'Reilly III, 1992) and lower levels of job satisfaction of employees, especially women and minorities (Greenhaus, Parasuraman, and Wormley, 1990; Sackett, DuBois, and Noe, 1991). Tsui, Egan, and O'Reilly (1992) examined the effects of demographic diversity on an individual's psychological and behavioral attachment to the organization. To test hypotheses which were developed based on self-categorization theory, they used a sample of 151 groups comprising 1705 respondents. The results show that increased diversity in an organization is associated with lower levels of organizational attachment or cohesiveness among members of the organization. They also found that whites and men who are members of the majority show larger negative effects of increased diversity in groups than minorities such as nonwhites and women.

On the other hand, people more similar in background variables may have similar values or attitudes and are likely to be more attracted to each other. Meglino, Ravlin, and Adkins (1989) tested the relationship between the value congruence process and individual outcomes such as multiple aspects of satisfaction – satisfaction for overall, security, supervisory, social, growth, coworker, and management – and organizational commitment. They used the sample composed of 191 production workers, 17 supervisors, and 13 managers at a large industrial products plant. According to the results, workers have higher levels of satisfaction and commitment when their values are congruent with the values of their supervisor and colleagues.

Diversity and Turnover. Empirical evidence on the relationship between diversity and turnover appears consistently to support theoretical arguments of social integration, similarity-attraction theory (Byrne, 1971), and the attraction-selection-attrition model (Schneider, 1987). Some studies show that age and tenure heterogeneity may increase turnover rates at the individual and group level. O'Reilly, Caldwell, and Barnett (1989) explored the relationships between group demography and individual turnover, using 20 work units with 79 respondents. While individual determinants of turnover are important, the results show that the aspects of social context such as group or organizational heterogeneity may also significantly affect decisions to leave. Group-level tenure heterogeneity is associated with lower levels of social integration, leading to higher levels of individual turnover. In addition, age diversity at both the individual and group level directly increases the turnover rates of individuals. In a similar vein, Wagner, Pfeffer, and O'Reilly (1984) found that heterogeneity in age increased turnover in top-

management teams. McCain, O'Reilly, and Pfeffer (1983), in their study of academic units, showed that differences in tenure lead to higher turnover rates of group members.

Jackson and colleagues (1991) tested hypotheses which were developed based on Schneider's (1987) attraction-selection-attrition model and Pfeffer's (1983) organizational demography model. Using 93 top management teams in the banking industry, they examined over a 4-year period how interpersonal context, which was operationalized as individual- and group-level heterogeneity with respect to age, tenure, education level, and career experiences, affects turnover rate. The findings revealed that group-level diversity enhanced the turnover rate over the research period. Individuals' differences from other group members enhanced individual-level turnover. Team diversity also resulted in increased turnover rates of teams.

Diversity and Effects of Context. Previous research suggested that the relationships between diversity and work-related outcomes may be moderated and mediated by a variety of contextual factors. These factors include demographic social context, organizational culture, team processes, organizational policies and programs for diversity, task characteristics, organization/ firm strategies (innovation, flexibility, and growth-oriented), and characteristics of workgroups or teams (shared goals and values). For example, although the research results demonstrate that racial diversity positively affects organizational performance, a negative relationship or no relationship may emerge when the effects of context are controlled (Richard, 2000).

Social Context. Jackson and Joshi (2004), in their study of 36 sales teams in 42 sales districts in a US firm, assumed that demographic social context may moderate the effect of team diversity on performance. They tested how three aspects of the social context would moderate the relationship between demographic diversity and performance. These social contexts include the combination of diversity dimensions within a team; the demographic characteristics of the team managers; and the demography of the work unit (Jackson and Joshi, 2004). The findings support the conclusion that the social context of teams may moderate the relationships between team diversity and team performance. The effects of any single attribute of diversity including gender, ethnic, or tenure diversity on performance are affected by the other attributes of diversity present in the team. Interestingly, in this study (Jackson and Joshi, 2004), the performance of the team with a combination of three diversity attributes – relatively high tenure diversity, high gender diversity and high ethnic diversity – turned out to be lowest. Results regarding the effect of the team manager's demographic characteristics on team performance are more complicated to assess. For example, while the team performance with only female managers declined when gender diversity increased, in the team with only male managers the team performance was not affected by gender diversity.

Organizational Culture. Two cultural orientations have been explored in the recent literature – collectivism and individualism (Chatman et al., 1998). While collectivistic cultures emphasize cooperation, sociability, empathy, interdependence, and good interpersonal relationships, individualistic cultures emphasize self-orientation, competition, uniqueness, autonomy, independence, and achievement (Triandis, 1995; Triandis and Suh, 2002). People-

oriented organizational culture emphasizes collectivistic values and results, while performance-oriented organizational culture accentuates individualistic values. Diverse groups in people-oriented organizational culture will place more emphasis on cooperation and teamwork and spend more time together to reduce conflicts and stereotypic bias that may result from demographic differences (Gartner, Mann, and Somech, 1996). Members in organizations that believe that diversity can benefit groups with collectivistic cultures were less likely to perceive individual differences, avoiding negative experiences from social categorization processes (Chatman et al., 1998).

Jehn and Bezrukova (2004) explored the moderating effects of three types of organizational context, including organizational culture, organizational strategies, and human resources management (HRM) practices, on the relationship between diversity and performance outcomes.[13] These categories of workgroup contexts include "organizational cultures" such as people- and competition-oriented; "organizational strategies" such as stability-, growth-, and customer-oriented; and "HRM practices" such as diversity- and training-oriented. The findings show that members of groups diverse in functional background perform better when their workgroup context emphasized people-oriented organizational cultures, but show lower performance with stability-oriented organizational strategies. Members of groups diverse in level of education performed better when the workgroup focused on customer- and growth-oriented strategies, but have lower levels of performance in a context emphasizing training- and diversity-oriented human resource practices.

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[13] Jehn and Bezruka (2004) employed three measures of performance outcomes of a *Fortune* 500 information-processing firm, which include merit-based performance ratings in individual and group level, composite bonuses, and stock options.

Team Processes. Recently, many diversity researchers have focused on the roles of mediating factors in the relationship between diversity and outcomes. To investigate team process that mediates between diversity and its outcomes, Smith and fellow scholars (1994) tested three alternative models about the effects of top management teams' demography and process on organizational performance – the demography model, the process model, and the intervening model – using data drawn from 53 high-technology firms. A demography model proposes that team demography entirely explains performance outcomes, with process having no impact. A process model proposes that process, such as social integration and communication, incrementally and directly affects performance outcomes with over the team's demography. An intervening model proposes that demographic factors have only indirect effects on performance outcomes, mediated by process (Smith et al., 1994). The results show that the top management team's demography is not only indirectly related to performance through process, but the team's demography is also directly related to performance.

Further, researchers have sought to understand what intervening factors affect the relationship between diversity and the outcomes. They argued that the demography of an organization may indirectly affect organizational outcomes through process variables, such as group processes, which include teamwork, communication, and cooperation and cohesiveness. McGrath's (1964) input-process-output model of group interaction attempted to explain the complex effects of group demography on the relationship between group processes and group performance (Hackman and Morris, 1975; McGrath, 1984; Rhodes, 1991). This model proposed that the interaction of the group members might be affected by the demographic composition of the work group and the characteristics of the group's task (McGrath, 1964). In

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turn, group processes may determine the quality of work, members' satisfaction with group processes, and even their attitudinal changes (Rhodes, 1991). In a similar vein, Michel and Hambrick (1992) proposed a process model that the longer the average team tenure is, the higher the level of team cohesion tends to be, which leads to better performance. The results revealed that links between average team tenure and team processes significantly affect diversification strategy and performance. Murray (1989) employed the concepts of social integration and communication to explain the relationship between diversity in workgroups and organizational performance. He contended that diversity in workgroups may negatively affect performance because a heterogeneous workgroup tends to have a low level of cohesion and thereby requires more formal communication. Ely (2004) examined the effects of four dimensions – diversity, context, team processes, and diversity programs on performance – using a sample of 486 retail bank branches. The results show that race and sex diversity have neither positive nor negative impacts on performance, counter to both of the conflicting theories about the relationship between diversity and performance – social categorization and similarity-attraction theories and information and decision-making theories. While the direct effects of tenure diversity and age diversity are negatively associated with performance, both of them affect performance differently when interacting with cooperation and teamwork. While in team processes with high cooperation and teamwork, age heterogeneity and tenure heterogeneity negatively affect performance, with low cooperation and teamwork age heterogeneity positively affects performance. Tenure heterogeneity negatively affects performance under conditions of high and low cooperation and teamwork, but moderately affects performance in team processes with low cooperation and teamwork.

Conflict in group processes is a critical challenge that should be taken into account. Some studies have established that diversified work groups have different dynamics than homogeneous groups (Williams and O'Reilly, 1998). Heterogeneous work groups tend to experience more challenges such as miscommunication and conflicts, than homogeneous work groups (Pelled, Eisenhardt, and Xin, 1999; Shaw, 1981; Tsui, Egan, and Xin, 1995). Pelled, Eisenhardt, and Xin (1999) examined a model proposing that work group diversity may indirectly affect cognitive task performance through two kinds of conflicts, intragroup task conflict and intragroup emotional conflict. They found that different sources of diversity cause task conflict or emotional conflict. Task conflict driven by differences in functional backgrounds tends to have a more favorable impact on performance than emotional conflict.

Nevertheless, the argument over indirect effects of diversity continues. Pfeffer (1983) argued that processes or intervening constructs through which team demography may affect organizational performance might not be a critical concern.[14] Rather, Pfeffer (1983) proposed that demography of the workgroup is directly related to organizational performance.

Organizational Tenure. Some researchers argued that the impact of readily observable diversity may decrease as time goes by. Harrison, Price, and Bell (1998, p. 96) examined the impact of "surface-level (demographic)" and "deep-level (attitudinal) diversity" on social

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[14] Pfeffer (1983, p. 350) "maintained that such research is unnecessary, because as soon as one says that it is necessary to understand the intervening constructs or processes one inevitably embarks on an infinite regress of reductionism from which there is no logical escape." Moreover, he argued that numerous hypothetical assumptions are neither testable nor unambiguous in their implication, leading to a lack of parsimony (Smith et al., 1994). He also maintained that the amount of variance explained by process measures is generally quite small (Pfeffer, 1983; Smith et al., 1994).

integration of groups.[15] In terms of the relational demography, heterogeneity among group members negatively affects social integration and group cohesiveness (Byrne, 1971; McGrath, 1984; Newcomb, 1961; O'Reilly, Caldwell, and Barnett, 1989). The findings showed that the length of time group members worked together weakened the effects of surface-level diversity and strengthened the effects of deep-level diversity as group members had the opportunity to engage in meaningful interactions. Time neutralized the initial negative effects of surface-level diversity on group cohesiveness and increased the effects of deep-level diversity. Mohammed and Angell (2004) assessed the differential effects of surface-level diversity (gender, ethnicity) and deep-level diversity (time urgency, extraversion)[16] on relationship conflict over time with moderating effects (team orientation and team processes). They found that different types of diversity affect relational conflict at different stages of a group's development over time. Over time, group members experience more frequent meaningful interactions between them, allowing for larger samples of behavior to be observed and deeper-level similarities to be discovered (Mohammed and Angell, 2004).

2. 3. 5 Evaluation of Previous Research

The early studies of diversity devoted greater attention to the direct effects of diversity on individual and organizational outcomes. However, no consistent evidence on how diversity affects organizations and their members has been found, suggesting that more complex

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[15] Surface-level diversity describes diversity in readily detectable attributes such as gender, race/ethnicity, and age and deep-level diversity describes underlying, deeper-level attributes such as attitudes and values (Jackson et al., 1995; Milliken and Martins, 1996).

[16] "Existing deep-level diversity research has focused on Big Five personality traits (Neuman, Wagner, and Christiansen, 1999), cognitive ability (Tziner andEden, 1985), values (Jehn et al., 1997, 1999), or work-related attitudes (Harrison et al., 2002)" (Mohammed and Angell, 2004, p. 1019).

relationships between diversity and its consequences may exist. Recently, diversity researchers developed more complex models to examine effects of various types of diversity and of contextual factors which may mediate or moderate the relationship between diversity and its outcomes. The results of recent research show that numerous contextual factors mediate or moderate the effects of diversity on organizational outcomes. Thus, diversity researchers and theorists proposed that contextual factors should be taken into account to improve our understanding of diversity's impacts on organizational effectiveness. Nevertheless, effects of many other variables such as the context of public organizations and diversity management practices, and leadership still remained untested. Further, previous research has used a very limited range of samples, such as private firms in some fields of business, thereby leading to a lack of external validity. Although some recent studies examined diversity's impacts on organizational effectiveness in the context of public organizations, they also used samples drawn from limited local areas or limited levels of governments.

The present study overcomes these weaknesses of previous research. First, this study focuses on the potential of effective management of increased diversity in organizations rather than on the direct effects of diversity. Previously, numerous studies have been conducted to examine the direct effects of diversity on organizational effectiveness, but recently diversity scholars realized the important roles of context in moderating the relationship between diversity and organizational effectiveness. Beyond these arguments, the present study contends that managerial efforts on diversity will significantly moderate the impacts of diversity on important outcomes at both the individual and the organizational level. Although some diversity scholars including Cox (1993), Ely (2004), and Foldy (2004) argued for the

importance of effective diversity management, there still appears to be no evidence on how diversity management affects the relationship between diversity and organizational effectiveness. Thus, this study will provide managers with critical insights about how to manage increased diversity effectively.

Second, this study uses a sample from a total of 291 federal agencies and the largest federal survey, in which approximately 150,000 federal employees participated. Given that the present study has the most representative sample of the U.S. federal government ever used, the results will contribute to better understanding of diversity's effects on organizational effectiveness, especially in the context of public organizations. Most of the previous diversity research has used data drawn from private businesses in limited fields and the external validity of the results remained questionable. Further, few previous studies examined the diversity effects on organizational effectiveness using data drawn from the U.S. federal government.

Third, the present study expands diversity research into the antecedents of diversity, that is, the factors that determine diversity in public organizations. Public organizations have played a leading role in increasing diversity in their workforces and consequently have achieved higher levels of diversity in their workforces than private organizations. The present study expects that there exist predictors that may lead to differences in the levels of diversity of organizations. Most previous diversity researchers seem to have been more interested in the consequences of diversity than determinants of diversity. Some research has analyzed diversity at the agency level (e.g., Kellough 1990; Kranz 1976; Grabosky and Rosenbloom 1975; Nachmias and Rosenbloom 1973); however, these studies may be irrelevant to describe the current employee populations in the federal government, given that the federal workforce

experienced further changes since then. This study will help us understand what determines the levels of diversity of public organizations.

2. 4 Discussion and Conclusion

The research on representative bureaucracy and diversity constitutes two primary streams of the recent research on diversity. Even though these two camps stem from different perspectives on heterogeneity in organizational management, they recently appear to combine into a larger research stream that is seeking to understand the relationship between diversity and representation, and organizational effectiveness. The normative view on representation in public administration has moved to a merit-based view on diversity, as government is increasingly emphasizing the importance of results-oriented organizational culture and the business-like performance of agencies. As a matter of fact, a very subtle distinction between diversity and representation has been made in the literature and most recently these two related, but distinct concepts have been distinguished by some scholars (e.g., Pitts, 2005b).

As mentioned before, the primary purpose of this research is to understand the impacts of diversity and representation on organizational effectiveness measured by performance and affective outcomes. Rather than separately investigating the effects of representation and diversity on organizational outcomes, I place greater emphasis on examining how diversity is related to work-related outcomes and how contextual factors affect the relationship between diversity and the outcomes.

Table 2.1 Summary of Empirical Findings

Authors	Sample	Attribute of Diversity	Findings
1. Organizational/Group Performance			
Cox, Lobel, and McLeod (1991)	136 students from a large public university in the midwestern U.S.	Race/ Ethnicity; Nationality	Ethnically diverse groups tend to act more cooperatively than all-Anglo groups, leading to higher competitiveness and performance than homogeneous groups.
Michel and Hambrick (1992)	134 firms	Function; Tenure	The longer the average team tenure is, the higher the level of team cohesion tends to be, leading to higher performance.
Watson, Kumar, and Michaelsen (1993)	173 upper-level undergraduates divided into 36 work groups	Race/ Ethnicity; Nationality	Newly formed culturally diverse groups interacted and performed less effectively than homogeneous groups. After 17 weeks, diverse work groups performed on the same level or better than homogeneous groups on two task measures – the range of perspectives and alternatives generated.
Smith, Smith, Olian, Sims, O'Bannon, and Scully (1994)	Top management teams of 53 high-technology firms	Experience; Education; Functional Background	The top management team's demography – team size, tenure, and diversity – indirectly affects performance, mediated by process – social integration, communication. Team demography also directly affects performance.
Chatman, Polzer, Barsade, and Neale (1998)	258 MBA students	Race; Gender; Nationality	Members in organizations which viewed demographic diversity as beneficial for groups with collectivistic cultures are less likely to perceive individual differences and experience negative effects of categorization processes.
Pate, Watson, and Johnson (1998)	500 upper-level undergraduate students from a large university in the southwestern United States	Race/ Ethnicity; Gender; Nationality	The competitive homogeneous groups perform better than do the noncompetitive diverse groups in terms of quality of performance. Both the culturally diverse and culturally nondiverse groups outperform their best individual members' scores when they are matched with competitive situations that enhance their innate group processing styles.

Pelled, Eisenhardt, and Xin (1999)	45 teams from the electronics divisions of three major corporations	Race; Gender; Age; Company tenure; Functional background	Functional diversity, mediated by task conflict, improves group performance on cognitive tasks. Task routineness and group longevity moderate emotional conflict caused by multiple types of diversity.
Jehn, Northcraft, and Neale (1999)	92 workgroups	Social category; Value diversity; Informational diversity	Informational diversity positively affects group performance, mediated by task conflict. This relationship is moderated by social and value diversity, task complexity, and task interdependence. Social category diversity positively affects group members' work morale. Value diversity negatively affects satisfaction, intention to remain, and commitment to the group, mediated by relationship conflict.
Richard (2000)	Firms in the banking industry	Race	Racial diversity positively affects organizational performance when firms have a growth strategy. However, racial diversity negatively affects organizational performance in firms with a downsizing strategy.
Kilduff, Angelmar, and Mehra (2000)	159 managers divided into 35 teams	Age; Nationality; Function	Cognitive diversity and firm performance have reciprocal effects. No effect of demographic diversity on cognitive diversity is found. High-performing teams interrelate diverse interpretations more effectively than others even if they experience early interpretative ambiguity.
Ely (2004)	486 retail bank branches	Race; Gender; Tenure; Age	Tenure and age diversity directly and negatively affect performance. In team processes with high cooperation and teamwork, age and tenure heterogeneity negatively affect performance. With low cooperation and teamwork, age heterogeneity positively affects performance while tenure heterogeneity negatively affects performance. Race and gender diversity are unrelated to performance.

Jackson and Joshi (2004)	36 sales teams in 42 sales districts in a US firm	Ethnicity; Gender; Team organizational tenure	The effects of any single attribute of diversity including gender, ethnic, or tenure diversity on performance are affected by the other attributes of diversity present in the team. For example, while the team performance with only female managers declined when gender diversity increased, in the team with only male managers the team performance was not affected by gender diversity.
Jehn and Bezrukova (2004)	1528 workgroups from a *Fortune* 500 information-processing firm	Race; Gender; Age; Tenure, Function; Education	Members of groups diverse in functional background perform better when their workgroup context emphasized people-oriented organizational cultures, but show lower performance with stability-oriented organizational strategies. Members of groups diverse in level of education perform better when the workgroup focused on customer- and growth-oriented strategies, but have lower levels of performance in a context emphasizing training- and diversity-oriented human resource practices.
Krishnan and Park (2005)	679 firms from the 1998 *Fortune 1000* list	Gender	Firms with more diversified and representative TMTs in terms of gender show better performance than others. Environmental characteristics such as munificence, dynamism, and complexity moderate the relationship between diversity and performance.
Pitts (2005a)	Public schools in Texas School districts	Race/ Ethnicity	A representative and diversified body of public school teachers positively affects performance of minority students in school.
Andrews, Boyne, Meier, O'Toole, and Walker (2005)	Major English local authorities	Ethnicity	Ethnic diversity and representation are not significantly associated with higher levels of performance. Representative bureaucracy is negatively associated with consumer perceptions of performance. However, organizational strategy (a prospector strategy) reduces this negative impact of representative bureaucracy.

2. Affective Consequences			
Meglino, Ravlin, and Adkins (1989)	151 groups comprising 1705 respondents	Race/Ethnicity; Gender	Increased diversity is related to lower levels of organizational attachment or cohesiveness among members of the organization. Whites and men who are members of the majority show larger negative effects of increased diversity in groups than minorities, such as nonwhites and women.
Greenhaus, Parasuraman, and Wormley (1990)	996 managers and 1273 supervisors from three work organizations (828 manager-supervisor pairs)	Race; Gender	Black managers experience lower levels of career satisfaction, perceive lower job discretion, and receive lower ratings from their supervisors on job performance and promotability.
Tsui, Egan, and O'Reilly (1992)	191 production workers, 17 supervisors, and 13 managers at a large industrial products plant	Race; Gender; Age; Education; Tenure	Workers have higher levels of satisfaction (satisfaction for overall, security, supervisory, social, growth, coworker, and management) and commitment when their values are congruent with the values of their supervisor and colleagues.
Harrison, Price, and Bell (1998)	39 groups in a medium-sized private hospital; The deli-bakery sections of 32 grocery stores	Age; Gender; Race/Ethnicity; Satisfaction (overall; with supervisor; with work); Organizational commitment	The length of time group members worked together weakens the effects of surface-level (demographic) diversity on group cohesiveness and strengthens the effects of deep-level (attitudinal) diversity on group social integration. Time neutralizes the initial negative effects of surface-level diversity on group cohesiveness and increases the effects of deep-level diversity.
Mohammed and Angell (2004)	45 student project teams	Gender; Ethnicity; Time urgency; Extraversion	Team orientation reduces the negative effects of surface-level diversity on relationship conflict. Team processes weaken the negative effects of deep-level diversity on relationship conflict. Relationship conflict results in lower perceived performance.

3. Turnover Intention			
McCain, O'Reilly, and Pfeffer (1983)	16 groups from a large state university	Tenure	Tenure diversity leads to higher turnover rates of group members.
Wagner, Pfeffer, and O'Reilly (1984)	599 managers from 31 1976 *Fortune* 500 firms	Age; Organizational tenure	Age heterogeneity increases turnover in top-management teams.
O'Reilly, Caldwell, and Barnett (1989)	20 work units with 79 respondents	Age; Tenure	Group-level tenure heterogeneity is associated with lower levels of social integration, leading to higher levels of individual turnover. Distance between group members is positively associated with intention to leave. Age diversity at both the individual and group level directly increases the turnover rates of individuals.
Jackson, Brett, Sessa, Julin, and Peyronnin (1991)	93 top management teams in the banking industry	Age; Tenure; Education level; Career experiences	Over the 4-year research period, interpersonal context, which was operationalized as individual- and group-level heterogeneity with respect to age, tenure, education level, and career experiences, affects turnover rate. Group-level diversity enhances the turnover rate over the research period. Individual differences from other group members enhance individual-level turnover. Team diversity increases turnover rates of teams.

CHAPTER THREE

A TREND OF DIVERSITY AND REPRESENTATION IN FEDERAL AGENCIES

This chapter reports on the variation in federal employment at the agency level using the archival data of the demographic profile of federal employees published by the Office of Personnel Management (OPM) in 2004 and 2006. Scholars have been concerned about the neglect of diversity and representation issues regarding "politically appointed policy leaders — individuals with the authority, resources, and means to influence agency culture and decisions" (Greene, Selden, and Brewer, 2001, p. 380; Riccucci and Saidel, 1997) — in that a top position in a hierarchy and its significant influence over decision making would be a key element in representative bureaucracy (Meier, 1993b; Sigelman and Karnig, 1976). Given that, I examine the variation of employment by agency and by rank as well, focusing primarily on the race/ ethnicity and gender of employees. This chapter aims to contribute to our understanding of the diversity and representation trends of the contemporary federal workforce.

The variation in federal employment is measured from two perspectives: diversity and representation. First, the theoretical background of these two perspectives will be briefly discussed. Second, the data will be discussed, as well as the measures of diversity and representation that will be used in analyzing the federal workforces will be introduced. Third, the findings will be reported, about the variation of employment by agency and by rank. The fourth section will concentrate on assessing representation at the top level of the federal bureaucracy, or the Senior Executive Service (SES). Finally, the results will be evaluated, and then a discussion of the implications that the results provide will follow.

3. 1 Diversity and Representation in the Federal Government

Since the Civil Rights Act of 1964, the U.S. federal government has played a leading role in diversifying employee populations by significantly increasing the employment of both women and minorities in federal agencies. The federal civil service started programs to achieve equal employment opportunity objectives in the 1940s and have invested considerable resources and energy to correct problems of underrepresentation of women and minorities in federal workforces (Kellough, 1990). As a result, public organizations tend to have more diverse employee populations than those in the private sector, suggesting they have more successfully employed people with different backgrounds (Cornwell and Kellough, 1994; Foldy, 2004; Riccucci, 2002).

A large literature has been devoted to assessing the representation of minorities and women in the public sector (e.g., Cornwell and Kellough, 1994; Greene, Selden, and Brewer, 2001; Kellough, 1989). However, scholars have concentrated only limited attention on developing analytic tools that measure the representativeness of the public workforce (Greene, Selden, and Brewer, 2001), or have focused on aggregate analysis of the federal government or only the limited grade levels across all federal agencies (Kellough, 1990). While some studies have assessed diversity at the agency level (e.g., Kellough, 1990; Kranz, 1976; Grabosky and Rosenbloom, 1975; Nachmias and Rosenbloom, 1973), they may be irrelevant to describe the current employee populations of federal agencies, given that diversity in the federal workforce has continuously progressed since then.

3. 2 Data and Measurement

I focus primarily on two demographic attributes to examine the variation of the diversity and representation of federal agencies: race/ethnicity and gender. As discussed in the previous chapter, these two factors are considered as the most critical demographic characteristics that significantly influence an individual's attitude and value for comparing bureaucratic and public representation in the United States. In fact, women and racial minorities in the United States faced great discrimination well into the twentieth century in their attempt to secure employment with the federal service (Aron, 1987; Rosenbloom, 1977; Shafritz et al., 1992). Much scholarly effort has been concentrated on exploring the extent to which women and minorities who had previously been discriminated against and underrepresented have been integrated into bureaucracies.

To measure the diversity and representation of federal employment, I use the data drawn from the Central Personnel Data File (CPDF) and the Demographic Profile of the Federal Workforce published by the Office of Personnel Management (OPM). The data[17] come from the 291 federal agencies that include the 15 executive branch departments[18] and independent agencies, representing one time period and collected in 2004 and 2006. The present study classifies federal employees into five racial/ ethnic groups – American Indian or

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[17] The sample includes 291 federal agencies including sub-agencies of 15 executive departments – Dept. of Agriculture, Dept. of Commerce, Dept. of Defense, Dept. of Education, Dept. of Energy, Dept. of Health and Human Services, Dept. of Homeland Security, Dept. of Housing and Urban Development, Dept. of the Interior, Dept. of Justice, Dept. of Labor, Dept. of State, Dept. of Transportation, Dept. of the Treasury, and Dept. of Veterans Affairs and small size (under 100 employees), medium size (100-999 employees) and large size (over 1000 employees) independent agencies.

[18] The executive branch includes all agencies except the U.S. Postal Service, Postal Rate Commission, Central Intelligence Agency, National Security Agency, Tennessee Valley Authority, White House Office, Office of the Vice President, Board of Governors of the Federal Reserve System, National Imagery and Mapping Agency, and Defense Intelligence Agency.

Alaskan Natives, Asian or Pacific Islanders, Blacks, Hispanics, and Whites – based on the

CPDF's categorization. The gender of the federal employees includes both male and female.

3. 2. 1 Diversity Measures

No clear distinction between diversity and representation measurement has been

identified. While research in business management has greater interest in measuring how

different members within and/or between groups are, studies in public administration have

sought to measure how well the demographic composition of the bureaucracy reflects that of

the whole population.

Measuring diversity in the public sector has important implications, in that it evaluates

how successfully governments and public organizations have integrated women and minorities

into their workforces through equal employment opportunity and/or affirmative action

programs. Rosenbloom (1977) argued that diversity measurement compares the degree of

social integration in different organizations and organizational levels. While organizational-

level diversity indices measure the extent to which organizations have organizational structures

that integrate minorities into their employee populations, intra-organizational-level measures

indicate the extent to which organizations promote minorities' upward mobility to higher-level

positions (Guajardo, 1999).

Diversity theorists and researchers have sought to refine measures of the diversity of

workforces. Diversity researchers have employed various measures of diversity,[19] but have not

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[19] The level of diversification of organizations can be measured by utilizing various diversity indices that include the absolute diversity index (AbD) and the relative diversity index (RelD) (e.g., Tam and Bassett Jr., 2004), Blau index of variability (e.g., Ely, 2004; Harrison, Price, and Bell, 1998; Jackson and Joshi, 2004; Mohammed and

seemed to have reached an agreement. Allison (1978) argued that researchers had usually based

their choice on convenience, familiarity, or on vague, methodological implications rather than

choosing among the numerous measure of heterogeneity relying on the clear criteria. He

evaluated several commonly used measures of heterogeneity from theoretical and

methodological perspectives and proposed three basic criteria for choosing measures of

diversity (Allison, 1978). First, a measure should be invariant to scale. Although actual

distribution of a variable in a group did not change, the variance can change when a different

scale is used. Measures of inequality should capture relative differences rather than absolute

differences and should be comparable across different kinds of scales (Allison, 1978; Blau,

1977). Scale invariant measures of inequality include the coefficient of variation[20] (Allison,

1978), Schultz's (1951) coefficient[21], the Gini index[22], Theil's coefficient[23], and the variance of

the logarithms.[24] The second criterion is sensitivity to transfers. For example, transferring

income from a poorer person to a rich person should increase the measures of inequality. In this

sense, the coefficient of variation, the Gini coefficient, and Theil's coefficient meet this

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Angell, 2004; Pitts, 2005a; Smith et al., 1994; Wiersema and Bantel, 1992), the coefficient of variation (e.g., Ely 2004; Harrison, Price, and Bell, 1998; Jackson and Joshi, 2004; Jehn and Bezrukova, 2004; Wiersema and Bantel, 1992), the entropy index of diversity (e.g., Ancona and Caldwell, 1992; Jehn and Bezrukova, 2004; Jehn, Northcraft, and Neale, 1999; Krishnan and Park, 2004; Pelled, Eisenhardt, and Xin, 1999; Teachman, 1980; Wiersema and Bantel, 1992), Gini coefficient (e.g., Meier, 1975), Hirshman-Herfindahle index, Lieberson index (e.g., Guajardo, 1999), McIntosh D Evenness index, or Nachmias-Rosenbloom Measure of Variation (MV) index, the relational demography score (e.g., Tsui, Egan, and O'Reilly III, 1992, 2001), and the Teachman's index (e.g., Keller, 2001; Pelled, Eisenhardt, and Xin, 1999; Teachman, 1980).

[20] The coefficient of variation refers to the standard deviation divided by the mean.

[21] The relative mean deviation, created by Schutz (1951), is defined by the following formula:
$D = (1/n * \text{sum of absolute values of } (X_i - \text{mean}))/ 2*\text{mean} (i= 1, 2, …, n).$

[22] The Gini index, the most commonly used measure of inequality, refers to a measure of dispersion divided by two times of the mean. $G = (1/n^2 * \text{sum of absolute values of } (X_i - X_j))/ 2*\text{mean} (i = 1, 2, …, n; j = 1, 2,…, n).$

[23] Theil's (1967) coefficient T is calculated by the following formula: $T = 1/n * \Sigma (X_i /\text{mean} * \log (X_i /\text{mean}))$ $(i = 1, 2,…, n).$

[24] The variance of the logarithms L is calculated by the following formula: $L = 1/n*\Sigma (Z_i - \text{mean of } Z)^2$ $(Z_i = \log X_i; i = 1, 2,…, n).$

requirement.[25] Last, the upper and lower bounds of heterogeneity measure, or how they

respond to changes in the population size, matter. The Gini index ranges from 0 to 1, while the

coefficient of variation and Theil's measure range from 0 to infinity. However, these bounds

can be changed to desired bounds by simple transformation.[26]

Recently, three kinds of diversity measures have been used most frequently: the

coefficient of variation, the Blau index of heterogeneity, and the entropy index of diversity.

Diversity researchers use different types of measures depending on the characteristics of the

variables. Blau's index of heterogeneity and the entropy index are appropriate for categorical

variables such as gender, race/ ethnicity, and functional and educational background. The

coefficient of variation is used for continuous variables such as age and tenure. Recent research

has frequently employed Blau's index of heterogeneity and the coefficient of variation (e.g.,

Bantel and Jackson, 1989; Jackson et al., 1991). Nevertheless, some researchers suggest that

despite the disadvantage of not being easily interpretable, the entropy index of diversity or

Shannon index (uncertainty index) is the most appropriate measure of diversity in mathematical

terms (Miller and Quigley, 1990; Pielou, 1977; Reardon, 1998; Theil, 1972; Zoloth, 1976). The

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[25] For example, while the coefficient of variation is equally sensitive to transfers at all income levels, the Gini coefficient tends to be most sensitive to transfers around the middle of the distribution and least sensitive to transfers among the very high or the very low income. Theil's coefficient or the entropy index of heterogeneity is more sensitive to transfers as the level of income is lower. Thus, for general use the coefficient of variation will be a better choice for measuring inequality of other variables such as age, gender, and race in a group.

[26] For example, by taking its logit the Gini index vary between minus and plus infinity and can be used as a dependent variable in a regression analysis by avoiding the problems associated with bounded dependent variables (Allison, 1978; Nerlove and Press, 1973). The upper bounds of these measures depend on the sample size, n – 1- 1/n (the Gini index); the square root of n-1 (the coefficient of variation); and log n (Theil's measure). However, in some situations when it is desirable to have a measure whose upper bound does not depend on the sample size n it can also be avoided by simple transformation or dividing indices by their upper bounds (Allison, 1978; Martin and Gray, 1971).

present study employs the entropy index of diversity to measure race and gender diversity. The entropy index is computed with the following formula:

$$E = \sum Q_r \log_n (1/Q_r) \ (r = 1, \ldots, n)$$

where Q_r denotes the proportion of the population of group r

The entropy index of diversity ranges from a minimum value of 0, which means that the population contains a single group, and to a maximum value of 1, which means all n groups are evenly represented in the population. The indices of each agency's attributes of diversity – race and gender – are calculated through the entropy index of diversity.

3. 2. 2 Representation Measures

Minorities and women tend to be concentrated in lower echelons in organizations, and not properly represented in higher-level positions. In this sense, the diversity indices are limited to measuring horizontal representation, that is, the incidence of diverse groups in an organization. They fail to deal with "representation in organizations that are hierarchical in the distribution of status and influence among their memberships because it in effect counts individual members as equally representative of their groups, regardless of their positions in the hierarchy" (Greene, Selden, and Brewer, 2001, p. 383). Ruccucci and Saidel (1997) argued that the commonly used measures of representation do not capture the representativeness of an entire hierarchy of the bureaucratic system, especially neglecting the representation of the top levels possessing resources, authority, and influence on policy making (Greene, Selden, and Brewer, 2001). As a matter of fact, while in terms of total numbers of positions women and minorities appear to be well represented in public organizations, they are still underrepresented

in the upper levels such as the managerial and senior executive levels and overrepresented in the lower echelons of bureaucracies (Cornwell and Kellough, 1994; Foldy, 2004; Greene, Selden, and Brewer, 2001; Riccucci, 2002). Researchers found that in various levels of government employment women and racial/ethnic minorities are disproportionately represented higher at lower-level jobs (e.g., Cornwell and Kellough, 1994; Greene, Selden, and Brewer, 2001; Sigelman, 1976).

Then, how can we know if a bureaucracy is indeed representative? Numerous scholars have developed various measures of representation to answer this question. Nachmias and Rosenbloom (1973) utilized the measure of variation in assessing bureaucratic representativeness. The logic underlying that measure is that as the number of differences among factors that a group has is greater, the group is more diverse as a whole and has more variation within it. They also suggest that the measure of variation can be used, combined with Subramaniam's (1967)[27] representation and stratification ratios.[28] Sigelman (1976) assessed the employment of women in state and local governments in terms of both quantity and quality, utilizing these measures. In this study, a representative ratio measuring the quantity dimension of representation indicates the extent to which the sexual composition of state and local bureaucracy accurately represents that of a state's working-age (from 18 to 65) population, while a stratification ratio measuring the quality dimension indicates the extent to which women are distributed evenly throughout the various levels or positions rather than

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[27] Subramaniam, V. 1967. "Representative Bureaucracy: A Reassessment" *American Political Science Review,* 61 (4): 1010-1019.
[28] A representation ratio referring to a measure of the quantity dimension of representation indexes the extent to which the social and demographic composition of bureaucracy accurately represents those of the populace, while a stratification ratio, which measures the quality dimension, indexes the extent to which a certain social or demographic group is distributed evenly throughout the various levels or positions.

concentrated in lower-level positions. Eisinger (1982) assessed black representation at the municipal level, using the affirmative action effort score. This measure compares the percentage of blacks in a city population with that of blacks in a bureaucracy of a city government. More recently, Greene, Selden, and Brewer (2000) developed a new measure to evaluate the quality of representation, that is, the way in which groups are distributed in the bureaucratic hierarchies of state governments. In the study, they focused on the potential for individuals depending on the ranks of their positions in the bureaucratic hierarchy rather than simple proportional representation.

The vertical representation of groups in bureaucratic hierarchies will be measured computing the penetration ratios of the groups. The penetration ratio, which is the most commonly used measure of representation, assesses the extent to which a group is represented in an organization by computing its overall proportional incidence (Sigelman and Karnig, 1976). However, many researchers have indicated that the measure fails to reflect on representation in organizations that are hierarchical in the distribution of status and influence among their memberships. In this study, I measure the vertical representation by computing penetration ratios by rank. A value of the penetration ratio of a group greater than a value of 1 suggests that the group is overrepresented in an organization. A value of the ratio less than a value of 1 indicates underrepresentation of a group in the organization.

3. 3 Horizontal Representation: Diversity in Federal Agencies

Since the 1964 Civil Rights Act and 1965 Voting Rights Act were passed, scholars and policy makers have centered their attention on the issues of how to promote the fair

representation of socially and politically significant groups within both elected and unelected institutions of government (Greene, Selden, and Brewer, 2001). Such efforts helped the federal government to be at the leading edge of diversity in their workforce. Table 3.1 presents the trends of federal civilian employment by race and gender between 1994 and 2004. During this period, the proportion of Hispanic employment in the federal government has increased by about 50 percent. The proportion of aggregate minority employment has also increased by about 10 percent.

Diversity by Agency. Table 3.2 reports the diversity measures of the 15 executive branch departments and selected independent agencies with regard to race, gender, and age. In terms of race diversity, among executive branch departments, the Department of Health and Human Services represents the highest level of diversity with an entropy of 0.77 and the third highest level of minority employment (44.2 percent). On the other hand, the Department of Transportation shows the lowest racial diversity with an entropy of 0.49. It also reports the second lowest proportion of minority employment (21.8percent), following the Department of Agriculture with the lowest proportion (21.6 percent) of minorities in its employee population. While the Department of Housing and Urban Development is ranked as the highest in terms of the proportion of the minority employment (49.6 percent), its diversity measure is found to be lower than that of the Department of Health and Human Services, suggesting that the employment of the department is concentrated on minority employment.

Not surprisingly, the level of diversity of the Equal Employment Opportunity Commission (0.7041) is most highly diversified in terms of race with an entropy of 0.7 among

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selected independent agencies and agencies under the Executive Office of President and the second highest following the Department of Health and Human Services. It hires minorities by the 61.4 percent of its total employment and women by the 67.1 percent, which are higher proportions than those in other agencies, corresponding to its mission of commitment to the diversity and representation. The Office of Management and Budget reports the lowest level of racial diversity (0.47) and the minority employment accounts for only the 23.8 percent of the agency's workforce.

The executive branch departments appear to be highly successful in balancing the employment of women and men. The Department of Labor achieves perfect gender diversity with an entropy of 1, which suggests the department employs the same proportions of women and men in its workforce. The Department of Transportation is ranked as the lowest with an entropy of 0.84. Female employees comprise the 26.9 percent of the employee population. The Equal Employment Opportunity Commission and the Social Security Administration report higher proportions of female employees than male employees in their employee population, 67.1 percent and 70.3 percent, respectively. The diversity indices of these agencies are lower than those of other agencies, suggesting that women are overrepresented in these agencies.

Concerning age diversity, the Department of Commerce is ranked as having the highest level of diversity with an entropy of 0.94 and the Department of Justice as the lowest with an entropy of 0.83.

Diversity by Sub-Agency. Table 3.3 illustrates top- or bottom-ranked sub-agencies in terms of race, gender, and age diversity. The most diversified sub-agency with regard to race is

the Office of Senior Coordinator for Pacific/ Hawaii (0.84) under the Department of Housing

and Urban Development. The proportion of minorities in this agency comprises 56.4 percent:

Blacks (24.2 percent), Hispanics (14.3 percent), Asian or Pacific Islanders (16.4 percent),

American Indian or Alaskan Natives (1.5 percent), and Whites (43.6 percent). As can be seen,

the membership of this agency is more evenly distributed among these five racial groups than

the other agencies. The least diversified agency is found to be the Bureau of the Public Debt

(0.21) under the Department of Treasury. The proportion of minorities in this agency comprises

only 7.4 percent and Whites occupy the 92.6 percent of the employee population of this agency.

Interestingly, fourteen sub-level agencies and independent agencies achieved perfect

heterogeneity in terms of gender, suggesting that the sub-level federal agencies have been

successful in obtaining the balance of the employment of men and women. Not surprisingly,

the least diversified agency is found to be the Women's Bureau (0.41), which has a higher level

of female employment (91.7 percent) than of male employment.

In terms of age, the U.S. Institute of Peace (0.99) has the highest level of diversity,

while the National Appeals Division (0.69) under the Department of Defense has the lowest

level of diversity.

Representation of Women and Minorities by Agency. The entropy measures focus

primarily on the even distribution of the five racial groups in the agency, not taking into

account the proportional incidence of the groups mirroring the whole employee population. To

assess the proportional representation of women and minorities, I compute penetration ratios

for the five racial groups and for women and men in the executive branch departments. Figure

3.1 shows the proportional representation of the racial groups in the executive branch departments. The penetration ratios for Whites indicate that their proportional incidence is consistent with that in the relevant population in all of the executive departments. Asian or Pacific Islanders are also relatively well represented in most of these agencies with slight overrepresentation in the Department of Commerce and the Department of Health and Human Services. Blacks are overrepresented in the Department of Education (2.12) and the Department of Housing and Urban Development (2.2). Hispanics are overrepresented in the Department of Homeland Security (2.28). On the other hand, the penetration ratios for American Indian or Alaskan Natives have greater variation than those for other groups. Especially, they are highly overrepresented in the Department of Health and Human Services (7.91) and the Department of the Interior (7.14), but in most of the other agencies, are underrepresented.

As discussed earlier, most of the agencies are very successful in employing women and the proportion of female employees corresponds to that of male employees in the majority of the executive departments. Figure 3.2 reveals the variation of the balance between women and men in these agencies. While underrepresented in the Department of Transportation (0.61), women are largely overrepresented in the Department of Treasury (1.41), the Department of Education (1.39), and the Department of Housing and Urban Development (1.36).

3. 4 Vertical Representation: Representation by Rank

As previously pointed out, the entropy index and the penetration ratio do not reveal the vertical representation of groups in hierarchical bureaucracies. Hence, to evaluate both vertical

and horizontal diversity and representation, it is necessary to investigate the distribution of the

positions occupied by women and minorities over the various levels or positions in the

hierarchy. In effect, Figure 3.3 shows that the ranks of positions are negatively related to the

levels of race diversity and minority employment. Both of the race diversity and the proportion

of the minority employment are consistently decreasing as the ranks of positions increase. In a

similar line, Figure 3.4 exhibits the levels of gender diversity and the proportion of female

employees in federal agencies by rank. The variation of female employment is similar to that of

the minority employment in that women are concentrated in the lower-level positions,

underrepresented at the higher and Senior Pay levels. The balances between the women and

men employment are accomplished at the levels between the GS-9 and GS-11.

Representation by Race/Ethnicity. Figure 3.5 demonstrates how different racial/ethnic

groups are distributed through ranks. The proportional representation of racial groups is

computed by rank – 15 General Schedule (GS) and Senior Pay levels. As for the representation

of racial minorities, the penetration ratios by pay plan and grade of three groups – Blacks,

Hispanics, and American Indians or Alaskan Natives – are higher at the lower- and middle-

levels, suggesting that these groups are overrepresented at these levels. American Indian or

Alaskan Natives show the larger variation of penetration ratios over the ranks than the other

groups. This group reaches the highest level of penetration at the GS-4 (2.14) and the lowest at

the GS-15 (0.38) and Senior Pay levels (0.38). Blacks and Hispanics demonstrate similar

patterns of penetration over the ranks. Hispanic employees reach the highest penetration ratio at

the GS-2 (1.56) and Blacks, at the GS-8 (1.58). The penetration ratios of these three groups

decline with fluctuation and become lower than unity at the GS-10 and higher-level grades, resulting in the underrepresentation of these groups at the higher-level positions.

Contrary to the trends for Blacks, Hispanics, and American Indian or Alaskan Natives, the penetration ratios of Whites steadily increase as grade level goes up from the lowest echelons to the highest and Senior Pay levels, showing a smaller variation across grade level than the other groups. They are underrepresented at the positions under the GS-10 and overrepresented at the upper levels. Not surprisingly, Whites are largely overrepresented at the Senior Pay levels and the other four groups are underrepresented. At the Senior Pay levels, Whites accomplish the highest penetration ratio (1.25), while each of the other groups reports the lowest level of penetration. The representation of Asian or Pacific Islanders by rank is more complicated to interpret than that of the other groups. The group is slightly underrepresented at the majority of the levels under the GS-11, largely overrepresented at the GS-1 and GS-3 (1.82 and 1.63, respectively). With the GS-12 as a turning point, this group achieves equal representation at the higher-levels of positions and is overrepresented at the level of the GS-15 (1.26).

Representation by Gender. Although federal employment in terms of gender diversity demonstrates that the agencies achieved a reasonable level of gender diversity, women still do not appear to be equally represented in all of the vertical positions in the hierarchy of the federal government. Figure 3.6 explores the representation of female and male employees in federal agencies by rank. As can be seen, the level-specific penetration ratios of female and male employment have an inverse "mirror" relationship. This shows that a large gap between

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women's and men's penetration ratios exists over the ranks of federal employment, especially at the lowest and highest levels. Apparently, women are underrepresented in the upper positions higher than over the GS-11 and overrepresented in the middle- and lower-level positions. This suggests that although, in terms of the number of positions, women are equally represented in federal agencies, they are concentrated in the levels under the GS-12, not promoted to the higher or Senior Pay levels.

3. 5 Senior Executive Service

The Senior Executive Service (SES), since it was created by the 1978 Civil Service Reform Act, has exercised considerable influence over governmental policy-making processes. Given that much literature argued that the representation of the SES contributes to benefiting politically important groups in meaningful ways, the demographic composition of the SES has received great attention from scholars and political leaders. Traditionally, the positions of the SES have been dominated by white males, while the share of minorities and women has increased consistently during the past several decades. Even so, minorities and women are still noticeably underrepresented at the top levels of the federal bureaucracy. The data are drawn from the demographic file of federal employment in 2006.

Diversity and Representation by Race/Ethnicity. As expected, Figure 3.7 shows that Whites are consistently overrepresented at the SES levels in the executive branch departments. The average penetration ratios of the groups are 0.81 for American Indians or Alaskan Natives, 0.45 for Asians or Pacific Islanders, 0.57 for Blacks, 0.49 for Hispanics, and 1.20 for Whites.

The Department of Housing and Urban Development achieved the relatively reasonable level

of representation of minorities, compared with the other departments. Most strikingly, the

American Indian or Alaskan Native group shows the extraordinary variation in its proportional

representation in the departments. This group is highly overrepresented in the Department of

Health and Human Services and the Department of the Interior, while it is commonly

underrepresented in the others or even not present in several departments, including the

Department of Education, the Department of Labor, and the Department of State. The

penetration ratios of American Indian or Alaskan Natives in the Department of the Interior and

the Department of Health and Human Services are 5.97 and 2.55, respectively. Blacks are

reasonably well represented in the Department of Education accomplishing a penetration ratio

of 0.96, while overrepresented in the Department of Housing and Urban Development with a

penetration ratio of 1.52. Hispanics are also well represented in the Department of Housing and

Urban Development with a penetration ratio of 0.95.

Diversity and Representation by Gender. Women are also commonly underrepresented

at the SES levels, as shown in Figure 3.8. Especially, in the departments that administer

traditionally male-dominated jobs such as the Department of Energy, the Department of

Defense, the Department of Homeland Security, the Department of Justice, and the Department

of Veterans Affairs, the gaps between the representation of women and of men is larger than in

the other departments. The largest gap in proportional incidence between women and men is

experienced by the Department of Defense (a penetration ratio of 0.47 for women and 1.43 for

men). On the other hand, women and men are almost equally represented in the Department of

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Health and Human Services (a penetration ratio of 0.97 for women and 1.02 for men). The

Department of Education and the Department of Housing and Urban Development also report

relatively small differences in penetration ratios between women and men.

3. 6 Discussion and Conclusion

According to a number of reports concerning employee populations, federal agencies

appear to be on the leading edge of diversity. Nevertheless, women and minorities are still

underrepresented at the upper-level positions in hierarchical bureaucracies. Given that the

vertical ranks of public bureaucracies are highly and positively correlated with authority and

influence on important policy issues and decision-making processes (Baldwin, 1996; Greene,

Selden, and Brewer, 2001), the unequal representation of women and minorities at the upper-

policy levels can result in unfair treatment of people who were members of these groups.

To assess not only the quantity but also the quality of diversity in federal agencies, this

study measured the levels of diversity and representation of the federal workforce in terms of

race/ ethnicity and gender in two ways. By computing the heterogeneity index (entropy index),

I assessed how evenly the positions of federal agencies are distributed to diverse racial or

gender groups. Further, by using the proportional incidence ratio (penetration ratio), I evaluated

how properly these groups are represented across the vertical levels in the federal government.

The results reveal that federal agencies, especially the executive branch departments

and large independent agencies (over 500 employees), are successful in accomplishing well-

diversified employee populations with regard to race and gender, although many small

independent agencies are still poorly diversified. Most of the minority groups – Blacks,

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Hispanics, Asian or Pacific Islanders, and American Indian or Alaskan Natives – show reasonably good ratios of presence in federal agencies.

However, the findings concerning the representation of women and minorities across grade levels tell us a different story. The groups of minority employees – Blacks, Hispanics, Asian or Pacific Islanders, and American Indian or Alaskan Natives – show a higher probability of presence at lower-level positions, and are largely underrepresented at the higher-level positions and Senior Pay levels. The employment of Whites shows the opposite trends to those of the minority groups. In addition, Whites tend to be distributed fairly uniformly not only across the organization but also throughout grade level, compared with the other groups. In a similar vein, the representation of women is also skewed toward the lower-level positions. Women are still largely underrepresented at the higher-level ranks as well as the Senior Pay levels.

Some relevant literature suggests that the underrepresentation of women and minorities at the higher-level positions may be related to the social and economic backgrounds that they might have, for example, educational backgrounds or training opportunities and selection processes (Baldwin, 1996). In addition, women may be disadvantaged by the traditional stereotypic role differences between men and women. Analysis described below will investigate what determines the successful integration of women and minorities in the federal government. This research will provide greater insight into how to improve diversity and representation in the federal government.

Table 3.1 Employment Trends of the Federal Government (Executive Branch Non-Postal)

	1994	1996	1998	2000	2002	2004
Total	2,043,449	1,890,406	1,804,591	1,755,689	1,813,047	1,851,349
Female (%)	43.9	44.0	44.4	45.0	44.6	44.4
Minority (%)	28.4	29.1	29.6	30.2	30.7	31.4
African-American (%)	16.7	16.6	16.7	17.0	16.9	16.9
Hispanic (%)	5.7	6.1	6.4	6.6	6.9	7.3
Asian/Pacific Islanders (%)	4.1	4.3	4.5	4.5	4.8	5.0
American Indian/Alaska Natives (%)	2.0	2.0	2.1	2.2	2.2	2.1

SOURCE: The 2004 Demographic File of Federal Employees, U.S. Office of Personnel Management

Table 3.2 Race, Gender, and Age Diversity by Agency (Executive Branch Departments and Selected Independent Agencies)

Agency	Entropy Index			Minority%	Female %
	Race	Gender	Age		
Dept. of Agriculture	.4862	.9851	0.9398	**21.6**	42.8
Dept. of Commerce	.5533	.9960	**0.9443**	28.8	46.3
Dept. of Defense	.5536	.9475	0.8855	27.2	36.6
Dept. of the Army	.5474	.9503	0.8900	27.4	36.9
Dept. of the Navy	.5619	.8833	0.8752	28.1	30.2
Dept. of the Air Force	.5056	.9086	0.8866	23.4	32.4
Dept. of Labor	.608	1.000	0.9015	35.5	50.4
Dept. of Justice	.5634	.9734	**0.8344**	30.0	40.4
Dept. of Energy	.503	.9535	0.8623	22.8	37.4
Dept. of Education	.6242	.9587	0.9097	45.0	61.9
Dept. of Health and Human Services	**.7657**	.9665	0.9179	44.2	60.7
Dept. of Homeland Security	.6468	.9229	0.9392	36.3	33.8
Dept. of Housing and Urban Development	.6734	.9696	0.8779	**49.6**	60.2
Dept. of Interior	.552	.9714	0.9246	26.9	40.1
Dept. of State	.52	.9996	0.9363	26.0	48.8
Dept. of Transportation	**.4854**	.8398	0.8490	21.8	**26.9**
Dept. of the Treasury	.6201	.9541	0.8749	36.8	**62.5**
Dept. of Veteran Affairs	.6491	.9799	0.8838	38.2	58.3
Office of Management and Budget	**.4723**	.9969	**0.9520**	**23.8**	53.3
Equal Employment Opportunity Commission	**.7041**	.9139	0.8665	**61.4**	67.1
Merit Systems Protection Board	.5611	.9871	**0.8367**	34.1	56.7
National Aeronautics and Space Administration (NASA)	.5039	.9322	0.8932	23.3	34.8
Office of Personnel Management (OPM)	.5455	.9540	0.9267	36.3	62.6
Social Security Administration	.6904	.8775	0.8990	44.6	**70.3**
General Services Administration	.6061	.9998	0.8903	36.9	**49.1**
Small Business Administration	.6497	.9976	0.8901	39.4	52.9

Table 3.3 Top and Bottom Five Federal Agencies in Race, Gender, and Age Diversity

Race Diversity

Top Five Agencies (Sub-Agency Level)	Diversity Index (Entropy Index)	Minority (%)
HU-Office of Senior Coordinator for Pacific/Hawaii	.8352	56.4
IN-Office of the Secretary of the interior	.7421	44.4
HSAB-Bureau of Citizenship and Immigrant Services	.7398	44.2
CM-Patent and Trademark Office	.7324	55.0
TRAD-U.S. MINT	.7182	46.1

Bottom Five Agencies (Sub-Agency Level)	Diversity Index (Entropy Index)	Minority (%)
HSBE-Federal Law Enforcement Training Center	.3439	13.6
IN-Geological Survey	.3195	11.8
IN-Indian Affairs	.2937	88.0
DLMS-Mine Safety and Health Administration	.2421	8.9
TRAB-Bureau of the Public Debt	.2076	7.4

Gender Diversity

Top Fourteen Agencies (Sub-Agency Level)	Diversity Index (Entropy Index)	Female (%)
AG-Office of Budget and Program Analysis	1.0000	50.0
AGHS-Homeland Security Staff	1.0000	50.0
VABA-Immed. Office of Asst. Sec. for Human Res. and Adm.	1.0000	50.0
VADC-Deputy Assistant Secretary for Budget	1.0000	50.0
VAJB-Dep. Asst. Sec. Intergov. and Internat. Affairs	1.0000	50.0
VAJC-Dep. Asst. Sec. for Public Affairs	1.0000	50.0
GB-Overseas Private Investment Corporation	1.0000	50.0
SS-Selective Service System	1.0000	50.0
HE-Food and Drug Administration	1.0000	50.1
IN-Mineral Management Service	1.0000	49.9
FT-Federal Trade Commission	1.0000	50.1
TR-Departmental Offices	1.0000	49.8
EP-Environmental Protection Agency	1.0000	50.2
AM-Agency for International Development	1.0000	50.3

Bottom Five Agencies (Sub-Agency Level)	Diversity Index (Entropy Index)	Female (%)
VAPA-National Cemetery Administration	.7454	21.2
GW-International Boundary and Water CMSN: US and MEX	.7433	21.1
EDEQ-Office of Safe and Drug-Free Schools	.6769	82.1
EDET-Office of English Language Acquisition	.6409	83.7
DLWB-Women's Bureau	.4138	91.7

Age Diversity

Top Five Agencies (Sub-Agency Level)	Diversity Index (Entropy)
AI-U.S. Institute of Peace	0.9936
HUAA-Office of the Secretary of HUD	0.9919
DLCA-Office of Congressional and Intergovernmental Affairs	0.9769
AG42-Office of Budget and Program Analysis	0.9765
HUKK-Office of Field Policy and Management	0.9698
Bottom Five Agencies (Sub-Agency Level)	**Diversity Index (Entropy)**
TR35-Office of Thrift Supervision	0.7479
EDET-Office of English Language Acquisition	0.7419
DJ03-Bureau of Prisons/Federal Prison System	0.7312
FM-Federal Mediation and Conciliation Service	0.7297
AGNA-National Appeals Division	0.6868

Figure 3.1 Representation of Race/Ethnicity by Agency
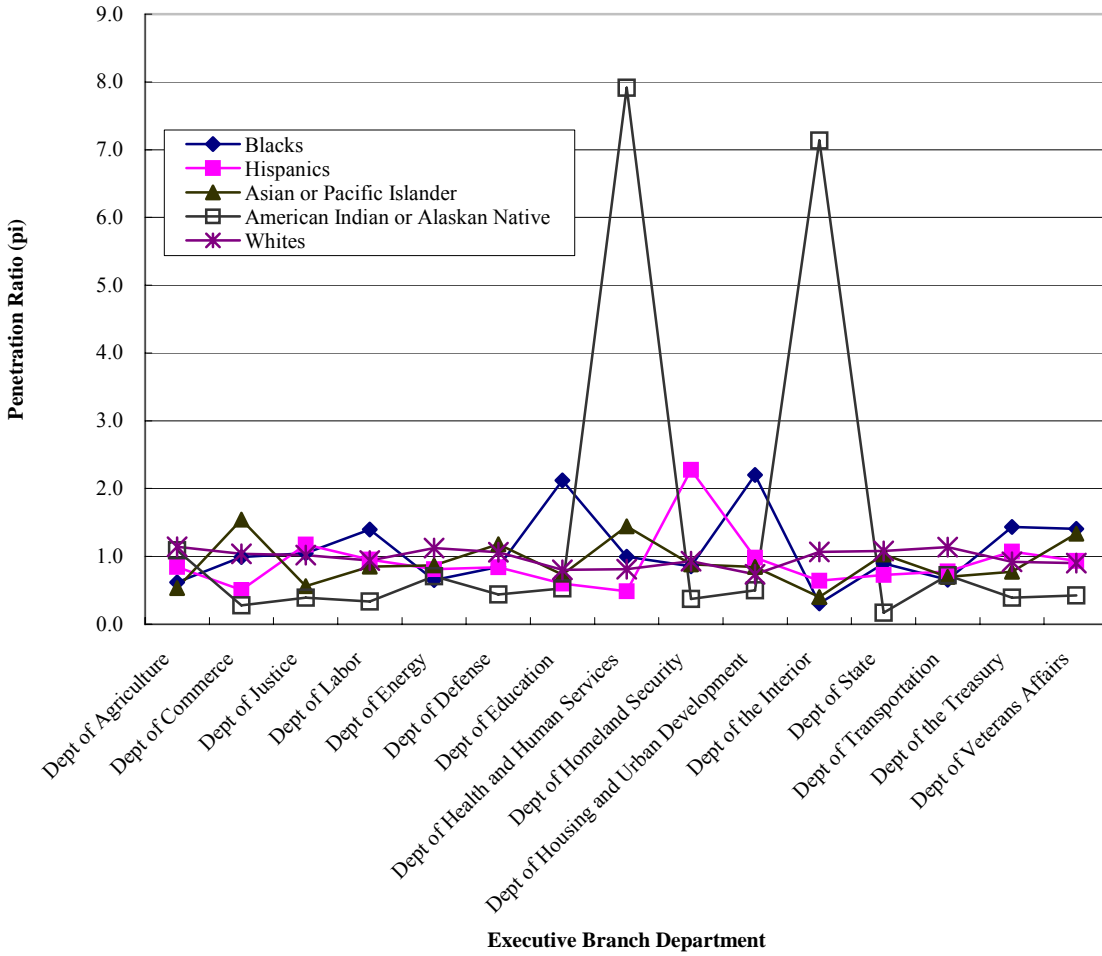
Figure 3.2 Representation of Gender by Agency
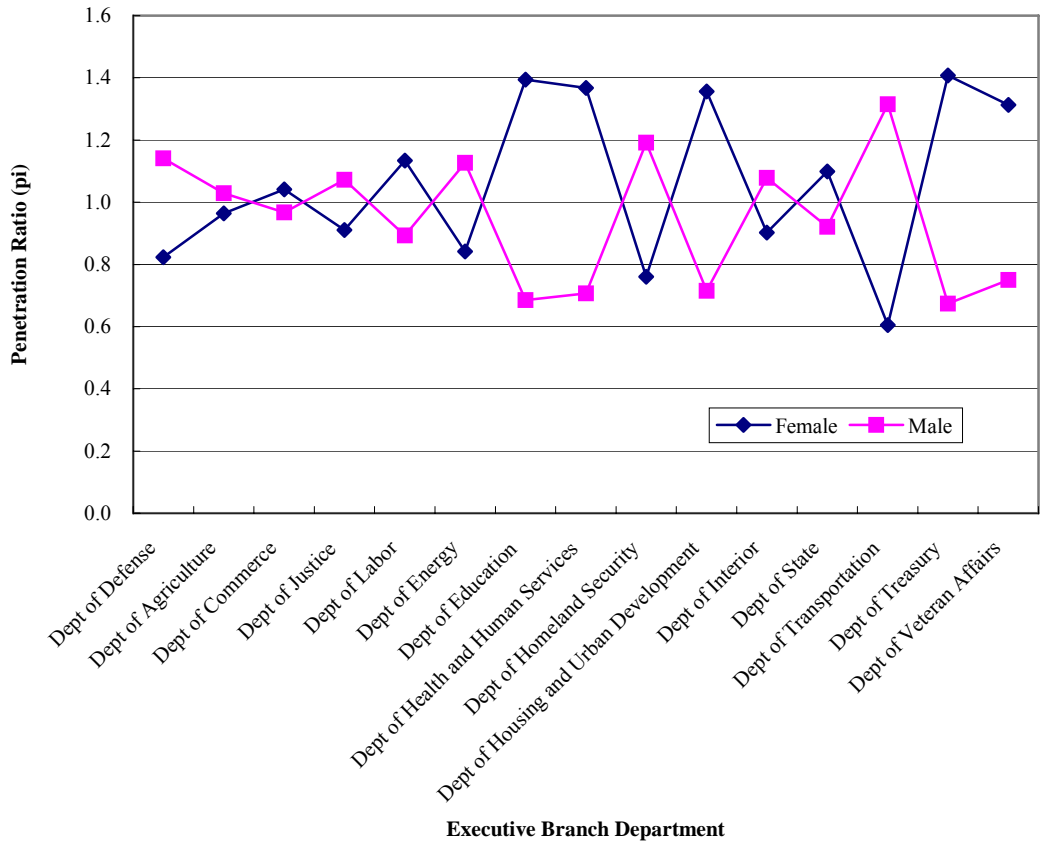
Figure 3.3 Race/Ethnicity Diversity by Pay Plan and Grade
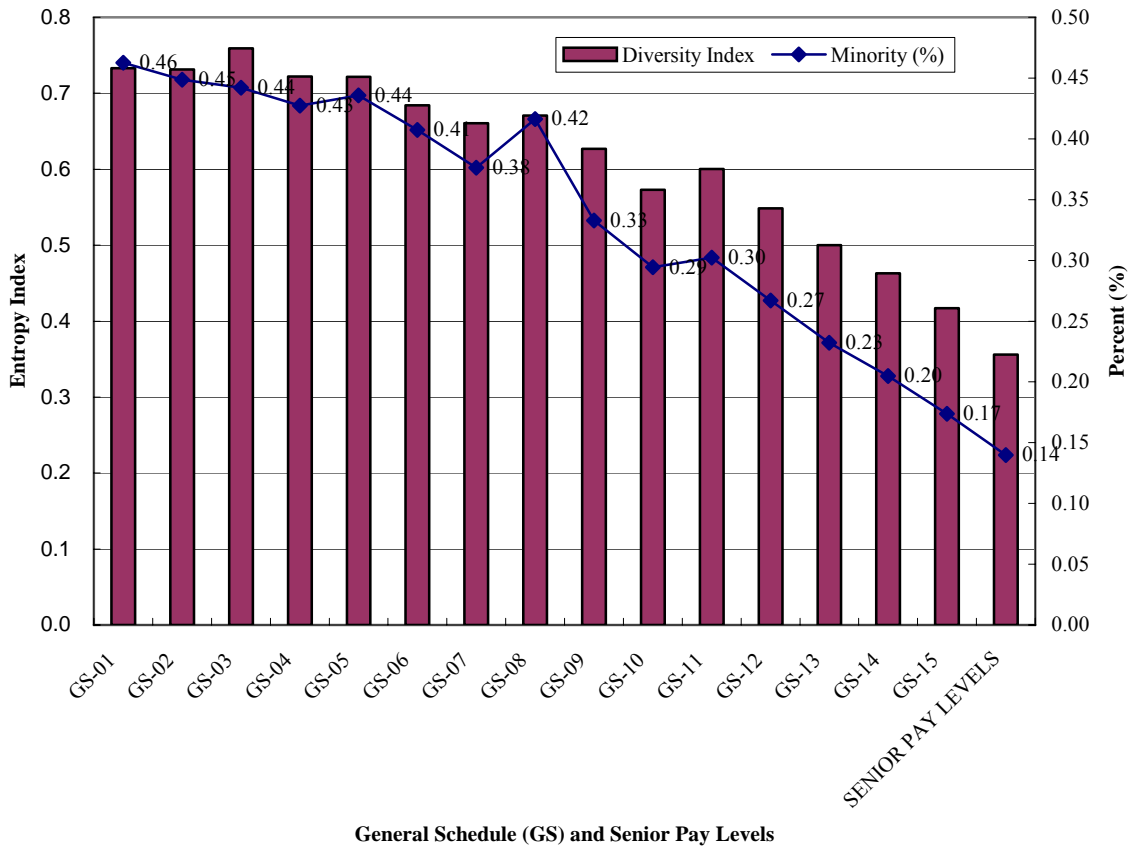
Figure 3.4 Gender Diversity by Pay Plan and Grade
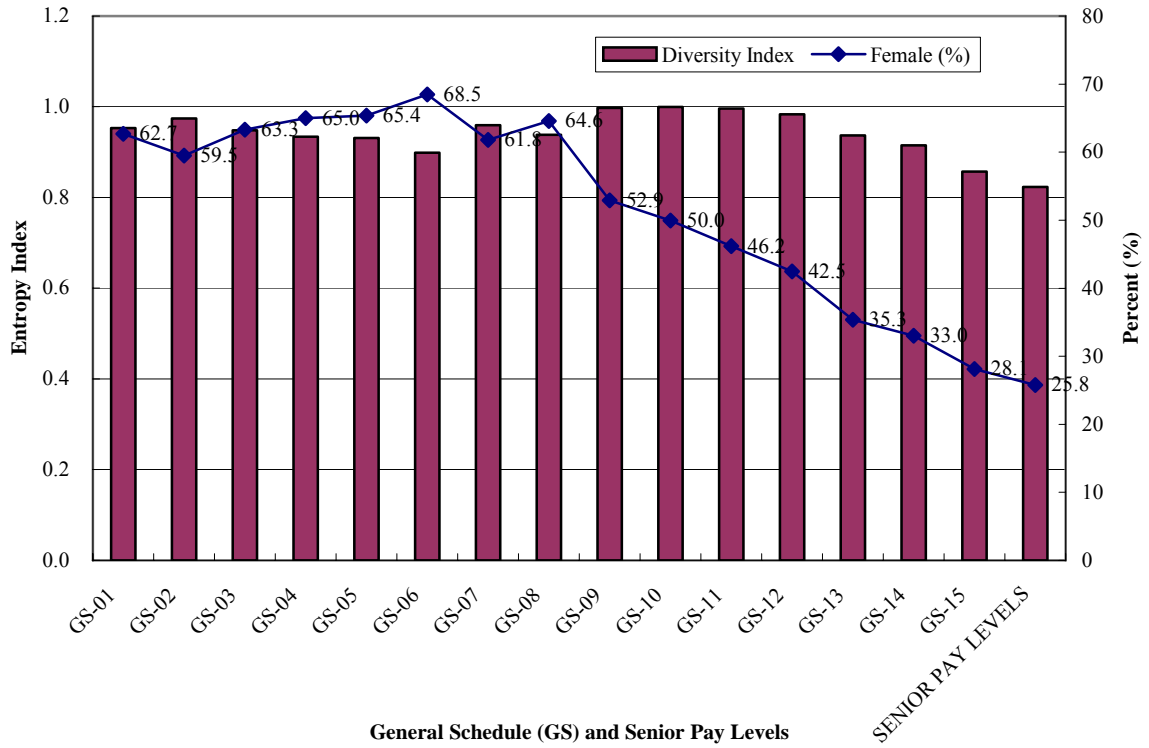
Figure 3.5 Representation of Race/Ethnicity by Pay Plan and Grade
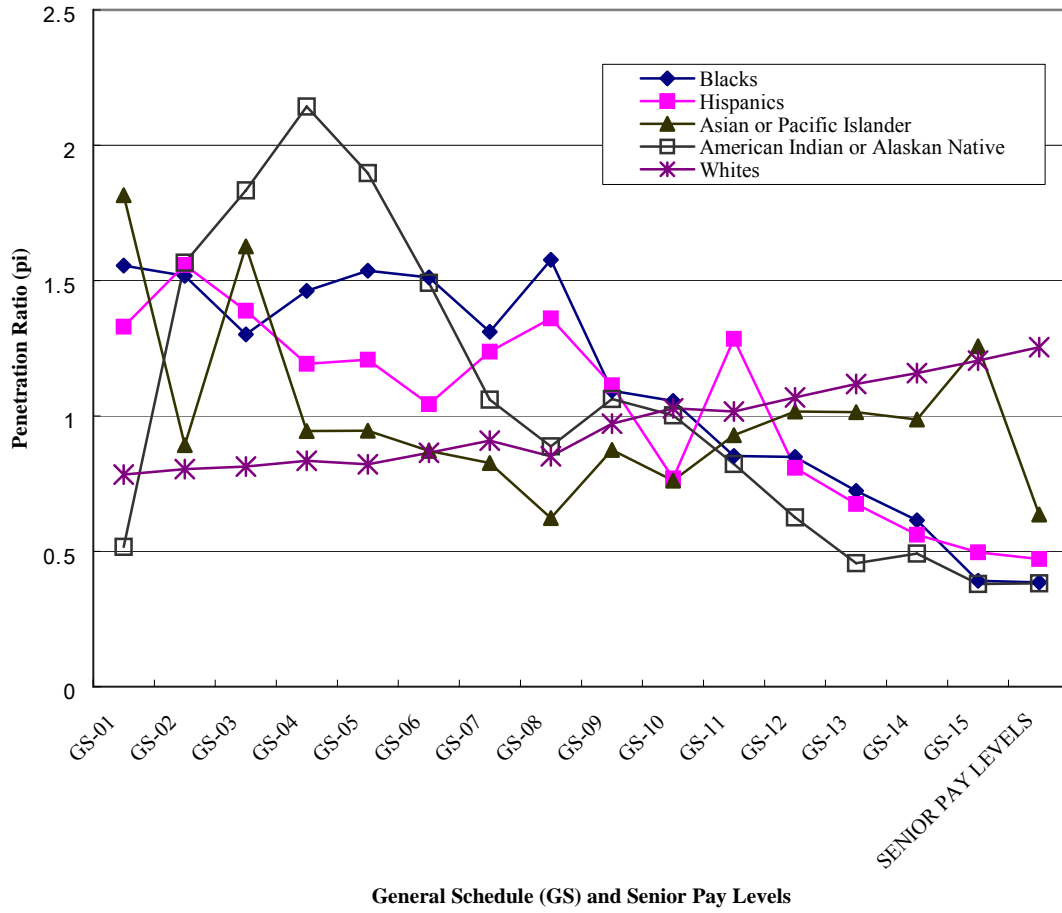
Figure 3.6 Representation of Gender by Pay Plan and Grade

Figure 3.7 Representation of Race/Ethnicity at the SES Level by Agency
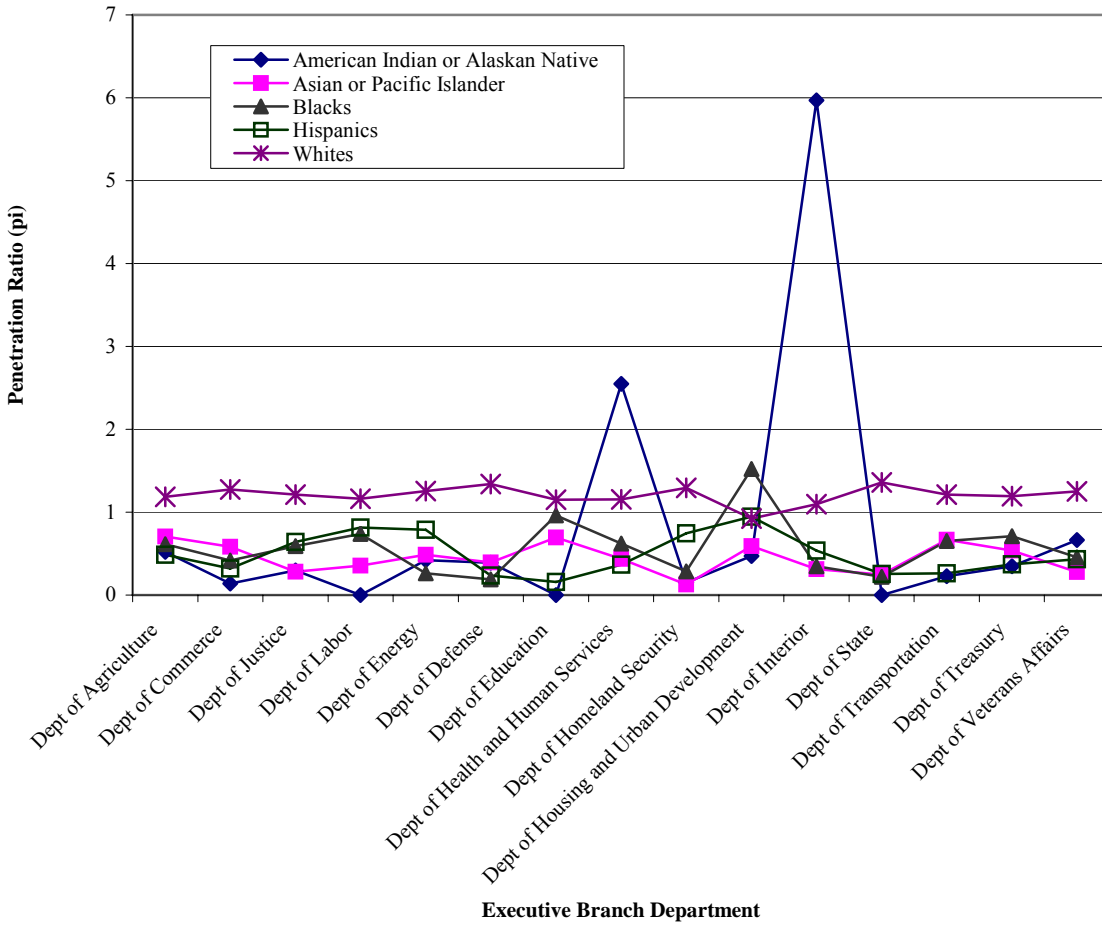
Figure 3.8 Representation of Gender at the SES Level by Agency
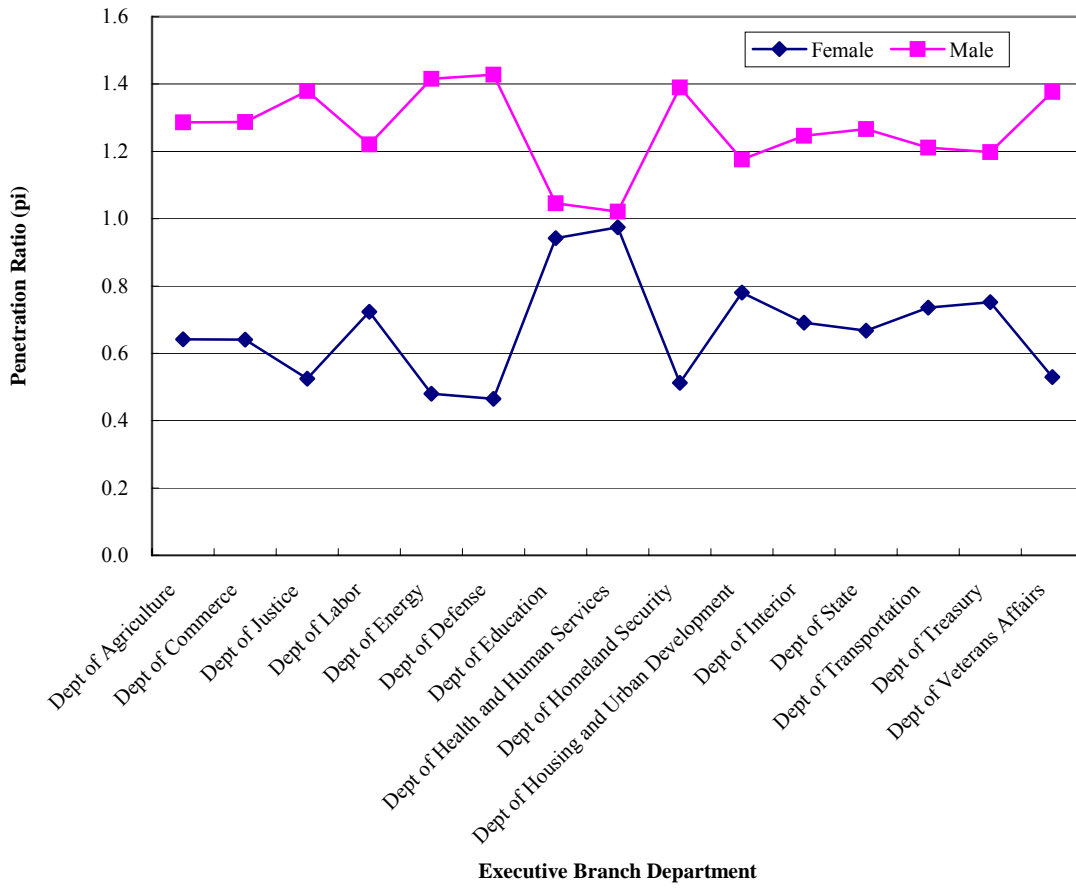
CHAPTER FOUR

DETERMINANTS OF DIVERSITY IN FEDERAL AGENCIES

As noted earlier, the U.S. federal government has played a leading role in diversifying the American workforces by recruiting people with different backgrounds. However, in recent years the rate of progress appears to have slowed down, influenced by a new political conservatism (Brewer and Selden, 2003; Button and Rienzo, 2003; Kellough, Selden, and Legge, 1997; Riccucci, 1997). In order not to lose the significant achievements made during the last half of the twentieth century, policy makers and public managers are centering their attention on what affects workforce diversity.

This chapter explores what determines the variation of employment in the federal government, using the most updated data from 291 federal agencies under the executive branch and independent agencies. The results will provide important implications for policy makers and public managers. First, I will provide the theoretical background and state hypotheses concerning predictors explaining the variation in workforce diversity. Then, I will analyze the data and report the results. In the last section, I will evaluate findings and discuss implications.

4. 1 Theoretical Framework and Hypotheses

While considerable scholarly efforts have been devoted to exploring the impacts of diversity on individual- and organizational-level outcomes, a relatively small number of studies have sought to empirically investigate the determinants of diversity in government (Brewer and Selden, 2003). Further, they appear to be concentrated on researching municipal-level

governments, while very little research has been conducted on state or federal employment (Brewer and Selden, 2003). Although there are some relevant studies on federal employment, they have focused on the aggregate analysis of the federal employee population or analyzed only the limited number of ranks across federal agencies (Kellough, 1990). Some research has examined diversity at the agency level (e.g., Kellough, 1990; Kranz, 1976; Grabosky and Rosenbloom, 1975; Nachmias and Rosenbloom, 1973); however, these studies may not provide the exact description of the current employee populations, given that diversity in the federal workforce has continuously progressed during the past several decades. Table 4.1 provides hypotheses tested in this chapter.

4. 1. 1 Type of Policy Responsibility

Organizational theorists contend that the structure and behavior of institutions is partially determined by the character of the institution (Mills, 1959), its predominant culture (Kaufman, 1976), and the characteristics of the policies they administer (Ferejohn, 1985). Lowi (1985) argued that different types of policies that agencies in government administer are associated with different sets of structures, processes, and politics which in turn result in different patterns of personnel administration of agencies. Public policy scholars, such as Lowi (1972), Meier (1993b), and Ripley and Franklin (1986), grouped agencies by three policy types – the distributive agencies, regulatory agencies, and redistributive agencies. Based on this typology of agencies by policy type, Meier (1993b), Miller, Kerr, and Reid (1999), and Newman (1994), have contributed to better understanding of how the policy types affect the levels of diversity in agencies. In addition, Cornwell and Kellough (1994) found that the social

equity oriented mission of agencies was significantly and positively associated with the rate of integration of female and minority employees in federal agencies.

Regulatory policy involves "government restrictions of individual choice to keep conduct from transcending acceptable bounds" (Meier, 1993b, p. 82). Regulatory agencies, which are in three types – the independent regulatory commission, the department regulatory agency, and the department law enforcement agency, are formulating and implementing the control policies of government by imposing legal obligations on individuals and punishing for violation (Lowi, 1985; Meier, 2000). Regulatory agencies are typically featured by the highest levels of rule boundedness, lateral entry[29], and a flat and truncated structure of hierarchy (Lowi, 1985; Newman, 1994). Given that regulatory agencies are generally associated with imposing costs on individuals, thereby resulting in the clear distinction between losers and winners (Chun and Rainey, 2005; Meier, 1985; Ripley and Franklin, 1986, 1991), they tend to have strong established administrative power, dominated by subject specialists and professionals.

Distributive agencies, as clientele agencies, are responsible for supporting and promoting the interests of their clientele (Lowi, 1981). These agencies have relatively flat hierarchies like regulatory agencies, reflecting high professional norms and subject specialization. The strong relationships between agency and clientele lead agencies to resist changes in established power and authority (Lowi, 1981), thereby make it difficult to improve the diversity of these agencies' personnel. In addition, given that the highly professionalized and specialized functions of the distributive agencies strongly demand professional norms for

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[29] Regulatory agencies tend to "favor lateral entry, that is, the recruitment of personnel from the outside directly into upper-management ranks; these lateral entrants would tend to be process and procedure specialists such as lawyers. These agencies would have a large proportion of high-ranking managers, making the hierarchy flatter and more truncated than in Weber's model of an ideal bureaucratic structure" (Lowi, 1985; Newman, 1994, p. 278).

cohesion and uniformity, the personnel of these agencies are less affected by formal legal and administrative procedures and due process requirements than is personnel in redistributive and regulatory agencies (Lowi, 1985; Miller, Kerr, and Reid, 1999), which make it difficult to recruit and employ applicants with diverse backgrounds. Consequently, these agencies mostly tend to hire subject specialists[30] with common patterns of education, rather than generalists.

Redistributive agencies include welfare, education, health and rehabilitative service, community affairs, veterans affairs, labor and employment security, and revenue (Lowi, 1985; Newman, 1994; Wright, 1988). Redistributive policies are intended to manipulate the distribution of wealth and/or rights among social classes or minority groups in society in terms of race or gender, often transferring benefits to one group at the expense of another group (Lowi, 1964; Ripley and Franklin, 1987). The policy supporting increasing diversity in the workforce (e.g., affirmative action) is an example of the redistributive policy these agencies administer (Miller, Kerr, and Reid, 1999; Newman, 1994; Wildavsky, 1979). The redistributive agencies emphasize recruitment at the lower level, low lateral entry, internal promotion through ranks to the top level, narrow spans of control, and overhead controls (Lowi, 1985; Newman, 1994). The knowledge of these agencies relies heavily on social science knowledge, a much weaker form of professional knowledge than that based on physical science and technology, different from distributive agencies (Meier, 2000).

Previously, regulatory and distributive agencies have been dominated by White male employees requiring strong authority and higher levels of professional knowledge and skills.

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[30] Subject specialists include engineers, physical or social scientists, biologists, and professions heavily dominated by White males (Corson and Paul, 1966).

This study hypothesizes that regulatory and distributive agencies have relatively lower levels of diversity, while redistributive agencies have relatively higher levels of diversity.

H_1: Regulatory agency status will be negatively related to workforce diversity.

H_2: Distributive agency status will be negatively related to workforce diversity.

H_3: Redistributive agency status will be positively related to workforce diversity.

4. 1. 2 Task Professionalization

Tasks with which federal agencies are mainly involved vary in regard to complexity and tractability (Chun and Rainey, 2005; Levine, Peters, and Thompson, 1990; Mazmanian and Sabatier, 1989). Such characteristics of agencies' tasks may influence the level of diversity of federal agencies' employee populations. In this study, task professionalization represents the levels of professionalization, difficulty, and complexity of tasks for which agencies are responsible. Highly professionalized tasks require employees with high levels of knowledge and professionalism, which can be obtained through high levels of education and training. The number of highly educated employees with professional knowledge and skills will be very limited, suggesting that it may be hard to maintain high levels of diversity in the workforce. Given that previously opportunities for higher education and training were limited to White males, it may be hard for agencies to find women or racial minorities qualified for highly professionalized tasks. On the other hand, agencies with simple and routine tasks can have a relatively larger pool of employees qualified for the tasks.

Task professionalization can be operationalized by the proportion of employees who are in the professional or administrative categories of occupation. Among five major occupational

categories,[31] professional and administrative categories of occupations are likely to require the

highest levels of professional skills and expertise. Professional occupations require "knowledge

in a field of science or learning typically acquired through education or training pertinent to the

specialized field, as distinguished from general education" (OPM, 2006, p. 246).

Administrative occupations that involve "the exercise of analytical ability, judgment, discretion,

personal responsibility, and the application of strong knowledge of principles, concepts, and

practices require a college-level general education or comparable experience" (OPM, 2006, p.

246).

> H $_4$: Agencies responsible for highly professionalized tasks will have less diversified
>
> workforces than will agencies responsible for simple and routine tasks.

4. 1. 3 Financial Dependence

Public organizations have been highly committed to enhancing diversity of the

employee populations, hiring people who were in historically discriminated groups, such as

women and racial minorities, through affirmative action and EEO programs. Consequently,

public organizations have maintained more diversified employee populations with diverse

backgrounds in terms of race/ethnicity, gender, age, and disability status than have private

organizations (Cornwell and Kellough, 1994; Foldy, 2004; Riccucci, 2002). According to

evidence, African-Americans make up over 17 percent of federal employees while they

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[31] Occupations are classified into five major categories – four white-collar occupations (professional, administrative, technical, clerical) and blue-collar occupations. These categories are defined based on "the subject of matter of work, the level of difficulty or responsibility involved, and the educational requirements of each occupation" (OPM, 2006, p.246).

comprise 12.8 percent of the U.S. population. African-Americans are 28 percent of the population of the state of Georgia, but comprise 42 percent of the state government workforce.

Scholars in public management have sought to conceptualize "publicness." Bozeman (1987) defined *publicness* as the degree of autonomy an organization exercises not constrained by external political influences. As an organization has a higher level of publicness, it will be constrained by a greater degree of political influence. Public management scholars maintain that the distinction between *public* and *private* should not be dichotomous. Bozeman (1987) argued that the public-private distinction should be a continuum rather than a dichotomy and the proportion of an organization's funding from governmental sources should be one factor that determines the level of "publicness" of the organization[32] (Chun and Rainey, 2005). On the other hand, Perry and Rainey (1988) proposed that more determinants, such as ownership, sources of funding, and the mode of social control, should be considered when measuring the "publicness" of an organization. The public-private continuum implies that even government agencies can vary in the level of "publicness," suggesting that some agencies are more "businesslike" than others (Chun, 2003, p. 36; Haque, 2001; Moe, 2001; Osborne and Plastrik, 2000). Government agencies, including federal agencies, increasingly acquire various proportions of financial resources from nongovernmental sources through market activities (Bozeman, 1987; Chun and Rainey, 2005; Dunsire et al., 1988). Considering that federal agencies belong to the U.S. federal government[33] and the availability of measurement, the

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[32] Governmental resources include allocations from legislative bodies, exclusive of funding from market-oriented activities (Chun and Rainey, 2005).

[33] "As defined in 5 U.S. Code 306 (f), U.S. federal agencies include executive departments, subdepartmental agencies, government corporations, and independent establishments, all of which are owned by the U.S. federal government" (Chun and Rainey, 2005, p. 10).

extent to which federal agencies rely on public funding will be a good indicator of publicness of federal agencies.

As mentioned previously, the more public that organizations are, the more diversified workforces they are likely to have. Various levels of federal agencies' publicness will lead to different levels of diversity of agencies' workforces. The present study assumes that federal agencies that highly dependent on funding from governmental sources tend to have higher publicness, suggesting stronger external influence by political constraints. Thus, the agency is likely to be more involved with enhancing diversity, thereby achieving highly diversified employee populations.

H $_5$: Financial dependence of a federal agency on governmental sources will be positively related to workforce diversity.

4. 1. 4 Institutional Location

Institutional location is another important factor that should be taken into account when we consider the relationship between political influence and diversity of the workforce. Institutional location represents "whether a federal agency is inside an executive department or is an independent establishment" (Chun and Rainey, 2005, p. 10). Federal agencies under an executive department will be strongly affected by political influence from strong clientele or by presidential influence. On the other hand, independent agencies are likely to maintain their independent status and have a level of autonomy insulated from strong political influence. For example, agencies under an executive department will be more strongly pressured to pursue the mission of affirmative action and EEO programs by political and presidential influences than

will independent agencies. Affirmative action and EEO have been critical missions of the U.S. government for decades. Thus, institutional location of agencies affected by strong political pressure will be associated with the level of diversity of the workforces. Agencies under an executive department will likely have higher levels of diversity in their employee populations than will independent agencies with less political pressure.

H $_6$: Institutional location with strong political influence – inside the executive department – will be positively related to workforce diversity.

4. 1. 5 Organizational Size

Some studies argue that organizational size is negatively related to diversity, noting that the larger the agencies are, the less diversified they tend to be (e.g., Grabosky and Rosenbloom, 1975; Kellough, 1990). Grabosky and Rosenbloom (1975) argued that in larger agencies the addition of each minority or female employee is less likely to affect the overall level of integration. In other words, it will be harder for larger agencies to reach the same levels of diversity as those of small agencies, since to do so, agencies should hire minorities and women in proportion to their size; in addition, the existence of a sufficiently large labor pool of minorities and women is necessary (Kellough, 1990). The location and distribution of agency positions may be an endogenous factor that affects both organizational size and diversity. Given that African-Americans comprise about 69 percent of the population of Washington, DC, smaller agencies that are more concentrated in Washington, DC, compared to larger agencies will have a higher probability of hiring African-Americans (Kellough, 1990). When the proportion of employees in Washington, DC is controlled, the effect of size may turn out

insignificant. Some scholars (e.g., Grabosky and Rosenbloom, 1975; Kellough, 1990) found a negative relationship between agency size and integration in their research. However, external validity of the findings should be more carefully investigated, given that the relationship between size and integration may be produced by the way of computing the MV index they used. This study attempts to examine if I can obtain the same results concerning the relationship between organizational size and diversity, even though I use a different measure of diversity or integration.

H $_7$: Organizational size will be negatively related to diversity.

4. 2 Data and Methods

The models of the determinants of diversity use the data drawn from the 291 federal agencies.[34] The sample includes sub-agencies under the 15 executive departments[35] and medium- and large-size independent agencies, the number of employees of which is over 100. The major sources of data include the Central Personnel Data File (CPDF)[36] and archival data of the Demographic Profile of Federal Employees, both of which were published by the U.S. Office of Personnel Management. The CPDF is an information system to support statistical

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[34] The sample includes the 291 federal agencies including subagencies of the 15 executive departments – Dept. of Agriculture, Dept. of Commerce, Dept. of Defense, Dept. of Education, Dept. of Energy, Dept. of Health and Human Services, Dept. of Homeland Security, Dept. of Housing and Urban Development, Dept. of the Interior, Dept. of Justice, Dept. of Labor, Dept. of State, Dept. of Transportation, Dept. of the Treasury, and Dept. of Veterans Affairs – and medium-size (100-999 employees) and large-size (over 1000 employees) independent agencies.

[35] The executive branch departments include all agencies except the U.S. Postal Service, Postal Rate Commission, Central Intelligence Agency, National Security Agency, Tennessee Valley Authority, White House Office, Office of the Vice President, Board of Governors of the Federal Reserve System, National Imagery and Mapping Agency, and Defense Intelligence Agency.

[36] The CPDF is composed of two primary data files – status file and dynamics file. While the status file documents the characteristics of employees at a specific point in time, the dynamic file documents personnel actions, for instance, appointments, promotions, and separations, over a period of time (OPM, 2006). The data of this study come mostly from the status file.

analysis of Federal personnel management programs. The CPDF is limited to Federal civilian

employees and covers all agencies under the executive branch except for Board of Governors

of the Federal Reserve, Central Intelligence Agency, Defense Intelligence Agency, National

Imagery and Mapping Agency, National Security Agency, Office of the Vice President, Postal

Rate Commission, Tennessee Valley Authority, U.S. Postal Service, and White House Office.

The coverage of Federal Bureau of Investigation, the Legislative Branch, and the Judicial

Branch is limited.[37] All data of the CPDF are submitted by the agencies from their own

separate personnel systems quarterly (OPM, 2006). The diversity measures of agencies were

created using information extracted from the data that represent a one-time period and were

collected in 2004**.**

Models of determinants of diversity test what explains the different levels of diversity

of federal agencies at the organizational level, using the OLS multiple regression method. For

this, each of the three attributes of diversity – race, gender, and age – is regressed on the

independent variables. Figure 4.1 describes the models.

As noted in Chapter Three, three attributes of diversity are measured using the entropy

index of diversity (or Shannon index). Previous research on diversity has employed various

attributes of diversity, such as age, education, ethnicity, gender, institutional location, job

category, national origin, supervisory status, and race. Because race and gender have been

considered as the most influential factors on an individual's attitude and values and the age

variation of federal employees is increasing,[38] this research focuses on these three dimensions

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[37] Legislative Branch coverage is limited to Government Printing Office, U.S. Tax Court, and Selected
Commissions. Judicial Branch is entirely excluded in CPDF.
[38] Previous literature has reached a consensus that race and ethnicity are possibly the most important demographic

of diversity – race, gender, and age diversity. The indexes of each agency's attributes of

diversity – race, gender, and age – are calculated through the entropy index of diversity. This

study classifies federal employees into five racial/ ethnic groups – American Indians or Alaskan

Natives, Asian or Pacific Islanders, Blacks, Hispanics, and Whites – based on the CPDF's

categorization. The gender of the federal employees includes both male and female. The age

variable is categorized into five groups – under 29, 30 to 39, 40 to 49, 50 to 59, and over 60.

4. 3 Measures

Type of Policy Responsibility.   Policy types are categorized into three groups –

regulatory, distributive, and redistributive. Scholars employed various ways to group agencies

by policy type, such as categorization by agencies' budget allocations (Cornwell and Kellough,

1994) and by agency mission described in the EEOC Form (EEO-4) (Miller, Kerr, and Reid,

1999). This study groups agencies depending on the identification provided by the previous

literature. The list of regulatory agencies in the 2006 *Congressional Quarterly's Federal*

Regulatory Directory[39] is used to identify regulatory agencies. Ripley and Franklin (1991)

identified federal agencies which administer distributive and redistributive types of policies,

based on characteristics of programs that they execute. This study assumes that while some

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characteristics for comparing bureaucratic and public representation in the United States (e.g., Cayer and Sigelman 1980; Dye and Renick 1981; Herbert 1974; Krislov 1974; Kranz 1976; Meier 1975; Meier 1993a; Nachmias and Rosenbloom 1973; Rosenbloom and Featherstonhaugh 1977; Rosenbloom and Kinnard 1977; Selden 1997; Smith 1980; Thompson 1976; Thompson 1978). Scholars have also argued that gender is an important demographic variable to be considered in the American bureaucratic setting (e.g., Cayer and Sigelman 1980; Daley 1984; Davis and West 1985; Dometrius and Sigelman 1984; Dye and Renick 1981; Hale and Kelly 1989; Kranz 1976; Krislov 1974; Meier 1975; Meier 1993c; Nachmias and Rosenbloom 1980; Rosenbloom and Kinnard 1977; Selden 1997; Smith 1980; Thompson 1978).

[39] The *Congressional Quarterly's Federal Regulatory Directory* in 2006 lists every federal agency with any regulatory policy responsibility. A total of 93 federal agencies in the sample were identified as regulatory agencies.

federal agencies have changed their names since the year the reference was published, the

policy types and programs that the agencies administer did not change much. A total of 93, 64,

and 36 federal agencies are identified as regulatory, distributive, and redistributive agencies,

respectively. 159 agencies were not classified into any of these categories. Three dummy

variables – regulatory, distributive, and redistributive agencies – were created for the three

different policy types. For the regulatory agency variable, regulatory agencies were coded as

"1" and all the others were coded as "0." For the distributive agency variable, distributive

agencies were coded as "1" and all the others were coded as "0." For the redistributive agency

variable, redistributive agencies were coded as "1" and all the others were coded as "0." These

three dichotomous variables are not mutually exclusive. It may not be possible to clearly

distinguish agencies by the type of policy, because agencies do not necessarily administer only

one type of policy and programs. Thus, some federal agencies that administer more than one

type of policy were recorded as "1" in the multiple fields of institutional policy types.

Task Professionalization. This study uses the proportion of employees in professional

and administrative occupational categories as the proxy measure of task professionalization of

an agency. According to the definition of the CPDF, professional and administrative

occupational categories require at least a college-level general education or responsible

experience. Professional occupations require professional expertise in the field of science or

specialized fields of education or training distinguished from general education.

Financial Dependence. The publicness of an agency is measured by calculating the proportion of financial resources coming from governmental sources. The financial data of federal agencies are obtained from the *Budget of the United States Government, FY 2004*. A federal agency's financial resources from nongovernmental sources can be found under the category of offsetting collections in the budget document of the U.S. government. The document defines offsetting collections as "amounts received from the public as a result of business-like or market-oriented activities" (OMB, 2006). The amount of budget from governmental sources can be calculated by subtracting the amount of offsetting collections from the gross outlay.

Institutional Location. In this study, institutional location refers to whether a federal agency is under the executive branch or has independent status. Based on the 2004 CPDF data, this variable is recorded as a dummy variable, which has a "1" when a federal agency is under the executive branch and a "0" for an independent agency.

Organizational Size. Organizational size of a federal agency is measured by calculating the natural logarithm of the number of full-time employees of the agency. The information is drawn from the CPDF in 2004.

4. 4 Results

Table 4.2 describes descriptive statistics of the variables in the determinants of diversity models. Levels of diversity are different depending on the dimension of diversity. Agencies

achieved a higher level of diversity (mean = 0.94; standard deviation = 0.12) in terms of gender

than other attributes of diversity, indicating that they are successful in balancing the proportion

of male and female employees. As shown earlier, 14 out of the 291 agencies reached a perfect

level of gender diversity. Agencies also accomplished a good level of age diversity (mean =

0.88; standard deviation = 0.05). However, the agencies' racial diversity (mean = 0.55; standard

deviation = 0.08) still remained lower than the other diversity attributes.

The three models of diversity – race, gender, and age diversity – were separately tested,

using the OLS multiple regression methods. The model fit of each of the models is good and

statistically significant. The race diversity model explains 15 percent of the variance of race

diversity in federal agencies; the gender diversity model, 18 percent of gender diversity; and

the age diversity model, 11 percent of age diversity.

Table 4.3 describes correlations of variables. To check for potential methodological

problems that may possibly affect the results of the analysis, I conducted several diagnostic

tests for normality, linearity, multicollinearity, homoskedasticity, and the existence of outliers.

The results did not indicate serious violations of the assumptions for the OLS regression,

except for several minor problems. Residual analyses detected four influential outliers in the

model of gender diversity and one in the race diversity model. Outliers in the gender diversity

model include National Sheep Industry Improvement Center (AG), Immediate Office of

Assistance Secretary for Information and Technology (VA), Immigration and Naturalization

Service (DJ), and Women's Bureau (DL). The diversity measures in terms of gender were 0, 0,

0, and 0.4138, while the mean was 0.9414. These observations were discarded. One outlier in

the race diversity model was detected. The diversity measure was 0.2076 for Bureau of the

Public Debt, while the mean value was 0.5497. One observation was removed. The variance inflation factor (VIF) test for multicollinearity revealed that only one of the VIF values was marginally higher (3.79) than the conventional cutoff of 3.5, but the others were much lower than that, suggesting that multicollinearity is not a serious concern. Not surprisingly, even after some modification the results of the analysis very slightly changed

Table 4.4 presents the results from the three regressions of diversity. The results show that organizational size is marginally, but positively associated with race (0.01, $p<.01$) and gender diversity (0.004, $p<.001$), suggesting that larger agencies tend to be more diversified and balanced in terms of race and gender. These findings do not reject H7 concerning the negative relationship between organizational size and integration in the previous literature. Thus, I cannot exclude the possibility that the impact of size on diversity may be just a mathematical artifact rather than real effect. However, an inconsistent pattern of the relationships between size and three attributes of diversity eliminate the possibility of spuriousness of the findings. Several potential interpretations can be taken into account. One possible explanation is that larger agencies may have a higher probability of hiring minority and female employees because they have a higher proportion of positions available for minorities and women than smaller ones. Further, the larger agencies may be more politically visible and pressured to observe the mission of EEO and affirmative action by stronger external influence than smaller agencies. Organizational size was not significantly related to age diversity in this study, in partial support of H7.

The findings concerning the type of an agency's policy responsibility are more complicated. Agencies that administer the regulatory policy are negatively related to race

diversity (-0.047, $p<.001$) and age diversity (-0.013, $p<.1$). In support of H1, regulatory

agencies are less diversified than non-regulatory agencies in terms of race and age, suggesting

that young White males are still overrepresented in these agencies. Agencies that administer

distributive policy are also negatively associated with race diversity (-0.044, $p<.001$), but

inversely related to age diversity (0.025, $p<.01$), in partial support of H2. In a similar way,

redistributive agencies have higher levels of race diversity (0.032, $p<.05$), while they have

lower levels of gender diversity (-0.026, $p<.05$). In sum, only race diversity supported the

relevant hypotheses, indicating that regulatory and distributive agencies are still dominated by

Whites, while redistributive agencies have more diversified employee populations in terms of

race.

Interestingly, federal agencies that conduct highly professionalized tasks (0.156,

$p<.001$) have higher levels of gender diversity; those agencies achieved well-balanced

employee populations in terms of gender. Higher levels of non-professionalized tasks, such as

technical (0.130, $p<.01$) and clerical tasks (0.117, $p<.1$), are also positively related to gender

diversity. Yet, blue-collar tasks (-0.168, $p<.1$) are negatively related to gender diversity,

suggesting that a greater proportion of those tasks goes to male employees. The results indicate

that federal agencies are more successful in balancing male and female employees than the

other two attributes of diversity across the white-collar occupations.

On the other hand, the findings with regard to the other two dimensions of diversity

require much deeper consideration. Agencies responsible for a high proportion of non-

professional tasks, such as clerical work (-0.190, $p<.1$), have lower levels of race diversity. This

finding may suggest that the clerical occupations have higher levels of minority employment.

In fact, the trend of federal employment in 2004 shows that a proportion of minorities is negatively associated with grade, steadily decreasing from 46 percent of minorities in the GS-1 to 14 percent in the senior pay levels. A level of age diversity is higher in agencies that conduct larger proportions of non-professional tasks – technical (0.071, $p<.1$) and clerical tasks (0.139, $p<.05$) – in support of H4.

Two variables associated with political visibility and influence – institutional location and financial dependence – are not as important as predictors of diversity as I had expected in this study. Institutional location, representing that the agency is either under executive branch or has independent status, is significantly related to gender and age diversity. In contrast to my expectation, agencies under the executive branch departments have slightly lower levels of gender (-0.026, $p<.01$) and age diversity (-0.015, $p<.1$). Further, financial dependence, or the level of the agency's dependence on budget from public sources, is not significantly associated with the diversity attributes in federal agencies. The results suggest that political influences may not be a significant predictor of diversity in the federal employment.

4. 5 Discussion and Conclusion

Understanding what determines diversity must be a critical issue in governments, given that they are increasingly forced to improve diversity and representation of their employee populations (Brewer and Selden, 2003; Ewoh and Elliott, 1997; Kellough, Selden, and Legge, 1997; Naff and Crum, 2000; Riccucci, 1997). Nevertheless, relatively little scholarly effort has been devoted to examining the determinants of workforce diversity. Further, much of the relevant literature tends to concentrate on investigating municipal-level government. This study

aims to fill holes in the literature by examining what determines the variation in diversity, particularly in the federal government. Rather than analyzing aggregate data of federal employees, this study investigates the relationship between the diversity level of each individual agency and relevant explanatory variables. Given that the data were collected from 291 federal agencies in 2004, the results of this study will offer an extensive and updated view on diversity and its determinants of the current federal employee populations. In this sense, this study will contribute to improving our understanding of how diversified the federal agencies are and what explains the variation of diversity in the agencies.

Surprisingly, political influence or pressure over agencies to observe the government's policy on diversity does not explain the variation of diversity in agencies to a large extent. As discussed, financial dependence is not significantly associated with diversity. Further, agencies under the executive branch departments have lower levels of gender and age diversity, countering my expectation. One possible explanation is that federal agencies may already be equally affected by the government's long-time commitment to workforce diversity, leading to the very slight variation in the levels of influence. Another explanation is that variables – financial dependence and institutional location – may not be valid measures of political influence or pressure. Future research should refine these measures to improve the validity of variables.

The type of policy responsibility the agency primarily administers is an important predictor of diversity. The regulatory and distributive agencies tend to have lower levels of race and age diversity, noting that these agencies are still overrepresented by young white males. One possible explanation is that these agencies strongly demand authority and higher levels of

expertise and professional skills, which can be obtained through higher education, but previously the access to the higher education was limited to White males.

Interestingly, gender is well balanced across the white-collar occupational categories in federal agencies. The findings suggest that as women have more opportunities to achieve higher education than in the past, they can acquire higher levels of professional skills and knowledge, increasing the probability for women to obtain professional occupations. On the other hand, the level of race diversity tends to be lower in clerical occupations, indicating that in the non-professionalized jobs minorities are overrepresented. In terms of age diversity, non-professional occupations, such as technical and clerical jobs, tend to have higher levels of diversity.

While previous studies found that organizational size is negatively associated with the level of diversity, the results of this study are somewhat different. The findings note that larger agencies have higher levels of race and gender diversity. As discussed earlier, the significant relationship between organizational size and diversity may not represent the actual effect of size on diversity. If it is true, the relationships between organizational size and the diversity attributes should have a consistent pattern. However, in this study the race and gender diversity are significantly associated with organizational size, but the age diversity is not, excluding the possibility of spuriousness of this finding.

Regardless of some interesting findings, the results do not reveal strong consistent patterns in the relationships between the three dimensions of diversity and the predictors. Previous literature examined a large array of variables, but failed to reach an agreement, noting that numerous potential variables are involved in determining the variation in workforce

diversity. This suggests that the determinants of diversity should be more carefully investigated, given the different relationships between the attributes of diversity and their predictors. Future research should take a deeper look at each of the attributes of diversity and its predictors. Although the models are statistically significant, they appear to explain only small proportions of the variation in the three dimensions of diversity. Future research should focus on exploring more valid predictors that have stronger explanatory power for the variation in diversity in the federal employment.

Figure 4. 1 Model Specification of Determinants of Diversity Model

$$RD_i = \beta_0 + \beta_1 S_i + \beta_2 P_i + \beta_3 L_i + \beta_4 R_i + \beta_5 T_i + e_i$$
$$GD_i = \beta_0 + \beta_1 S_i + \beta_2 P_i + \beta_3 L_i + \beta_4 R_i + \beta_5 T_i + e_i$$
$$AD_i = \beta_0 + \beta_1 S_i + \beta_2 P_i + \beta_3 L_i + \beta_4 R_i + \beta_5 T_i + e_i$$

RD_i = race diversity; GD_i = gender diversity; AD_i = age diversity
S_i = organizational size
P_i = financial dependence
L_i = institutional location
R_i = type of policy responsibility
T_i = task professionalization
e_i = error term

Table 4.1 Hypotheses

H_1: Regulatory agency status will be negatively related to workforce diversity.

H_2: Distributive agency status will be negatively related to workforce diversity.

H_3: Redistributive agency status will be positively related to workforce diversity.

H_4: Agencies responsible for highly professionalized tasks will have less diversified workforces than will agencies responsible for simple and routine tasks.

H_5: Financial dependence of a federal agency will be positively related to workforce diversity.

H_6: Institutional location with strong political influence – inside the executive department – will be positively related to workforce diversity.

H_7: Organizational size will be negatively related to diversity.

Table 4.2 Descriptive Statistics of Determinants of Diversity Model

	Mean	Std. Dev.	Min	Max	Unit
Race Diversity	.5497	.0797	.2076	.8352	Entropy index
Gender Diversity	.9414	.1155	0	1	Entropy index
Age Diversity	.8822	.0494	.6868	.9936	Entropy index
Size	6.5210	2.4112	0	13.3884	Natural log of the number of employees
Financial Dependence	.8505	.1531	.1815	1	Proportion of financial resources from government
Professional and Administrative	.7822	.1740	.1634	1	Proportion of employees in professional and administrative occupations
Technical	.1185	.1104	0	.83	Proportion of employees in technical occupations
Clerical	.0276	.0525	0	.5717	Proportion of employees in clerical occupations
Blue Collar	.0080	.0416	0	.5058	Proportion of employees in blue-collar occupations
Regulatory Agency	.3196	.4671	0	1	Dummy variable
Distributive Agency	.2199	.4149	0	1	Dummy variable
Redistributive Agency	.1237	.3298	0	1	Dummy variable
Institutional Location	.8247	.3808	0	1	Under the executive branch = 1; independent agency = 0

Table 4. 3 Correlations of Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Race Diversity												
2. Gender Diversity	.328**											
3. Age Diversity	.180**	.278**										
4. Regulatory	-.199**	.062	-.052									
5. Distributive	-.173**	.043	.197**	.205**								
6. Redistributive	.003	-.028	-.010	.190**	.330**							
7. Professional and Administrative	.000	.063	-.152**	-.062	-.110	.043						
8. Technical	-.021	.055	.182**	.145*	.182**	-.016	-.719**					
9. Clerical	-.089	.071	.173**	-.070	-.011	-.070	-.278**	.064				
10. Blue-collar	.055	-.095	-.016	-.055	-.037	-.033	-.411**	.104	.040			
11. Organizational Size	.069	.217**	.129*	.304**	.299**	.176**	-.497**	.400**	.117*	.056		
12. Financial Dependence	-.029	.036	-.004	-.013	.069	.114	.222**	-.067	-.128*	-.149*	-.100	
13. Executive Branch	-.051	-.117*	-.080	-.111	.114	.091	.044	.015	-.094	-.208**	-.038	.048

* Significant at .05 level

** Significant at .01 level

Table 4. 4 OLS Multiple Regression Analysis of Determinants of Diversity Model

	Dependent Variable		
	Race Diversity Coef. (Std. Err.)	Gender Diversity Coef. (Std. Err.)	Age Diversity Coef. (Std. Err.)
Organizational Size	.0077** (.0023)	.0035† (.0017)	.0009 (.0015)
Financial Dependence	-.0070 (.0291)	-.0123 (.0207)	.0036 (.0190)
Institutional Location	-.0120 (.0118)	-.0259** (.0084)	-.0147† (.0077)
Regulatory	-.0466*** (.010)	-.0073 (.0071)	-.0133† (.0065)
Distributive	-.0442** (.0115)	.0030 (.0082)	.0249** (.0075)
Redistributive	.0321* (.0143)	-.0255* (.0100)	-.0064 (.0092)
Professional and Administrative	.0268 (.0478)	.1561*** (.0347)	.0059 (.0311)
Technical	.0204 (.0612)	.1295** (.0441)	.0710† (.0399)
Clerical	-.1900† (.0885)	.1169† (.0631)	.1386† (.0577)
Blue-Collar	.0629 (.1248)	-.1680† (.0892)	-.0646 (.0812)
	F = 4.77*** R-square = .1461 N = 290	F = 5.96*** R-square = .1777 N = 287	F = 3.62*** R-square = .1146 N = 291

† Significant at .1 level

* Significant at .05 level
** Significant at .01 level
*** Significant at .001 level

CHAPTER FIVE

DIVERSITY MANAGEMENT AND ORGANIZATIONAL PERFORMANCE

This chapter aims to improve our understanding of how workforce diversity in public organizations affects organizational performance. As public organizations have more diverse employee populations, they have to face a new challenge to manage the increasingly diversified workforce effectively to have it work well together and collaborate effectively. Nevertheless, little research in public administration appears to have been devoted to exploring the impacts of diversity on organizational effectiveness and developing effective ways to manage for diversity in public organizations (Wise and Tschirhart, 2000). In this chapter, I explore how managerial efforts as well as other contextual variables moderate the relationship between diversity and organizational outcomes in public organizations. First, I will briefly review theoretical arguments on the impacts of diversity, diversity management, and other important contextual factors. Then, I statistically test the effects of diversity with regard to race, gender, and age and moderators including diversity management, organizational culture, and team processes on individual- and organizational-level outcomes. To test moderating effects, I use a hierarchical regression analysis method. Finally, I will discuss findings and implications and address future research directions.

5.1 Theoretical Background and Hypotheses

In recent years, workforce diversity and diversity management have become one of the most critical concerns increasingly discussed in the field of organizational management and

organizational behavior. The early studies of diversity placed much attention on the direct effects of diversity on individual and organizational outcomes. The findings of previous research suggest that diversity can not only provide a great opportunity for organizations, but can also be an enormous challenge (Milliken and Martins, 1996; Shaw, 1981; Tsui, Egan, and Xin, 1995). Inconsistent empirical evidence on the impacts of diversity on organizations and their members suggests that more complex relationships between diversity and its consequences may exist. Recently, diversity researchers developed more complex models to examine effects of contextual factors which may mediate or moderate the relationship between diversity and its outcomes, for example human resources practices, team processes, and organizational culture (Jackson, Joshi, and Erhardt, 2003; Kochan et al., 2003; Milliken and Martins, 1996; Williams and O'Reilly, 1998). Nevertheless, effects of many other critical variables, such as the context of public organizations and diversity management practices, and leadership, still remained untested. Table 5.1 provides hypotheses tested in this chapter.

5. 1. 1 Direct Effects of Diversity

Proponents of diversity have maintained that workforce diversity positively affects organizational effectiveness, performance, and productivity (e.g., Ely, 2004; Hambrick and Mason, 1982; McLeod and Lobel, 1992; Nemeth, 1992; Richard, 2000; Wiersema and Bantel, 1992). Ely's (2004) information and decision-making theories suggest that diversity would contribute to performance improvement, by helping to make better-quality decisions through a broader range of alternatives and new ideas (Cox, 1993; Foldy, 2004; McLeod et al., 1996; Ospina, 2001, 2003; Richard, 2000). In fact, some studies found that work teams composed of

people with different functional backgrounds tend to share information, leading to better performance than homogeneous teams (Bunderson and Sutcliffe, 2002). Further, an organization that has the higher level of heterogeneity in its belief structure is likely to face high complexity and low consensus in decision-making processes, which will improve problem-solving ability of the organization (Dutton and Duncan, 1987). In a similar vein, Katz (1982) and Weick (1969) suggest that a highly diversified team performs better than a homogeneous team in highly challenging situations.

Nevertheless, previous research reports a negative or insignificant relationship between diversity and organizational performance (e.g., Chatman and Flynn, 2001; Chatman et al., 1998; Foldy, 2004; Gladstein, 1984; Jehn, 1995; Jehn, Northcraft, and Neale, 1999). Scholars are concerned about the intrinsic problems that heterogeneous groups may experience regarding coordination, motivation, and conflict management (Gladstein, 1984; Jehn, 1995; Jehn, Northcraft, and Neale, 1999). Heterogeneous groups may experience negative social processes, such as a lack of communication or miscommunication and disabling conflict, when they are not properly managed. Consequently, diverse workgroups typically take more time and energy to accomplish tasks than homogeneous workgroups (Moos and Speisman, 1962; Schneider and Northcraft, 1999). Further, diverse groups may suffer from a lack of integration within the groups (Greenhaus, Parasuraman, and Wormly, 1990; Kanter, 1991; Miller, 1988). Previous research indicates that individuals from diverse groups commonly experience exclusion from the group's internal information networks and from important decision-making processes (Cox, 1993; Ibarra, 1993; Pettigrew and Martin, 1989). To solve these problems,

diverse groups or organizations are likely to be burdened with high costs of coordination and resolution of conflicts.

Similarity-attraction theory (Byrne, 1971) and social categorization and social identity theories (Tajfel, 1978, 1981; Turner, 1987) support negative perspectives on diversity in workgroups. The tenet underlying the similarity-attraction theory posits that people prefer similarity in their interactions (Schneider, 1987; Tsui, Egan, and O'Reilly, 1992). Individuals are more likely to feel comfortable when they are in a group composed of people they perceive as similar to them. In contrast, when individuals are in diverse groups, they tend to feel less safe and to trust each other less. Lower trust increases the possibility of conflicts within groups. Theories of selection (Chatman, 1991) and socialization (Van Maanen and Schein, 1979) view similarity in values and demographic characteristics as the essence of effective work environments (Jehn, Northcraft, and Neale, 1999).

In a similar vein, social categorization and social identity theories propose that people tend to classify themselves and others into various social categories such as social status, group affiliation, and membership of social groups (Ashforth and Mael, 2001; Tajfel, 1978, 1981; Tajfel and Turner, 1985; Turner, 1987). People in a group sharing the same social category or identity tend to draw the lines to confirm affiliation and distinguish members of their own social category from others (Billig and Tajfel, 1973; Ely, 2004; Kramer, 1991; Tajfel, 1981). Such distinction decreases interaction within or between groups composed of people from different social categories and instigates discrimination and self-segregation, resulting in conflicts and miscommunication.

In general, research supports the conclusion that greater diversity is associated with less social integration, more conflicts, and less cohesion in groups (Milliken and Martins 1996; William and O'Reilly 1998). Due to higher costs than benefits, diversity in organizations is likely to decrease organizational effectiveness.

H $_8$: Higher levels of workforce diversity will decrease organizational performance.

5. 1. 2 Effects of Diversity Management

Effective diversity management enhances the effects of diversity on organizational performance. While research has shown mixed findings about the impacts of diversity in tenure, race, and sex on organizational performance, diversity, when properly managed, may produce beneficial effects on performance (Cox, Lobel, and McLeod, 1991; O'Reilly, Williams, and Barsade, 1997). Human resource management practices and policies that promote diversity may work as a crucial contextual factor that influences the diversity-performance relationship (Jehn and Bezrukova, 2004; Richard, 2000; Richard and Johnson, 2001). Organizational cultures and managerial attitudes supporting diversity were reported to have positive effects on performance (e.g., Jehn and Bezrukova, 2004; O'Reilly, Williams, and Barsade, 1997).

The integration and learning perspective on diversity proposes that organizations should incorporate employees' diverse perspectives into the main stream of organizational tasks and benefit from an abundance of opportunities to learn from differences (Thomas and Ely, 1996). Diversity will contribute to enhancing positive organizational outcomes by providing a source of growth, learning, and intuition, but only when it is properly managed. Foldy (2004) suggests that the integration and learning perspective (Thomas and Ely, 1996, 2001) should be

connected to the generic high learning frames and behaviors (Argyris and Schon, 1996). High-learning frames and behaviors related to diversity make three important contributions – 1) high-learning frames and behaviors support the perspective that diversity is an important source of learning related to work; 2) these frames and behaviors propose that cultural diversity should be discussed openly; 3) these frames and behaviors ask every member in a group to be responsible for addressing diversity (Foldy, 2004). Both the integration and learning perspective and generic learning frames and behaviors are necessary in order for learning to occur in culturally diverse groups. These two elements interacting each other enhance the effects of diversity on organizational performance.

Numerous scholars have emphasized the important role of managers in diversity management. Thomas and Ely (1996) suggest that effective leadership will make the diversity paradigm shift to connect diversity to work effectiveness. Effective leadership encourages a diverse workforce to embody different perspectives and approaches to work valuing diverse opinions and ideas. The managers also create an organizational environment that expects higher standards of performance from every member of an organization, encourages openness for debate or conflict, stimulates employees' self-empowerment in their work, and makes employees feel valued for their skills and experiences (Thomas and Ely, 1996).

H_9: Effective diversity management will increase organizational performance.

H_{10}: Diversity management will moderate the impact of diversity on organizational performance such that, for agencies that have more effective diversity management, higher levels of diversity will increase organizational performance. For agencies that

have less effective diversity management, higher levels of diversity will decrease organizational performance.

5. 1. 3 Effect of Organizational Tenure

Pfeffer (1983, p. 323) asserted the effect of tenure on performance by noting that organizations will be most productive when employees have organizational tenure "long enough to overcome some initial naivete and learn the ropes and local practices" (Smith et al. 1994, p. 415). As diverse teams work together longer, interactions, such as teamwork and collaboration, will increase and in turn enhanced intragroup contact will reduce the negative effects of social categorization (Chatman and Flynn, 2000; Ely, 2004; Harrison et al., 2002). While over time, the negative effects of surface-level diversity, such as demographic differences, fade away and become less important, members in a group tend to reduce prejudices and stereotypic thoughts related to differences. In a similar vein, Katz (1982) argued that longer organizational tenure stabilizes the organization, reducing goal conflicts. Decreased negative effects of diversity imply that organizations can invest more time and efforts in the improvement of organizational performance, while saving resources for coordination, conflict management, and control.

H_{11}: Longer organizational tenure will increase organizational performance.

H_{12}: Organizational tenure will moderate the impact of diversity on organizational performance such that, for agencies that have longer average tenure of employees, higher levels of diversity will increase organizational performance and for agencies that

have shorter average tenure, higher levels of diversity will decrease organizational

performance.

5. 1. 4 Effect of Team Processes

Given that individual differences may lead to dysfunctional levels of conflict, it is

necessary to develop ways to counteract these potential negative effects of diversity. Relational

conflicts, when not properly treated, may not only negatively affect team performance, but also

decrease satisfaction of team members (De Dreu and Weingart 2003). Previous research

suggests team processes may moderate the relationship between diversity and relational

conflict in the way that cooperation and communication among team members mitigate the

negative effect of diversity on relational conflicts (e.g., Ely 2004; Mohammed and Angell

2004). Team processes can contribute to reducing organizational costs of coordination and

conflict resolution. Mohammed and Angell (2004, p. 1021) argue that "team processes also

capture the types of interaction that occur between team members during goal accomplishment

(Marks, Mathieu, and Zaccaro 2001) and the synergistic combination of individual efforts to

collective outcomes (Kozlowski and Bell 2003)." On the other hand, in general diverse groups

wherein members do not work well together may produce poor performance (Chatman et al.

1998). This study expects that team processes will moderate the potential negative effects of

diversity on organizational performance, by reducing relational conflicts in diversified

workgroups.

H $_{13}$: Team processes will increase organizational performance.

H $_{14}$: Team processes will moderate the impact of diversity on organizational performance such that, for agencies that have more effective team processes, diversity will increase organizational performance. For agencies that have less team processes, diversity will decrease organizational performance.

5. 1. 5 Effect of Organizational Culture

Organizational culture is defined as "a common set of shared meanings or understandings about an organization (e.g., shared standard operating procedures, strongly held values, and norms about patterns of group members' behaviors)" (Chatman and Jehn 1994; Jehn and Bezrukova 2004, p. 705-706; Reichers and Schneider 1990; Rousseau 1990; Triandis and Suh 2002). Organizational culture may affect the relationship between diversity and performance, by imbuing group members with the organization's perspectives on diversity and reinforcing them (Jehn and Bezrukova 2004; O'Reilly and Chatman 1996).

Result-oriented organizational culture emphasizes individual accomplishment, usually leading to high competition among members in the organization. High competition may prevent individuals from working efficiently due to detrimental tensions, leading to accumulated inefficiency of the organization as a whole (Mannix, Thatcher, and Jehn 2001; Tsui et al. 1992). Furthermore, the organization may lose great opportunities to benefit from cooperation and integration due to such competitive culture. Members of diverse groups with competition-oriented cultures are more likely to perceive differences among each other and consider heterogeneity to decrease organizational effectiveness. Thus, diversity in result-oriented organizational culture may decrease organizational performance.

H $_{15}$: Result-oriented organizational culture will increase organizational performance.

H $_{16}$: Result-oriented organizational culture will moderate the impact of diversity on organizational performance such that, for agencies that emphasize result-oriented culture, diversity will decrease organizational performance.

5. 2 Data and Methods

The present study uses data drawn from two major sources, which include Central Personnel Data File (CPDF) and 2004 Federal Human Capital Survey (FHCS), both of which were published by U.S. Office of Personnel Management. The Central Personnel Data File is an information system to support statistical analysis of federal personnel management programs. This study extracted 2004 employees' demographic data for the target agencies of the federal government. CPDF is limited to Federal civilian employees and covers all agencies under the executive branch except for Board of Governors of the Federal Reserve, Central Intelligence Agency, Defense Intelligence Agency, National Imagery and Mapping Agency, National Security Agency, Office of the Vice President, Postal Rate Commission, Tennessee Valley Authority, U.S. Postal Service, and White House Office. The coverage of Federal Bureau of Investigation, the Legislative Branch, and the Judicial Branch is limited. All data of CPDF are submitted by the agencies from their own separate personnel systems quarterly (OPM, 2006). The diversity measures of these agencies were created using information extracted from CPDF and archival data published by OPM in the period of 2004. Index variables were developed using the questionnaire of 2004 FHCS. A total of 67 sub-agencies

under the executive branch and independent agencies participated in 2004 FHCS and

approximately 150,000 employees hired in the federal government responded to the survey.

A series of hierarchical regressions is employed to test a model. Moderated Multiple

Regression or MMR involves hierarchical regression that first tests the relationship of the

predictors (independent variables) of interest on the criterion variable (dependent variable) and

secondly tests the relationship of a term that carries information about both predictors (the

interaction term). The "hierarchical" form of regression indicates that predictors are not entered

into the regression equation heuristic simultaneously, but in a logical order. Typically, the

continuous predictor and the polychotomous predictor are entered in the first step, and the

interaction term is entered in the second step (Aiken and West, 1991). In addition, researchers

decide how many predictors to enter and the order in which they are entered. Determining the

order of entry is based on logical or theoretical considerations. The present study uses this

hierarchical procedure for purposes of assessing the importance of the independents. F-tests are

used to compute the significance of each added variable (or set of variables) to the explanation

reflected in R-square (Garson, 1998). This study tests the main and interaction effects of

diversity and diversity management on organizational performance using this method. Some

researchers pointed out that larger correlations between predictors yield great degree of

multicollinearity, leading to the unreliable interpretation of the interaction terms (Cortina 1993;

Lubinski and Humphreys 1990). When the predictors are highly correlated, a statistically

significant interaction term is significant because of a nonlinear multiplicative effect and not

because of a linear multiplicative effect.[40] Nevertheless, Table 5.3 shows that correlations between predictors that compose interaction terms are not substantially high, suggesting that multicollinearity related to interaction terms may not be a critical problem in this model.

The model of diversity and organizational performance categorizes the independent variables into eight sets and enter them in the following order: demographic control variables (Step 1); the main effects of diversity (Step2); the main effects of diversity management (Step 3); the main effects of team processes and organizational culture (Step 4); the moderating effects of diversity management (Step 5); the moderating effects of tenure (Step 6); the moderating effects of team processes (Step 7); and the moderating effects of organizational culture (Step 8). Figure 5.1 describes the model of organizational performance.

5. 3 Measures

Diversity. Table 5.2 provides descriptive statistics of measures. The measures of three attributes of diversity of the 67 agencies – race, gender, and age – are calculated through the entropy index of diversity. This study classifies federal employees into five racial/ ethnic groups – American Indian or Alaskan Native, Asian or Pacific Islander, Blacks, Hispanics, and Whites – based on the CPDF's categorization. Gender of federal employees is composed of two groups – male and female. The age variable is categorized into five groups – under 29; 30 to 39; 40 to 49; 50 to 59; over 60.

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[40] Specifically, the significance of their interaction term regression weights may be due only to the overlap between the interaction terms and untested, but significant, nonlinear trends and not to an actual interaction between the variables.

Organizational performance. Organizational performance is measured based on employees' perception of organizational performance. A measure of perceived organizational performance was developed by using principal components factor analysis, rotated through varimax rotation. Four survey questions are included, about the overall quality of work, organizational performance, managerial capability, and job-relevant resource and skills. Respondents rated these four questions on a Likert-scale from 1 (strongly disagree or very poor) to 5 (strongly agree or very good). Factor loadings range between 0.715 and 0.794. The scale's eigenvalue is 2.280 and cronbach's alpha is 0.738.

Diversity Management. Very few measures have evaluated the quality of diversity management in organizations. Naff and Kellough (2003) developed the measure of diversity management by combining questions from the NPR survey about agency diversity management programs. The measure assessed four components of federal agencies' diversity programs that include diversity training, internal communications, accountability, resource commitments, and the scope of programs (Naff and Kellough, 2003). Given that it is necessary that agencies should have appropriate programs and activities to manage diverse work groups to work well together, Naff and Kellough's (2003) work provides a good measure of the quality of diversity management. However, it does not appear to capture some important aspects of diversity management such as the impacts of managerial leadership and commitment that promotes diversity in agencies and an organizational atmosphere that values diversity properly.

The present study measures diversity management in two ways. One way is to measure diversity management of agencies depending on employees' perception. This study develops an

index variable through factor analysis, utilizing three survey questions extracted from 2004

FHCS, which ask about managerial capacity to manage diversity, commitment to diversity, and

policies and practices to promote diversity. For specific questions, refer to Appendix. Principal

component factor analysis and varimax rotation produce a single factor on which these three

items loaded. The initial eigenvalue of the scale is 2.308 and the cronbach's alpha is 0.850.

Factor loadings range between 0.868 and 0.886.

The other way of measuring diversity management is to refer to the number of EEO

complaints reported in an agency as a proxy measure of diversity management. Under the

Notification and Federal Employee Anti-discrimination and Retaliation (No FEAR) Act of

2002,[41] every federal agency is required to report complaints about violations of anti-

discrimination and whistleblower protection laws quarterly. Under Section 301 of the No Fear

Act, each federal agency must post summary statistical data pertaining to complaints of

employment discrimination filed against it by employees, former employees and applicants for

employment under 29 C.F.R. Part 1614 (U.S. Equal Employment Opportunity Commission,

2005). This study assumes that effectiveness of diversity management of an agency might be

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[41] On May 15, 2002, President Bush signed the Notification and Federal Employee Anti-discrimination and Retaliation of 2002 (No FEAR) Act into law. The No Fear Act, with an effective date of October 1, 2003, requires that Federal agencies be more accountable for violations of anti-discrimination and whistleblower protection laws. The Act requires that each Federal agency post quarterly on its public Web site, certain statistical data relating to Federal sector equal employment opportunity complaints filed with such agency and for other purposes (Departmental Office of Civil Rights, U.S. Department of Transportation, 2005). Under the Act, every federal agency is required to notify employees and applicants for employment about their rights under the discrimination and whistleblower laws; to post statistical data relating to Federal sector equal employment opportunity complaints on its public website; to ensure that their managers have adequate training in the management of a diverse workforce, early and alternative conflict resolution, and essential communications skills; to conduct studies on the trends and causes of complaints of discrimination; implement new measures to improve the complaint process and the work environment; to initiate timely and appropriate discipline against employees who engage in misconduct related to discrimination or reprisal; to reimburse the Judgment Fund for any discrimination and whistleblower related settlements or judgments reach in Federal court; and to produce annual reports of status and progress to Congress, the Attorney General and the U.S. Equal Employment Commission (Congressional Record, 2001).

negatively related to the number of complaints reported by the agency, suggesting that the smaller number of EEO complaints represents more effective diversity management of the agency. However, it is also plausible that more complaints may represent better management of diversity. When diversity issues are highly salient concerns to agencies, they tend to be more sensitive to those concerns, thereby making employees feel more comfortable in reporting their complaints to the agencies' EEO offices. Given that this measure provides a more specific description of employees' reactions to agencies' diversity management practices than do measures developed based on survey questions, it is meaningful as a complementary measure of perceived diversity management. The data come from the 2004 annual report posted on each agency's public web site. The measure is developed by dividing the number of EEO complaints by organizational size.

Organizational Culture. This study focuses on result-oriented cultures of federal agencies. Result-oriented organizational culture emphasizes performance and productivity of employees in workgroups by rewarding high performance and penalizing poor performance. The survey items were rated on a Likert-scale from "1" (strongly disagree) to "5" (strongly agree). They inquire about merit-based promotions, rewards or penalty for performance, performance evaluation, and merit-based personnel decisions. These eight items are integrated into a single factor, with factor loadings between 0.685 and 0.888, through principal factor analysis and varimax rotation. The initial eigenvalue of the scale is 5.736 and the cronbach's alpha is 0.942.

Team Processes. This variable measures cooperation and communication in work units. Two questions which ask about employees' cooperation to get the job done in workgroups and information and knowledge sharing among employees through communication were rated on a 5-scale Likert. These items are also integrated into one index variable through factor analysis. The initial eigenvalue is 1.462 and the cronbach's alpha is 0.626.

Average Tenure. Average tenure represents the average tenure of full-time employees hired in an agency. This variable is measured by agency based on the 2004 CPDF. The mean average tenure of federal agencies is 15.1 years, ranging between 7.9 and 22.6 years.

Demographic Variables. Demographic variables including gender, minority, and supervisory status are recorded as dummy variables in order to control their effects on dependent variables. The findings of previous research show that differences in terms of gender, minority status, and supervisory status significantly affect perception on organizational performance. Thus, the present study controls the impacts of these demographic characteristics of respondents on dependent variables. The gender variable is recorded as a "1" when a respondent is a female and is recorded as a "0" when a respondent is a male. The minority variable is recorded as a "0" when a respondent is a white male or a white female and is recorded as a "1" when a respondent is neither a white male nor a white female. The CPDF defines American Indian or Alaskan Native, Asian or Pacific Islander, Black (not of Hispanic origin), and Hispanic as the minority race/ national origin groups for Federal statistics and program administrative reporting (OPM, 2006). The supervisory status is classified into two

types – supervisor or manager and executive. These two types of supervisory status are developed as two dummy variables. When a respondent is a supervisor or a manager, the supervisor variable is recorded as a "1" and when a respondent is an executive, the executive variable is recorded as a "1." Otherwise, it is recorded as a "0."

5. 4 Results

The main effects of diversity, diversity management, and other contextual variables and moderating effects on organizational performance were examined through eight steps of a hierarchical regression analysis. The model fit of each of the eight blocks is significantly good and a total of fifty-seven percent is explained by the complete model. To check for potential methodological problems, I conducted several diagnostic tests for normality, linearity, multicollinearity, homoskedasticity, and the existence of outliers. The results did not indicate serious violations of the assumptions for the OLS regression, except for one minor problem. Residual analyses detected one outlier, but it does not appear to influence the relationship significantly. Table 5.3 describes the correlations of variables. The largest correlation is 0.66, the average and median correlations are 0.03 and 0.01, respectively, suggesting that the multicollinearity is not a serious concern in this analysis. The variance inflation factor (VIF) test for multicollinearity revealed that the largest VIF value and the average were 1.95 and 1.40 respectively, much lower than the typical cutoff point of 3.5.

Table 5.4 presents the results of the hierarchical regression analysis. The first step tests the effects of demographic control variables on perceived organizational performance. Female employees, supervisors, and senior executive service (SES) members are positively related to

organizational performance, while minorities are negatively related to organizational performance. The second step examines the direct effects of the three diversity attributes – race, gender, and age – on organizational performance. The result shows that race diversity is negatively related to organizational performance in support of H 8, while gender diversity is positively related to organizational performance. The effect of age diversity on organizational performance was not significant. The third step includes the effects of the two measures of diversity management – perceived diversity management and EEO complaints. These two measures are negatively related to each other. Higher levels of perceived diversity management indicate that the agency manages workforce diversity more effectively, while higher levels of EEO complaints reported to the agency's EEO office mean that the agency manages diversity less effectively. Supporting H 9, perceived diversity management ($0.578, p<.01$) is positively related to organizational performance, while EEO complaints ($-0.031, p<.01$) are negatively related to organizational performance. The fourth step examines the effects of team processes ($0.367, p<.01$) and result-oriented organizational culture ($0.378, p<.01$) on organizational performance and the results show that they are positively related to organizational performance in support of H 13 and H 15.

The four steps from step 5 to step 8 test moderating effects of four contextual variables that include diversity management practices, organizational tenure, team processes, and result-oriented organizational culture. The results of the moderating effects of diversity management appear to be complicated to interpret. The interaction of perceived diversity management and race diversity ($0.126, p <.01$) had a significant positive association with organizational performance. In the agency that effectively manages diversity, race diversity will improve

organizational performance, suggesting that although higher levels of race diversity will be negatively related to organizational performance, when they are managed effectively they will turn their negative effects on organizational performance into positive. On the other hand, the interactions of perceived diversity management and the other two types of diversity are found to be insignificant, in partial support of H 10. H 10 also proposed that the effects of EEO complaints moderate the relationships between the attributes of diversity and organizational performance in the way that less effective diversity management will enhance the negative effects of diversity on organizational performance. Interestingly, in the agency with higher levels of EEO complaints, representing poor management of diversity, higher levels of gender diversity had a positive association with organizational performance (0.845, $p < .01$), while race and age diversity were negatively related to performance (-0.523, $p < .01$ and -1.344, $p < .01$, respectively).

The interaction effects of organizational tenure and diversity also show mixed results. H 12 predicted that the interaction of organizational tenure and diversity would have a positive association with organizational performance. However, the results show that the interaction of organizational tenure and race diversity (-0.061, $p < .01$) was negatively associated with organizational performance, suggesting that higher levels of race diversity will decrease organizational performance when employees of the agency have longer organizational tenure. In contrast, higher levels of gender diversity tend to increase organizational performance when the employees worked together longer. The interaction of tenure and age diversity was not significant. H 14 predicted that interactions of team processes and the three attributes of diversity would have positive associations with organizational performance. Team processes

show a similar pattern of moderating effects to that of perceived diversity management. The interaction of team processes and race diversity had a slightly positive association with organizational performance (0.081, $p < .01$). In the agency effectively practicing teamwork and cooperation among members in work groups, higher levels of race diversity increased organizational performance. However, the moderating effects of team processes did not significantly affect the relationships between gender and age diversity and organizational performance. H 16 proposed that organizational culture should negatively moderate the relationship between diversity and organizational performance. However, interactions of organizational culture and the three types of diversity were mixed, positively associated with organizational performance or insignificant. In the agency that emphasizes the performance and productivity of members, higher levels of age diversity increased organizational performance (0.361, $p < .01$), while interactions of organizational culture and race and gender diversity were found to be insignificant.

5. 5 Discussion and Conclusion

Workforce diversity has often been believed to cause high costs for conflict resolution and coordination, thus decreasing organizational effectiveness. This study aims to examine the validity of such expectations by exploring not only the main impacts of diversity but also potential moderating effects of contextual factors on organizational performance. While previous literature focused primarily on the direct effects of various diversity attributes, this study devoted more attention to the moderating effects of contextual variables affecting the relationships between diversity and organizational performance. Recent research has

emphasized the importance of contextual variables for understanding impacts of diversity on organizational outcomes (Jackson, Joshi, and Erhardt, 2003; Kochan et al., 2003; Milliken and Martins, 1996; Williams and O'Reilly, 1998). The most promising findings of this study may be that the impact of workforce diversity on organizational outcomes goes well beyond simple direct effects. The results suggest that various contextual variables significantly affect the relationship between diversity and organizational performance. In this sense, this study will help to improve our understanding of how diversity affects organizational outcomes in real workplaces beyond laboratory settings, pointing out that the relationships between diversity and organizational effectiveness are affected by multiple interrelated factors.

The findings suggest that the main effects of diversity may vary according to attributes of diversity. Higher levels of race diversity decreased organizational performance, while higher levels of gender diversity increased organizational performance. One possible interpretation for the effect of gender diversity is that the bicategorical nature of gender may lead to less conflicts than do other attributes of diversity, boosting positive effects of diversity on organizational performance over negative impacts (Pelled, Eisenhardt, and Xin, 1999). The higher level of gender diversity implies the more balanced distribution of male and female employees in the agency, leading to more frequent interactions with similar others, especially in case of female employees, and possibly reducing conflicts (Pelled, Eisenhardt, and Xin, 1999). Another possibility is that gender diversity may be a less sensitive or less visible issue in workgroups, thereby requiring small costs of conflict resolution or coordination. On the other hand, workgroups with higher levels of race diversity may experience more conflicts due to complicated differences in observable or cultural differences.

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The most interesting findings of this study are the moderating effects of diversity management on the relationship between diversity and organizational performance. Although policy makers and public managers may understand the importance of workforce diversity very well, they may not notice that effective management practices can increase or decrease the impacts of diversity on organizational performance. This study examined the effects of diversity management, developing two measures – a subjective measure and an objective measure. Even though the results of these two measures did not exactly match each other, but the pattern of the impacts appear to be consistent. The findings suggest that the effects of diversity management can enhance or even reverse the main impacts of diversity on organizational outcomes. For example, when the agency managed race diversity effectively, higher levels of race diversity improved organizational performance. In contrast, higher levels of race diversity, in the agency that was not successful in managing diversity, significantly decreased the agency's performance. Similarly, when the agency manages diversity poorly, higher levels of age diversity decreased organizational performance. On the other hand, the interaction of diversity management and gender diversity and its impact on organizational appear to be more complicated to interpret. In agencies that poorly manage gender diversity, higher levels of gender diversity increased organizational performance. We may interpret the finding in this way. Gender diversity may not cause high costs of conflict resolution and coordination for organizations, thereby not requiring much managerial capacity or efforts for diversity. Positive effects of gender diversity may cancel out the costs or negative effects of diversity, eventually resulting in benefits for the organizations. Even though this study did not find consistent patterns of the impact of diversity management and gender and age diversity, it

provides important implications for public managers and policy makers given that race diversity has been one of the most critical concerns in federal employment.

The findings concerning effects of other contextual factors are also interesting. The moderating effects of organizational tenure were significant, but only slightly affected the relationship between diversity and performance. When employees worked together longer, higher levels of gender diversity increased performance, but race diversity decreased performance. It suggests that the effects of organizational tenure do not much affect the relationship between diversity and performance in this study, although other studies have found significant moderating effects of organizational tenure on diversity and organizational effectiveness (e.g., Chatman and Flynn, 2000; Ely, 2004; Harrison et al., 2002; McNeill and Thompson, 1971; Smith et al., 1994).

In a similar vein, team processes also appear to have marginal moderating effects on the relationship between diversity and performance. Even so, race diversity significantly improved performance in the agency that encourages teamwork and cooperation among employees. Workgroups highly diversified in terms of race may suffer from the lack of communication and exclusion of minorities from the main stream of interactions. Team processes that encourage frequent interactions and communication among members may reduce such problems and increase positive effects of race diversity on organizational performance. However, interactions of team processes and gender and age diversity were not significantly associated with organizational performance in this study.

The findings regarding result-oriented organizational culture partially supported our expectation. Only the age diversity had a positive association with performance in the agency

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that emphasized the performance and productivity of employees. As discussed earlier, result-oriented organizational culture tends to promote high competition among members in workgroups, leading to high conflicts. Age may be closely associated with career progress and members in workgroups are more likely to compete with others in their age group (Lawrence, 1988; Pelled, Eisenhardt, and Xin, 1999). Therefore, higher levels of age diversity in the agency that emphasizes result-oriented culture may increase organizational performance, reducing competition and conflicts among employees.

This investigation has been devoted primarily to exploring the moderating effects of various contextual factors on diversity and organizational performance. Even though the results partially supported our hypotheses, they will provide important implications for public managers and policy makers in the public sector. This study suggests potential avenues for future research. One will be research on impacts of diversity and moderators on other organizational outcomes, for example, the psychological well-being of employees in highly diversified work environments. The research will be important given that employees' welfare in their workplace will be significantly related to organizational effectiveness and performance. Another possibility will be related to potential effects of mediating variables between diversity and organizational outcomes. Exploring the mediating effects will contribute to improving our understanding of the relationship between diversity and organizational effectiveness.

Figure 5.1 Model Specification of Diversity and Organizational Performance Model

Step 1: $P_i = \beta_0 + \beta_1 C_i + e_i$
Step 2: $P_i = \beta_0 + \beta_1 C_i + \beta_2 D_i + e_i$
Step 3: $P_i = \beta_0 + \beta_1 C_i + \beta_2 D_i + \beta_3 M_i + \beta_4 E_i + e_i$
Step 4: $P_i = \beta_0 + \beta_1 C_i + \beta_2 D_i + \beta_3 M_i + \beta_4 E_i + \beta_5 T_i + \beta_6 R_i + e_i$
Step 5: $P_i = \beta_0 + \beta_1 C_i + \beta_2 D_i + \beta_3 M_i + \beta_4 E_i + \beta_5 T_i + \beta_6 R_i + \beta_7 D_i*M_i + \beta_8 D_i*E_i + e_i$
Step 6: $P_i = \beta_0 + \beta_1 C_i + \beta_2 D_i + \beta_3 M_i + \beta_4 E_i + \beta_5 T_i + \beta_6 R_i + \beta_7 D_i*M_i + \beta_8 D_i*E_i + \beta_9 D_i*A_i + e_i$
Step 7: $P_i = \beta_0 + \beta_1 C_i + \beta_2 D_i + \beta_3 M_i + \beta_4 E_i + \beta_5 T_i + \beta_6 R_i + \beta_7 D_i*M_i + \beta_8 D_i*E_i + \beta_9 D_i*A_i +$
$\beta_{10} D_i*T_i + e_i$
Step 8: $P_i = \beta_0 + \beta_1 C_i + \beta_2 D_i + \beta_3 M_i + \beta_4 E_i + \beta_5 T_i + \beta_6 R_i + \beta_7 D_i*M_i + \beta_8 D_i*E_i + \beta_9 D_i*A_i +$
$\beta_{10} Di*T_i + \beta_{11} D_i*R_i + e_i$

P_i = perceived organizational performance
C_i = vector of organizational contextual variables (organizational size, average tenure of employees) and demographic characteristics of employees (female, minority status, and supervisory status)
D_i = vector of attributes of diversity (race diversity, gender diversity, and age diversity)
A_i = Average tenure of employees
T_i = team processes
R_i = result-oriented organizational culture
M_i = perceived diversity management
E_i = percentage of the reported EEO complaints
e_i = error term

Table 5.1 Hypotheses

H_8: Higher levels of workforce diversity will decrease organizational performance.

H_9: Effective diversity management will increase organizational performance.

H_{10}: Diversity management will moderate the impact of diversity on organizational performance such that, for agencies that have more effective diversity management, higher levels of diversity will increase organizational performance. For agencies that have less effective diversity management, higher levels of diversity will decrease organizational performance.

H_{11}: Longer organizational tenure will increase organizational performance.

H_{12}: Organizational tenure will moderate the impact of diversity on organizational performance such that, for agencies that have longer average tenure of employees, higher levels of diversity will increase organizational performance and for agencies that have shorter average tenure, higher levels of diversity will decrease organizational performance.

H_{13}: Team processes will increase organizational performance.

H_{14}: Team processes will moderate the impact of diversity on organizational performance such that, for agencies that have more effective team processes, diversity will increase organizational performance. For agencies that have less team processes, diversity will decrease organizational performance.

H_{15}: Result-oriented organizational culture will increase organizational performance.

H_{16}: Result-oriented organizational culture will moderate the impact of diversity on organizational performance such that, for agencies that emphasize result-oriented culture, diversity will decrease organizational performance.

Table 5.2 Descriptive Statistics of Diversity and Organizational Performance Model

Variables	Mean	Std. Dev.	Min	Max	Unit
Size	11.23	1.83	6.22	13.39	Natural log of the number of employees
Organizational tenure	15.11	2.72	7.9	22.6	Year
Female	.43	.50	0	1	Female =1; Male =0
Supervisor	.28	.45	0	1	Supervisor or manager =1
Executive	.03	.18	0	1	Executive =1
Minority	.30	.46	0	1	Minority =1
Race diversity	.56	.08	.21	.77	Entropy index
Gender diversity	.95	.04	.81	1	Entropy index
Age diversity	.89	.03	.73	.96	Entropy index
Diversity management	0	1	-3.07	1.44	Factor score
EEO complaints	.60	.28	.15	1.81	Proportion of the number of EEO complaints
Team Processes	0	1	-3.96	1.28	Factor score
Organizational culture	0	1	-2.20	1.87	Factor score
Organizational Performance	0	1	-4.15	1.60	Factor score

Table 5.3 Correlations of Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13
1.Organizational Performance													
2. Race Diversity	-.05												
3. Gender Diversity	.01	.14											
4. Age Diversity	-.01	.09	.27										
5. Size	.02	-.16	-.35	-.09									
6. Tenure	.02	-.13	.01	-.45	-.19								
7. Gender	-.00[a]	.09	.12	.01	-.14	.04							
8. Minority	-.02	.15	-.00[a]	-.02	-.06	.03	.19						
9. Supervisor	.08	-.01	-.07	.05	.18	-.14	-.14	-.07					
10. Executive	.08	-.01	.02	.01	-.01	.02	-.06	-.06	-.12				
11. Diversity Management	.57	-.04	.00[a]	-.01	.03	.03	-.09	-.19	.15	.11			
12. EEO Complaints	-.05	.32	-.03	-.09	-.31	.11	.10	.11	-.04	-.05	-.06		
13.Team processes	.63	-.04	-.00[a]	-.01	.02	.01	-.06	-.07	.11	.07	.49	-.04	
14. Organizational culture	.66	-.04	.02	-.00[a]	.04	.04	-.06	-.04	.21	.15	.64	-.07	.52

All of the coefficients, except coefficients marked by 'a,' are statistically significant at .01 or .001 levels.

Table 5.4 Hierarchical Regression Analysis of Diversity and Organizational Performance Model

	Coefficient	Std. Err.
Step 1: Controls		
Size	.001	.003
Tenure	-.001	.002
Gender	.034***	.007
Supervisor	.211***	.008
Executive	.115***	.023
Minority	-.017*	.008
R-square=.017 Adjusted R-square=.017 F = 224.09*** N= 77188		
Step 2: Diversity Effects		
Race diversity (RD)	-.416***	.039
Gender diversity (GD)	.310***	.095
Age diversity (AD)	-.072	.115
R-square=.019 Adjusted R-square=.019 F = 162.62***		
Step 3: Management Effects		
Diversity management	.578***	.003
EEO complaints	-.031***	.010
R-square=.332 Adjusted R-square=.332 F = 3484.66***		
Step 4: Teamwork and Organizational Culture Effects		
Team processes	.367***	.003
Result-oriented culture	.378***	.003
R-square=.569 Adjusted R-square=.569 F = 7840.82***		
Step 5: Interaction Effects (Management)		
Diversity management*RD	.126***	.026
Diversity management*GD	-.087	.061
Diversity management*AD	-.048	.071
EEO*RD	-.523***	.118
EEO*GD	.845***	.292
EEO*AD	-1.344***	.325
R-square=.569 Adjusted R-square=.569 F = 5370.71***		
Step 6: Interaction Effects (Tenure)		
Tenure*RD	-.061***	.015
Tenure*GD	.065*	.029
Tenure*AD	.037	.029
R-square=.570 Adjusted R-square=.569 F = 4640.38***		

Step 7: Interaction Effects (Team Processes)

Team processes*RD	.081**	.030
Team processes*GD	.050	.071
Team processes*AD	-.139	.083

R-square=.570   Adjusted R-square=.570   F = 4084.45***

Step 8: Interaction Effects (Organizational Culture)

Organizational culture*RD	-.002	.035
Organizational culture*GD	-.022	.083
Organizational culture*AD	.361***	.097

R-square=.570   Adjusted R-square=.570   F = 3647.97***

† significant at .1 level

* significant at .05 level

** significant at .01 level

*** significant at .001 level

CHAPTER SIX

DIVERSITY MANAGEMENT AND AFFECTIVE OUTCOMES

This chapter examines the impact of diversity on the individual-level outcomes that include employee job satisfaction and retention of employees. It also analyzes how managerial efforts as well as other contextual variables moderate the relationships between diversity and the outcomes in the context of public organizations. While the early studies placed greater attention on the direct impacts of diversity, recently scholars have sought to understand more complex relationships between diversity and its consequences that may exist. This study focuses primarily on the potential effects of contextual factors that moderate or mediate the relationships between diversity and turnover intention of employees, including diversity management, organizational tenure, and demographic composition of workgroups. First, I will explore the theoretical frameworks and state hypotheses of the direct effects of diversity on job satisfaction and turnover intentions of employees and the moderating and mediating effects of contextual variables on the relationships between diversity and these affective consequences. Then, I statistically test the hypotheses using hierarchical logistic regression methods and the test procedure for mediation. The turnover model will use the same data sources that were employed for the organizational performance model. In the last section, I will discuss findings and implications and address future research directions. Figure 6.1 illustrates how the moderating and mediating effects of contextual factors affect the relationship between diversity and turnover intentions of employees.

6.1 Theoretical Background and Hypotheses

As discussed earlier, there have been ongoing arguments concerning costs and benefits of diversity in organizational settings. Some studies argue that more heterogeneous workgroups tend to consider a greater range of perspectives and to produce more high-quality solutions than homogeneous groups (Cox, Lobel, and McLeod, 1991; Hoffman and Maier, 1961; McLeod and Lobel, 1992; Milliken and Martins, 1996; Ruhe, 1978; Watson, Kumar, and Michaelsen, 1993). Others contend that heterogeneous groups are less likely to be integrated in work processes (O'Reilly, Caldwell, and Barnett, 1989), and the levels of dissatisfaction and turnover of heterogeneous groups are likely to be higher than homogeneous groups, suffering from discrimination and self-segregation (Jackson et al., 1991; Wagner, Pfeffer, and O'Reilly, 1984). Diverse groups, associated with the effects of social categorization and similarity-attraction, may experience a lack of communication or miscommunication and negative social processes, such as conflicts, when their differences are not properly managed. Table 6.1 provides the hypotheses tested in this chapter.

6. 1. 1 Turnover Intentions

As discussed earlier, Schneider's (1987) attraction-selection-attrition theory and social integration theory suggest that individuals prefer others who have similar characteristics to their own. For example, managers are likely to select applicants similar to themselves, and the current workforce and applicants are also likely to be attracted to the organization with a workforce similar to themselves. When individuals who are different from the majority in the organizations are selected, they tend to be less psychologically committed to their organizations,

less integrated with others in the majority, and more likely to be absent and leave their organizations (Tsui, Egan, and O'Reilly, 1992). Eventually, those who are different from others in a group become excluded from the group's internal information networks and from important decision-making processes and leave, increasing the level of homogeneity within the group by attrition over time (George, 1990; Schneider and Northcraft, 1999). Further, differences may lead all members of a group as well as members in the minority to feel uncomfortable and dissatisfied, preventing them from integrating within the group and finally increasing a likelihood of turnover (Jackson et al., 1991; Wagner, Pfeffer, and O'Reilly, 1984).

Demographic diversity can affect the relative cohesiveness of groups, which may, in turn, enhance or diminish the probability of employee turnover (O'Reilly, Caldwell, and Barnett, 1989; Wagner, Pfeffer, and O'Reilly, 1984). Previous research supports the association between social integration and similarity in demographic attributes such as race, gender, and age (Hoffman, 1985; Tsui and O'Reilly, 1989; O'Reilly, Caldwell, and Barnett, 1989; Ward, La Gory, and Sherman, 1985). Social cohesion is reported to be positively correlated with commitment to remaining in the group (O'Reilly, Caldwell, and Barnett, 1989; Piper et al., 1983), suggesting that lower social cohesion among individuals in workgroups may be related to higher intention to leave their organization.

Scholars found evidence that supports such an argument on the relationship between demographic diversity and turnover. Many empirical findings revealed that as a workgroup is more heterogeneous in terms of gender, race, or age, its turnover rate tends to be higher and dissimilar individuals are more likely to turn over and be absent (Cummings, Zhou, and Oldham, 1993; Jack et al., 1991; Milliken and Martins, 1996; O'Reilly at al., 1989; Tsui, Egan,

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and O'Reilly, 1992; Wagner, Pfeffer, and O'Reilly, 1984; Wiersema and Bird, 1993). According to the results of some research on racial diversity, group members from the minority race in an organization may not only have less positive emotional feelings and perceptions to their organizations, but they may also receive less positive evaluations from their supervisors, eventually leading to a higher level of turnover of these minority members (Sackett and Dubois, 1991; Sackett, Dubois, and Noe, 1991; Tsui et al., 1992). The research on gender diversity found that women in male-dominated organizational settings were more likely to be absent and to experience turnover than were men (Cummings, Zhou, and Oldham, 1993). In a similar vein, members who belong to the minority gender in a group tend to show the lack of attachment to their organizations, have higher rates of absence, and lower intentions to stay (Tsui et al., 1992). Pfeffer (1985) proposed that similarity in age and organizational tenure may increase organizational commitment of members through similarity and facilitate communications (Byrne, 1971; Roberts and O'Reilly, 1979), suggesting that age diversity may decrease integration among individuals and enhance a likelihood of leaving.

H $_{17}$: Diversity will increase turnover intention of employees.

6. 1. 2 Mediating Effect of Job Satisfaction

Scholars have suggested that diversity is likely to affect job satisfaction of employees in the short term, influencing turnover intention in the longer term. People tend to feel more comfortable with others with whom they share important characteristics, strengthening in-group/out-group distinction and showing exclusionary behaviors (Blau, 1977). As previously discussed, relevant theoretical frameworks contend that people prefer interacting with similar

others and find interactions with them easier, positively reinforcing, and more desirable compared with interactions with others who are different (Ely, 2004; Schneider, 1987; Tsui, Egan, and O'Reilly, 1992; William and O'Reilly, 1998). Social categorization and identity theories argue that membership in any social category or group tends to cause distinction between different social categories (Billig and Tajfel, 1973; Ely, 2004; Kramer, 1991; Tajfel, 1981). Such distinction based on similarity may decrease interaction and integration within or between groups composed of people from different social categories and instigate discrimination and self-segregation, resulting in conflicts and miscommunication. Employees' low level of job satisfaction and organizational commitment will decrease productivity and organizational effectiveness (Lawler, 1994; Porter, Lawler, and Hackman, 1979). Conversely, employees' perception that they are favorably accepted by other members and the organization would positively affect the degree of job satisfaction and commitment to their organization, lowering absenteeism and organizational turnover rates (Lawler, 1994, 1995).

The research on affective consequences of diversity has found that observable attributes of diversity negatively influence organizational cohesiveness and job satisfaction. Further, researchers found greater negative effects of diversity on race and gender than those on age, which indicates that members in a group who hold prejudices or unfavorable perceptions against others who are different from themselves in terms of race and gender may hamper interaction and integration for the group (Milliken and Martins, 1996; Tsui, Egan, and O'Reilly, 1992).

H_{18}: Diversity will decrease job satisfaction of employees.

H $_{19}$: Job satisfaction will mediate the effects of diversity and the moderating effects of contextual factors on turnover intention of employees.

6. 1. 3 Moderating Effects of Diversity Management

Managerial efforts will harmonize differences among employees and reduce relational conflicts, increasing job satisfaction and thereby decreasing turnover intention of employees. Diversity scholars and professionals have been concerned about hostility and animosity, conflicts, and lack of interaction that diverse social categories in workgroups may cause (Ely, 2004; Jehn et al., 1999). Unless properly managed, diversity in workgroups may undermine group members' satisfaction with their job and decrease the individuals' organizational commitment or social integration with their organizations, resulting in high rates of employee turnover (Ancona and Caldwell, 1992; O'Reilly, Caldwell, and Barnett, 1989; Smith et al., 1994).

While individual determinants of turnover are clearly important, it is also likely that the social context, such as group and organizational variables, may importantly affect decisions to stay or leave (O'Reilly, Caldwell, and Barnett, 1989). As one of the contextual factors, diversity management policies and practices may affect the relationships between diversity and turnover. Effective diversity management and leadership emphasize respecting individual differences, promoting diversity and representation of workgroups, and integrating individuals from different backgrounds in workgroups. Thus, organizational policy and managerial capacity to manage diversity in work units will mitigate the potential conflicts that occur in diversified workgroups and, more importantly, enhance social integration among individuals in

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organizations. Social cohesiveness will improve satisfaction of members for their job or

organization, strengthening commitment to their organization. Consequently, effective

management of diversified workforces will mitigate potential relationship conflicts caused by

heterogeneous demographic attributes and lower the intention of employees to leave their

organization.

H_{20}: Effective diversity management will increase job satisfaction.

H_{21}: Effective diversity management will decrease turnover intentions of employees.

H_{22}: Diversity management will moderate the impact of diversity on job satisfaction of

employees such that, for agencies that have more effective diversity management,

diversity will increase job satisfaction and for agencies that have less effective diversity

management, diversity will decrease job satisfaction.

H_{23}: Diversity management will moderate the impact of diversity on turnover intention

of employees such that, for agencies that have more effective diversity management,

diversity will decrease turnover intention of employees and for agencies that have less

effective diversity management, diversity will increase turnover intention.

6. 1. 4 Organizational Tenure

Numerous studies indicate that similarity in tenure and age is related to increased job

satisfaction with coworkers and social integration (e.g., Mobley, 1982; Muchinsky and Tuttle,

1979; O'Reilly, Caldwell, and Barnett, 1989; Sorensen and Tuma, 1981). As diverse teams

work together longer, interactions, such as teamwork and collaboration, will increase and in

turn, enhanced intragroup contact will reduce the negative effects of social categorization

(Chatman and Flynn 2000; Ely 2004; Harrison et al. 2002; O'Reilly III, Caldwell, and Barnett, 1989). As time goes by, the negative effects of surface-level diversity decrease and members in a group may have more favorable views on differences. In a similar vein, Katz (1982) argued that the high level of organizational tenure leads to stability with less goal conflict or less discomfort in relationship. Smith and his colleagues (1994) contended that longer team tenure would reduce the need for coordination and control, positively affecting attraction to the workgroup and satisfaction with colleagues as well as organizational performance. Over time, the effects of surface-level diversity on conflict in a heterogeneous group decrease and the effects of deep-level diversity increase. The impact of surface-level differences in terms of race, gender, and age tends to become less important over time and people tend to pay more attention to deep-level differences in terms of attitudes and values, reducing prejudices and stereotypic thoughts. Thus, a longer average tenure of members in a diverse workgroup will be associated with increased job satisfaction of employees, thereby leading to a lower probability of turnover from the group.

H $_{24}$: Organizational tenure will moderate the impact of diversity on job satisfaction of employees such that, for agencies that have longer average tenure of employees, diversity will increase job satisfaction and for agencies that have shorter average tenure, diversity will decrease job satisfaction.

H $_{25}$: Organizational tenure will moderate the impact of diversity on turnover intention of employees such that, for agencies that have longer average tenure of employees, diversity will decrease turnover intention of employees and for agencies that have shorter average tenure, diversity will increase turnover intention.

6. 1. 5 Demographic Structure of Work Units

Demographic structure of work groups may affect individuals differently. As previously discussed, social categorization and social identity theories suggest that members in the same social category or group draw the lines differentiating others in different social categories and confirming group affiliation by showing discriminatory attitudes and behaviors against outgroup members (Ely, 2004; Kramer, 1991; Tajfel, 1981). Minorities who work in less diversified work units, such as a few women in male-dominated work groups and a few racial minorities in white-dominated work units, feel excluded and separated from the mainstream of the work units. As a result, they are likely to have low job satisfaction, organizational cohesiveness, and commitment to stay in their organizations. The present study assumes that minority employees in organizations which are dominated by people with membership of different social categories, especially in terms of race and gender, will have lower job satisfaction and high turnover intention.

H_{26}: Female employees in more diversified agencies in terms of gender will have higher job satisfaction than are female employees in less diversified agencies.

H_{27}: Female employees in more diversified agencies in terms of gender will have lower turnover intention than are female employees in less diversified agencies.

H_{28}: Minority employees in more diversified agencies in terms of race will have higher job satisfaction than are minority employees in less diversified agencies.

H_{29}: Minority employees in more diversified agencies in terms of race will have lower turnover intention than are minority employees in less diversified agencies.

6. 2 Data and Methods

The same sources of data that were employed for the organizational performance model – CPDF and archival data, and 2004 FHCS – are used for the analysis of the job satisfaction and turnover model. As noted in Chapter 5, the diversity measures of 67 sub-agencies under the executive branch and independent agencies were calculated using information extracted from the CPDF and the archival data from OPM in the period of 2004. Index variables were developed using the questionnaire of the 2004 FHCS.

A series of hierarchical logistic regressions is employed to test the model. This study uses this hierarchical procedure for the purpose of testing moderating relationships or interactions. As discussed, larger correlations between exploratory variables can yield great degree of multicollinearity, leading to the unreliable interpretation of the interaction terms (Cortina, 1993; Lubinski and Humphreys, 1990). However, correlations between variables that compose interaction terms are not substantially high, suggesting that multicollinearity related to interaction terms is not a critical concern in this model.

This study also examines the mediating effect of job satisfaction on the relationship between diversity and turnover intention of employees. To test the mediating effect of job satisfaction, I employed a procedure by Baron and Kenny (1986, p. 1177), which includes three steps: 1) regressing the mediator on the independent variables; 2) regressing the dependent variable on the independent variables; 3) regressing the dependent variables on both the mediator and independent variables (Simons, Pelled, and Smith, 1999, p. 667). If these three steps are significant and the effects of the independent variables in the third step are weaker

than in the second step, these conditions indicate that the mediating effects exist. Figure 6.2 illustrates the model of job satisfaction and turnover.

6. 3 Measures

Diversity. Table 6.2 provides the descriptive statistics of the measures. The measures of three attributes of diversity of the 67 agencies – race, gender, and age – are calculated through the entropy index of diversity. This study classifies federal employees into five racial/ ethnic groups – American Indian or Alaskan Native, Asian or Pacific Islander, Blacks, Hispanics, and Whites – based on the CPDF's categorization. Gender of federal employees is composed of two groups – male and female. The age variable is categorized into five groups – under 29; 30 to 39; 40 to 49; 50 to 59; over 60.

Job satisfaction. The current study measured individual-level job satisfaction of employees based on responses to relevant survey questions. The measure of job satisfaction was also developed by principal factor analysis and varimax rotation methods. Eight survey items, ranging from "1" (strongly disagree) to "5" (strongly agree), were included to create the index variable, which asks about satisfaction of employees regarding the overall job satisfaction, involvement in decision making, information sharing, recognition of performance, leadership, opportunities for a better job within the organization, training opportunities, and the overall satisfaction with their organizations. Factor loadings ranged from 0.699 to 0.858. The initial eigenvalue of the scale was 5.211 and the cronbach's alpha was 0.923.

Turnover Intention. The 2004 FHCS includes a question that asks about the turnover intention of respondents. Respondents can answer "yes," "no," or "not reported" for this question. The turnover variable is recorded as a "1" when a respondent expresses the intention to leave his or her agency or is recorded as a "0" when a respondent does not. The relationships between diversity and turnover intention were tested using the logistic regression method because the dependent variable was coded as a dichotomous variable.

Diversity Management. The present study measured diversity management in two ways. One way was to measure diversity management of agencies depending on employees' perception. This study developed an index variable through factor analysis, utilizing three survey questions extracted from the 2004 FHCS, which asked about managerial capacity to manage diversity, commitment to diversity, and policies and practices to promote diversity. The survey items included 1) supervisors/ team-leaders in my work unit are committed to a workforce representative of all segments of society; 2) policies and programs promote diversity in the workplace (for example, recruiting minorities and women, training in awareness of diversity issues, mentoring); 3) managers/ supervisors / team leaders work well with employees of different backgrounds. Principal factor analysis and varimax rotation produced a single factor on which these three items loaded. The initial eigenvalue of the scale was 2.308 and the cronbach's alpha was 0.850. Factor loadings ranged between 0.868 and 0.886.

The other way of measuring effectiveness of diversity management was to refer to the number of EEO complaints in an agency as a proxy measure of effective diversity management. This study assumes that effectiveness of diversity management of an agency is negatively

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related to the number of complaints reported by the agency, suggesting that the smaller number of EEO complaints represents more effective diversity management of the agency. The data come from the 2004 annual report posted on each agency's public web site. The measure was developed by dividing the number of EEO complaints by organizational size.

Average Tenure. Average tenure represents the average tenure of full-time employees hired in an agency. This variable was measured by agency based on the 2004 CPDF. The mean average tenure of federal agencies was 15.1 years, ranging between 7.9 and 22.6 years.

Demographic Variables. Demographic variables including gender, minority, and supervisory status were recorded as dummy variables in order to control their effects on dependent variables. The findings of previous research show that differences in terms of gender, minority status, and supervisory status significantly affect perception of job satisfaction and turnover intention. The gender variable was recorded as a "1" for female respondents and as "0" for male respondents. The minority variable was recorded as a "0" when a respondent was a white male or a white female and was recorded as a "1" when a respondent was neither a white male nor a white female. The supervisory status was classified into two types – supervisor or manager and executive. These two types of supervisory status were developed as two dummy variables.

6. 4 Results

Figure 6.2 illustrates the diversity and job satisfaction and turnover intention model. To examine moderating effects of contextual variables on turnover intention and the job satisfaction of employees, I used the hierarchical regression methods. To test for mediation, I separately estimated three models, following the process Judd and Kenny (1981) recommended. The first model (Model 1) assessed the effects of the independent variables on the mediating variable – job satisfaction. The job satisfaction model was tested by the hierarchical regression method. Each of the blocks was statistically significant except for the block for the interaction variables of tenure and diversity measures. The second model (Model 2) assessed the effects of the independent variables on the dependent variable – turnover intention. The last model (Model 3) tested the effects of both the mediating variable and the independent variables on the dependent variable. Models 2 and 3 were tested using the hierarchical logistic regression methods. I used two different methods because job satisfaction is a continuous variable, while turnover intention is a dichotomous variable. For the mediation test, when the following three conditions hold, the independent variable is assumed to cause the mediator: 1) the independent variable significantly affects the mediating variable in the first model; 2) the independent variable significantly affects the dependent variable in the second model; 3) the mediator significantly affects the dependent variable in the third model and the effect of the independent variable on the dependent variable is weaker in the third model than in the second model (Baron and Kenny, 1986, p. 1177).

Table 6.3 describes the correlations of the variables. The largest correlation is .63, the average and median correlations are –0.009 and -0.01, respectively. The largest VIF value and

the average in model 1 were 1.86 and 1.26, respectively. Residual analyses did not detect any substantial irregularities or influential outliers in all three models.

Table 6.4 presents the results of the hierarchical regression analysis of the model. The McFadden's R^2 of the full model (Model 3) is .12. The likelihood ratio chi-square of each block for model 2 and 3, the partial F statistics for model 1, unstandardized coefficients, and odd ratios of variables are reported in Table 6.4. The effect sizes of independent variables on a dependent variable in a logistic regression model can be more easily interpreted in terms of changes in the odds. For a unit change in a variable, the odds are expected to change by a factor of the exponential of the coefficient, holding all other variables constant (Long and Freese, 2006). Odds above 1 indicate that a unit change in the independent variable is associated with an increase in the odds that the dependent equals 1 in binomial logistic regression, while an odds ratio below 1 indicates that a unit change in the independent variable relates to a decrease in the odds that the dependent equals 1.

The direct effects of race and age diversity positively relate to turnover intention of employees, supporting H 17. Higher levels of the race and age diversity were positively related to turnover intention of employees. One unit increase in the race diversity index increased the odds of turnover intention of employees by a factor of 1.716, while each additional unit of the age diversity index increased the probability of employees' intention to leave by a factor of 4.125. Gender diversity was not significantly related to turnover intention. Regarding the effects of diversity on job satisfaction, the higher level of race diversity was negatively associated with job satisfaction of employees, while the higher level of gender diversity, which implies better gender balance, was positively related to job satisfaction. Previous research, for

instance, has shown that employees in gender-balanced workgroups showed higher levels of job satisfaction than those in homogeneous groups in terms of gender, supporting Blau's argument on heterogeneity (Fields and Blum, 1997). According to Fields and Blum's findings, both men and women showed lower levels of job satisfaction in homogeneous groups, regardless of their majority status. These results refute the argument by Wharton and Baron (1987, 1991) on preferences for more homogeneous work settings. Age diversity was not significantly related to job satisfaction, also partially supporting H 18. Only the race diversity supported both H 17 and H 18.

The results of the effects of diversity management – perceived diversity management and EEO complaints – support H 20 and H 21. Perceived diversity management, representing effective diversity management, was negatively related to turnover intention of employees, while positively associated with job satisfaction. EEO complaints were positively related to employees' intention to leave, but were negatively associated with job satisfaction. A unit increase in the diversity management index decreased the odds of intention to leave by a factor of 0.615, while a percent increase in the EEO complaints increased the odds of turnover intention by a factor of 1.090.

One of the most interesting findings of this study is the role of contextual variables that moderate the relationship between diversity and its outcomes. The moderating effects of diversity management appear to be inconsistent with the hypotheses. Diversity management significantly, but partially, moderated the relationships between diversity and job satisfaction. Interestingly, diversity management consistently moderated the relationship between race diversity and job satisfaction, in support of H 22. Race diversity, in agencies that effectively

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manage diversity, was positively related to job satisfaction (0.132, $p <.001$), whereas, in agencies that are poor at managing diversity, it was negatively associated with job satisfaction (-0.574, $p <.001$). The effects of diversity management on the relationships between gender and age diversity and job satisfaction were not consistent. Gender diversity, in agencies that do not practice effective diversity management, was positively associated with job satisfaction, countering my expectation. In addition, age diversity, regardless of effectiveness of diversity management, was negatively related to job satisfaction.

Further, the observed moderating effects of diversity management on the relationships between diversity and turnover intentions of employees are more challenging to interpret. The findings reveal a consistent but theoretically inexplicable pattern. Perceived diversity management did not significantly moderate the relationships between diversity and turnover intention. Even though it moderated the relationship between gender diversity and turnover intention, the effect was not only marginally significant, but also counter to my anticipation (H 23). In addition, EEO complaints consistently and negatively moderated the relationships between race and gender diversity and turnover intention, rejecting my expectation. In agencies practicing effective diversity management, the higher level of gender diversity was positively related to employees' turnover intention. Further, in agencies with higher levels of EEO complaints, race and gender diversity were negatively associated with employees' intention to leave. One possible explanation is that higher levels of reported complaints about EEO may suggest that the agencies are highly sensitive to discrimination against minorities and women and are caring for their concerns. Thus, employees in those agencies tend to feel more comfortable with expressing their complaints to the EEO office of the agencies. By doing so,

employees are likely to feel satisfied with their coworkers and work environments, leading to lower levels of turnover intention.

Organizational tenure does not appear to significantly affect the relationships between diversity and job satisfaction and turnover intention of employees. Organizational tenure has only a marginally significant effect on the relationship between age diversity and turnover intention of employees, partially supporting H 25. One possible interpretation is that longer organizational tenure may be positively related to the average age of employees in the agency and, in turn, the higher average age of employees may lead to the higher level of intention to leave or actual rates of turnover in the agencies.

The demographic composition of an organization consistently and negatively moderated the relationships between race and gender diversity and turnover intention, in support of H 27 and H 29. The odds that female employees have turnover intention, when the gender diversity index of the agency increases by one unit, are expected to decrease by a factor of 0.339, while the odds that minority employees feel intention to leave their agency, when the race diversity index of the agency increases by one unit, are likely to decrease by a factor of 0.229. These findings indicate that female employees, in highly diversified agencies in terms of gender, tend to have lower levels of intention to leave, while minority employees, in agencies with higher levels of race diversity, also tend to have lower levels of turnover intention. In addition, minorities show a higher level of job satisfaction in agencies that have the higher level of race diversity. H 28 is supported.

Another interesting finding is the mediating role of job satisfaction in the relationships between interaction variables and turnover intention. The result of the mediation test shows that

job satisfaction partially mediates the relationships between the moderating effects and turnover intention of employees. Following the procedure recommended by Judd and Kenny (1981), I tested the mediation of job satisfaction using three models. The findings show that job satisfaction significantly mediates the moderating effects of diversity management and the demographic composition of an organization on turnover intention. In model 1, the interactions between perceived diversity management and race and age diversity, and between EEO complaints and race, gender, and age diversity are significantly associated with job satisfaction. The interaction between race diversity and minority is significantly associated with job satisfaction as well. In model 2, the interactions between EEO complaints and race and gender diversity, and between minority and race diversity are significantly related to intention to leave. Then, in model 3, job satisfaction significantly relates to turnover intention. The moderating effects of EEO complaints on the relationships between race and gender diversity, and turnover intention diminished, after controlling the mediating effect of job satisfaction. In the same way, job satisfaction also mediates the interaction between minority and race diversity. Effects of other independent variables on turnover intention are consistent, even after controlling the mediation of job satisfaction in model 3, indicating that they do not cause the mediation by job satisfaction. H 19 is partially supported.

Finally, the results of control variables show that supervisors and executives have higher job satisfaction and lower turnover intention. On the other hand, female and minority employees tend to be slightly less satisfied with their jobs. However, while minority employees consistently show higher intention to leave their jobs, women show marginally lower levels of

turnover intention, suggesting that women are less likely to leave their jobs even though they are not satisfied.

6. 5 Discussion and Conclusion

Scholars have suggested that increased diversity may lead to lower levels of psychological attachment among members and job satisfaction of minority employees, increasing turnover intention of employees. In recent years, diversity researchers have developed more complex models to examine effects of various dimensions of diversity and of contextual factors which may mediate or moderate the relationships between diversity and its consequences (Jackson, Joshi, and Erhardt, 2003; Milliken and Martins, 1996; Williams and O'Reilly, 1998). Indeed, empirical findings show that various contextual factors significantly affect the relationships between diversity and organizational outcomes. Nevertheless, effects of many other important factors still remained untested. The present study aimed to explore the effects of contextual factors, such as diversity management practices and leadership, organizational tenure, and demographic composition of an organization, on short-term and long-term affective outcomes of diversity. The findings presented here reveal that these contextual variables significantly affect the relationships between diversity and turnover intention of employees. Further, job satisfaction – that is, the short-term affective consequence – partially mediates the moderating effects of context on turnover intention of employees, which is the long-term outcome of diversity.

The most critical finding of this study is that contextual variables such as diversity management and demographic composition of an organization significantly moderate the

relationships between diversity and turnover intention of employees. Additionally, these moderating effects are mediated by job satisfaction. This suggests that the relationships between diversity and its consequences are not as simple as previous studies assumed and inconsistent empirical findings may be attributed to complicated relationships among various contextual factors. The findings of this study will contribute to diversity research by providing empirical evidence that the contexts significantly affect the relationships between diversity and its consequences.

Another interesting finding is that effective management of increased diversity has substantially positive effects on the relationship between race diversity and job satisfaction. As I had predicted, the higher level of race diversity was negatively related to job satisfaction and positively associated with turnover intention of employees. However, in agencies that effectively manage diversity, race diversity is positively associated with job satisfaction, suggesting that managerial effectiveness and leadership of public managers cannot only significantly reduce the negative effect of diversity, but also increase satisfaction of employees. In contrast, in agencies that do not effectively manage diversity race diversity was negatively related to job satisfaction of members in the agencies. Given that employees' satisfaction with their jobs is an important criterion for evaluating organizational effectiveness, the result provides important implications for public managers and policy makers.

No evidence supported the expectation that diversity management would negatively moderate the effects of diversity on turnover intention of employees. In other words, effective diversity management was not negatively related to turnover intention of employees in highly diversified agencies. Rather, effective diversity management was positively associated with

turnover intention of employees in those agencies. Some scholars indicate that there may be the possibility of the opposite causal direction from turnover intention to diversity management, suggesting that higher levels of turnover intention may lead to managerial reaction to the problem, such as more efforts to manage diversity. A pattern of the relationships between diversity and intention to leave is more complicated to interpret, noting that it requires deeper consideration. Indeed, numerous studies have argued that turnover could be explained by a large number of variables including individual determinants as well as by the social context (Mobley, 1982; O'Reilly, Caldwell, and Barnett, 1989). Scholars have indicated that economic, organizational, job, and personal characteristics are related to turnover (Cotton and Tuttle, 1986; O'Reilly, Caldwell, and Barnett, 1989). Nevertheless, this study controls for some organizational factors such as diversity management, organizational tenure, and demographic composition of an organization. Other potential effects, for example, rewards expectancy, work environment or condition, and personal factors may significantly influence the relationship between diversity and turnover intention of employees. Further, intention to leave may be substantially different from the actual turnover rate of employees, which may be another weakness of this study. Thus, future research should control the possible effects of other variables and also employ the actual rate of employee turnover for better explanation.

The observed mediation of job satisfaction is also a critical finding in this research. Recent studies have focused on roles of process variables as mediators of diversity effects on organizational consequences (Simon, Pelled, and Smith, 1999). The test for mediation shows that job satisfaction partially mediates the effects of the interactions between diversity and diversity management and demographic composition of an organization on turnover intention

of employees. This result implies that the moderating effects of diversity management and demographic composition of an organization affect job satisfaction in a short term and then influence turnover intention of employees in a longer term through job satisfaction as a mediator.

This study contributes to our understanding of how diversity and the context of work environments affect job satisfaction and commitment to organization of federal employees, by analyzing the sample representing federal agencies and a large promising federal survey. Further, important implications are provided for public managers and policy makers by demonstrating that diversity is a multifaceted construct that interacts with various contextual factors and affects consequences through process factors. As this study pointed out the importance of effective management of diversity, in order for diversity to benefit organizational effectiveness sufficient managerial efforts must be necessarily invested in harmonizing differences in organizations.

Future research should control other possible effects of work characteristics and individual factors on turnover to obtain a more accurate pattern of the relationships between diversity and turnover. Scholars have argued that turnover is reliably explained by at least 26 separate variables, including social, organizational, job, and personal characteristics (Cotton and Tuttle, 1986; O'Reilly, Caldwell, and Barnett, 1989). As briefly mentioned earlier, an actual rate of turnover may show us a different picture of the relationship between diversity and employee turnover. Intention to leave is more likely to be associated with organizational commitment and will not necessarily lead to actual turnover. Thus, employing the actual number of turnovers from archival data for future research will reveal a richer set of dynamics

of the effects of diversity on turnover, aiding public managers and policy makers in retaining

their valuable human resources.

Figure 6.1 Diversity and Affective Outcomes
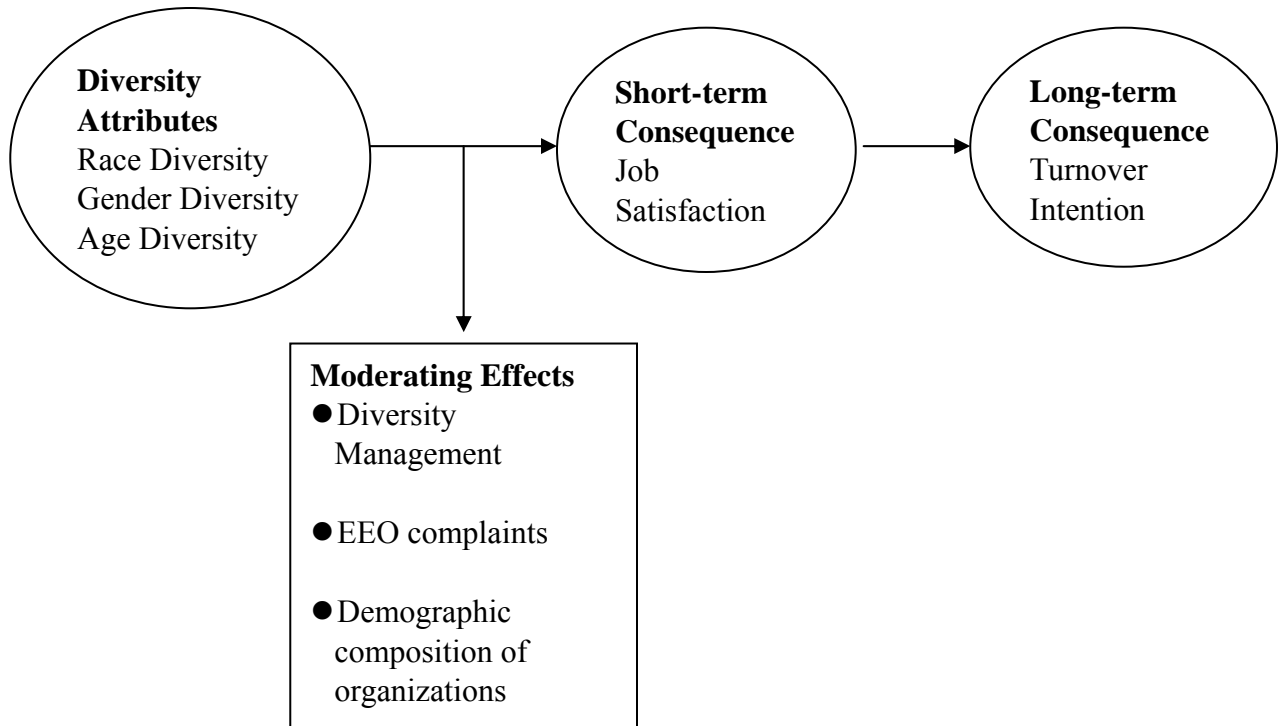
Figure 6.2 Model Specification of Diversity and Job Satisfaction and Turnover Model

Step 1: $T_i = \beta_0 + \beta_1 C_i + e_i$

Step 2: $T_i = \beta_0 + \beta_1 C_i + \beta_2 D_i + e_i$

Step 3: $T_i = \beta_0 + \beta_1 C_i + \beta_2 D_i + \beta_3 M_i + \beta_4 E_i + e_i$

Step 4: $T_i = \beta_0 + \beta_1 C_i + \beta_2 D_i + \beta_3 M_i + \beta_4 E_i + \beta_5 M_i{*}D_i + \beta_6 E_i{*}D_i + e_i$

Step 5: $T_i = \beta_0 + \beta_1 C_i + \beta_2 D_i + \beta_3 M_i + \beta_4 E_i + \beta_5 M_i{*}D_i + \beta_6 E_i{*}D_i + \beta_7 F_i + \beta_8 N_i + e_i$

Step 6: $T_i = \beta_0 + \beta_1 C_i + \beta_2 D_i + \beta_3 M_i + \beta_4 E_i + \beta_5 M_i{*}D_i + \beta_6 E_i{*}D_i + \beta_7 F_i + \beta_8 N_i + \beta_9 A_i + e_i$

Step 7: $T_i = \beta_0 + \beta_1 C_i + \beta_2 D_i + \beta_3 M_i + \beta_4 E_i + \beta_5 M_i{*}D_i + \beta_6 E_i{*}D_i + \beta_7 F_i + \beta_8 N_i + \beta_9 A_i + \beta_{10} J_i + e_i$

T_i = turnover intention of an employee

C_i = vector of organizational contextual variables (organizational size and average tenure of employees) and demographic characteristics of employees (female, minority status, and supervisory status)

D_i = vector of attributes of diversity (race diversity, gender diversity, and age diversity)

M_i = perceived diversity management

E_i = percentage of EEO complaints

J_i = job satisfaction

F_i = interaction between female and gender diversity

N_i = interaction between minority status and race diversity

A_i = interactions between average organizational tenure and three attributes of diversity

e_i = error term

Table 6.1 Hypotheses

H $_{17}$: Diversity will increase turnover intention of employees.

H $_{18}$: Diversity will decrease job satisfaction of employees.

H $_{19}$: Job satisfaction will mediate the effects of diversity and the moderating effects of contextual factors on turnover intention of employees.

H $_{20}$: Effective diversity management will increase job satisfaction.

H $_{21}$: Effective diversity management will decrease turnover intention of employees.

H $_{22}$: Diversity management will moderate the impact of diversity on job satisfaction of employees such that, for agencies that have more effective diversity management, diversity will increase job satisfaction and for agencies that have less effective diversity management, diversity will decrease job satisfaction.

H $_{23}$: Diversity management will moderate the impact of diversity on turnover intention of employees such that, for agencies that have more effective diversity management, diversity will decrease turnover intention of employees and for agencies that have less effective diversity management, diversity will increase turnover intention.

H $_{24}$: Organizational tenure will moderate the impact of diversity on job satisfaction of employees such that, for agencies that have longer average tenure of employees, diversity will increase job satisfaction and for agencies that have shorter average tenure, diversity will decrease job satisfaction.

H $_{25}$: Organizational tenure will moderate the impact of diversity on turnover intention of employees such that, for agencies that have longer average tenure of employees, diversity will decrease turnover intention of employees and for agencies that have shorter average tenure, diversity will increase turnover intention.

H $_{26}$: Female employees in more diversified agencies in terms of gender are likely to have higher job satisfaction than are female employees in less diversified agencies.

H $_{27}$: Female employees in more diversified agencies in terms of gender are likely to have lower turnover intention than are female employees in less diversified agencies.

H $_{28}$: Minority employees in more diversified agencies in terms of race are likely to have higher job satisfaction than are minority employees in less diversified agencies.

H $_{29}$: Minority employees in more diversified agencies in terms of race are likely to have lower turnover intention than are minority employees in less diversified agencies.

Table 6.2 Descriptive Statistics of Diversity and Job Satisfaction and Turnover Model

Variables	Mean	Std. Dev.	Min	Max	Unit
Size	11.23	1.83	6.22	13.39	Natural log of the number of employees
Organizational tenure	15.11	2.72	7.9	22.6	Year
Female	.43	.50	0	1	Female =1; Male =0
Supervisor	.28	.45	0	1	Supervisor or manager =1
Executive	.03	.18	0	1	Executive =1
Minority	.30	.46	0	1	Minority =1
Race diversity	.56	.08	.21	.77	Entropy index
Gender diversity	.95	.04	.81	1	Entropy index
Age diversity	.89	.03	.73	.96	Entropy index
Diversity management	0	1	-3.07	1.44	Factor score
EEO complaints	.60	.28	.15	1.81	Proportion of the number of EEO complaints
Job satisfaction	0	1	-2.63	1.81	Factor score
Intention to leave	.28	.45	0	1	Yes = 1; No = 0

Table 6.3 Correlations of Variables

	1	2	3	4	5	6	7	8	9	10	11	12
1.Turnover Intention												
2. Job satisfaction (Factor Score)	-.37											
3. Race Diversity	.03	-.06										
4. Gender Diversity	-.00^a	.00	.14									
5. Age Diversity	.04	-.03	.09	.27								
6. Size	-.00^a	.04	-.16	-.35	-.09							
7. Tenure	-.03	.04	-.13	.01	-.45	-.19						
8. Gender	-.00^a	-.03	.09	.12	.01	-.14	.04					
9. Minority	.04	-.02	.15	-.00^a	-.02	-.06	.03	.19				
10. Supervisor	-.03	.11	-.01	-.07	.05	.18	-.14	-.14	-.07			
11. Executive	-.00^a	.12	-.01	.02	.01	-.01	.02	-.07	-.06	-.12		
12. Diversity Management	-.22	.63	-.04	.00^a	-.01	.03	.03	-.09	-.19	.15	.11	
13. EEO Complaints	.02	-.07	.32	-.03	-.09	-.31	.11	.10	.11	-.04	-.05	-.07

All of the coefficients, except coefficients marked by 'a,' are statistically significant at .01 or .001 levels.

Table 6.4 Hierarchical Logistic Regression Analysis of Diversity and Job Satisfaction and Turnover Model

Independent Variables	Model 1 Coef. (Std. Err.)	Model 2 Coef. (Std. Err.)	Odds Ratio	Model 3 Coef. (Std. Err.)	Odds Ratio
Step 1: Demographic Variables					
Size	.015***	-.019**	.981	-.019**	.981
	(.003)	(.006)		(.006)	
Tenure	.007***	-.019***	.981	-.019***	.981
	(.001)	(.003)		(.003)	
Gender	-.015*	-.058***	.944	-.058***	.944
	(.007)	(.016)		(.016)	
Minority	-.018*	.188***	1.207	.188***	1.206
	(.008)	(.017)		(.017)	
Supervisor	.278***	-.156***	.855	-.156***	.855
	(.008)	(.018)		(.018)	
Executive	.735***	-.183***	.833	-.183***	.833
	(.019)	(.044)		(.044)	
Partial F value	468.61***	Log Likelihood	-50142.04		-50131.92
R-square	.0317	LR-chi square	257.08***		256.59***
Number of obs	86015	McFadden's R^2	.0026		.0026
		Number of obs	86029		86015
Step 2: Diversity Effects					
Race diversity (RD)	-.327***	.540***	1.716	.540***	1.717
	(.037)	(.085)		(.085)	
Gender diversity (GD)	.444***	-.186	.834	-.186	.831
	(.089)	(.207)		(.207)	
Age diversity (AD)	.005	1.415***	4.125	1.415***	4.116
	(.108)	(.253)		(.253)	
Partial F value	31.73***	Log Likelihood	-50106.84		-50096.8
R-square	.0327	LR chi-square	70.39***		70.24***
Δ R-square	.0011	Δ McFadden's R^2	.0007		.0007
Step 3: Diversity Management Effects					
Diversity management (DM)	.617***	-.486***	.615	-.486***	.615
	(.009)	(.008)		(.008)	
EEO complaints (EEO)	-.056***	.086**	1.090	.086**	1.090
	(.106)	(.027)		(.027)	
Partial F value	26298.61***	Log Likelihood	-48142		-48132.34
R-square	.3998	LR chi-square	3929.68***		3928.93***
Δ R-square	.3671	Δ McFadden's R^2	.039		.039

Step 4: Moderating Effects of Diversity Management

DM* RD	.132***	.060	1.061	.059	1.061
	(.028)	(.084)		(.084)	
DM*GD	-.002	.360†	1.433	.366†	1.442
	(.068)	(.200)		(.200)	
DM*AD	-.178*	-.387	.679	-.391	.677
	(.079)	(.234)		(.234)	
EEO*RD	-.574***	-1.517***	.219	-1.522***	.218
	(.131)	(.393)		(.393)	
EEO*GD	2.798***	-3.051**	.047	-3.048**	.047
	(.324)	(.978)		(.978)	
EEO*AD	-1.670***	-1.763	.172	-1.775	.169
	(.359)	(1.089)		(1.089)	
Partial F value	17.07***	Log Likelihood	-48116.55		-48106.76
R^2	.4005	LR chi-square	50.91***		51.16***
ΔR^2	.0007	Δ McFadden's R^2	.0005		.0005

Step 5: Moderating Effects of Demographic Contexts

Gender*GD	.152	-1.083**	.339	-1.093**	.335
	(.126)	(.378)		(.378)	
Minority*RD	.126†	-1.473***	.229	-1.475***	.229
	(.064)	(.188)		(.188)	
Partial F value	2.71†	Log Likelihood	-48081.69		-48071.74
R^2	.4005	LR chi-square	69.73***		70.04***
ΔR^2	.0000	Δ McFadden's R^2	.0007		.0007

Step 6: Moderating Effects of Tenure

Tenure*RD	-.025	-.085	.918	-.085	.918
	(.017)	(.050)		(.050)	
Tenure*GD	-.016	-.152	.859	-.152	.859
	(.032)	(.097)		(.097)	
Tenure*AD	-.006	.264*	1.303	.264*	1.302
	(.032)	(.099)		(.099)	
Partial F value	1.30	Log Likelihood	-48076.55		-48066.59
R^2	.4006	LR chi-square	10.28*		10.30*
ΔR^2	.0000	Δ McFadden's R^2	.0001		.0001

Step 7: Mediating Effects

Job satisfaction				-.905***	.405
				(.011)	
				-44291.89	
				7549.39***	
				.0751	

† significant at .1 level
* significant at .05 level
** significant at .01 level
*** significant at .001 level

Model 1 represents the effect of diversity and contextual factors on job satisfaction.
Model 2 represents the effects of diversity and contextual factors on turnover intention
Model 3 represents the effects of diversity and contextual factors on turnover intention,
controlling the effect of job satisfaction.

CHAPTER SEVEN

CONCLUSIONS

As organizations increasingly operate in a demographically diverse context, understanding and managing diversity in the workplace have become a central concern of the modern organizational management. Public organizations have strongly promoted diversity in their employee populations through legal requirements, leading to unprecedentedly high levels of diversity. Nevertheless, a relatively small literature on diversity has been produced in the field of public administration. Although a number of studies in business management and social psychology have sought to investigate the impacts of diversity and its consequences, they may not be directly applied in the context of public organizations. This study attempts to investigate diversity in the public sectors and contribute to our understanding how diversity in the composition of organizational groups affects outcomes such as organizational performance, employee satisfaction, and turnover and how contextual factors influence the relationships between diversity and its outcomes. By focusing on the effects of diversity management, I try to provide important implications for public managers and policy makers in the public sector. In this chapter, I will provide a summary of important findings and discuss contributions and limitations of this study. I will then discuss the practical implications and suggest future research.

7. 1 Findings and Conclusions

In Chapter 3, I investigated the diversity and representation of employee populations in the federal government. As a number of reports noted, federal agencies under the executive branch departments and large independent agencies successfully achieved well-diversified employee populations in terms of race and gender. Most of the minority groups – Blacks, Hispanics, Asian or Pacific Islanders, and American Indian or Alaskan Natives – show reasonably good ratios of presence in federal agencies. Nevertheless, the findings revealed that women and minorities are still underrepresented at the upper-level positions in hierarchical bureaucracies. The higher proportions of minority employees tend to be employed at the lower-level positions, largely underrepresented at the higher-level positions and the SES level. In addition, the distribution of female employees in federal employment also shows a similar pattern to that of minority employees, suggesting that higher echelons are still dominated by White male employees in the federal government.

The following question was what leads to the variation of diversity in federal agencies. Chapter 4 attempted to answer the question and fill holes in the literature by examining what determines the variation of diversity, particularly in the federal government. To examine determinants of diversity, this study measured three attributes of diversity of the 291 federal agencies in 2004. One of the most striking findings of this analysis is the relationships between diversity and agencies' policy responsibility. The results demonstrate that the type of policy responsibility the agency primarily administers is one important determinant of diversity in federal employment. The regulatory and distributive agencies tend to have lower levels of race and age diversity, noting that these agencies are still overrepresented by young White males. Another interesting finding is that federal agencies achieved the balance between female and

male employees across the white-collar occupational categories in federal employment. One possible explanation will be that as women have more opportunities to access higher education than in the past, they are more likely to achieve professional skills and knowledge, increasing the probability for women to obtain white-collar occupations. Frustratingly, political characteristics of public organizations were not significantly associated with the variation of diversity in this study. The most likely explanation will be that federal agencies may already be equally affected by the government's long-time commitment to workforce diversity, leading to the very slight variation in the levels of influence.

Chapter 5 and 6 investigated the complex relationships between diversity and outcomes by taking into account various contextual variables and their impacts on the relationships between diversity and its consequences. Chapter 5 sought to understand the effects of diversity and important contextual factors on organizational performance, while Chapter 6 focused primarily on affective outcomes including job satisfaction and turnover intention of employees and relationships.

In Chapter 5, the most noticeable finding is the moderating effects of diversity management on the relationship between race diversity and organizational performance. The results demonstrated that effective management for diversity positively moderates the relationship between race diversity and organizational performance, enhancing or even reversing the negative effects of diversity into positive impacts. For example, when the agency managed race diversity effectively, higher levels of race diversity were positively associated with organizational performance. In contrast, higher levels of race diversity, in the agency that was not successful in managing diversity, were negatively related to the agency's performance.

In a similar line, when the agency poorly manages diversity, higher levels of age diversity were negatively associated with organizational performance.

Affective outcomes of diversity will be as much important as organizational performance for organizational effectiveness, given that human resources are important assets in organizations. The findings presented in Chapter 6 revealed that contextual variables significantly affect the relationships between diversity and turnover intention of employees in the way that job satisfaction mediates the moderating effects of diversity management on turnover intention of employees. In agencies that conduct effective management for race diversity, employees show higher levels of job satisfaction even though race diversity is negatively associated with job satisfaction. More interestingly, minority employees in racially well-diversified work settings tend to have higher job satisfaction and lower intention to leave their jobs. In addition, the results show that when agencies successfully manage diversity the turnover intention of employees further decreased. However, this study could not find consistent patterns of the moderating effects of diversity management on the relationship between diversity and turnover intention. It may be attributed to numerous factors that may affect employees' intention as previous studies have argued. Even given some inconsistent findings, this study contributed to the literature, systematically testing my argument that the relationships between diversity and its consequences are not as simple as previous studies assumed and inconsistent empirical findings may be attributed to complicated relationships among various contextual factors. Further, this study uncovered the part of contexts influencing the relationships between diversity and outcomes and opened a new venue for future research.

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7. 2 Contributions and Limitations

The most significant contribution of this study is that it is the first attempt to evaluate the effects of diversity management on organizational effectiveness in the context of public organizations. Some scholars have already conducted research on the direct effects of diversity and representation on organizational performance, but no previous study systematically examined how managerial efforts for diversity and other important contextual factors can affect the relationships between diversity and consequences in the public sector. As noted, numerous diversity researchers have argued that diversity is a multifaceted construct that interacts with various contextual factors and affects consequences through process factors, encouraging more systematic investigation on the complex relationships between diversity and results. In this sense, this study contributes to our understanding of how diversity affects organizational effectiveness. Further, the results provide important implications for public managers and policy makers as well as the public management literature. When organizations manage diversity effectively diversity can lead to completely different results in a positive way, otherwise diversity *per se* or bad management may cause damage to organizational effectiveness. Given that public organizations have become increasingly diversified in terms of various attributes of heterogeneity, this study makes public managers well aware of how important their roles that help employees to work well together and collaborate successfully are in public organizations.

Further, this study also contributes to the diversity literature demonstrating that diversity affects individual and organizational outcomes through complex processes. Previously, numerous studies have focused primarily on the direct effects of diversity *per se* on

organizational effectiveness without taking potential processes into serious consideration. It is very recent that diversity scholars realized the important roles of context in moderating or mediating the relationship between diversity and organizational effectiveness. This study not only empirically proved that various characteristics of context, including managerial efforts on diversity, team processes, organizational culture, and demographic composition of workgroups, significantly moderate diversity impacts on important outcomes in both individual- and organizational-level, but also investigated how they affect those relationships. By doing so, this study initiated further argument on the multifaceted characteristics of diversity and complex effects of various contextual factors that might influence diversity impacts on organizational effectiveness.

Finally, this study is one of a few quantitative studies of diversity in public administration. Further, this research is the first that systematically analyzed the most representative data of the federal government that have been drawn from the 291 federal agencies and the largest survey over 150,000 federal employees participated. Most of the previous diversity research has used data drawn from private businesses in limited fields or has been limited to case studies. The external validity of the results remained questionable. Given that the present study has the most representative sample of the U.S. federal government ever used, the results will contribute to better understanding how diversity affects organizational effectiveness, especially in the context of public organizations. Further, few previous studies examined the diversity effects on organizational effectiveness using data drawn from the U.S. federal government.

Several limitations of this study are discussed as well. One primary limitation of this study is that due to data limitation I did not measure potential attributes of diversity that may possibly affect organizational performance or interpersonal relationships among members in organizations. For example, some studies argued that diversity of work-related characteristics, such as functional backgrounds and education, significantly affects organizational performance. However, it is not possible for this study to examine the impacts of these attributes of diversity on organizational effectiveness. Future research should investigate more characteristics of diversity and their impacts in order to provide us better understanding of the multifaceted diversity effects.

Some measurements of this research may limit the validity of the findings. In this study, I developed the objective and subjective measures of diversity management. The subjective measure of diversity management was developed based on employees' evaluation of diversity management practices of their agencies, while the objective measure was a proxy measure developed by computing the proportion of EEO complaints reported to the EEO office of the agency. The reliability and validity of the objective measure of diversity management may remain questionable. There are a number of other factors that may possibly affect the EEO complaints. For example, organizational culture may allow more open discussion for the issue, thereby making employees feel more comfortable to report their concerns to the EEO office.

In addition, the study of determinants of diversity may have similar limitations as well. The measure of the type of policy responsibility may leave room for debate. This study classified agencies into three categories based on the characteristics of programs they administer. However, scholars have argued that to identify the type of policy the agency is

responsible for, the agency's pattern of spending may be a more accurate measure. For example, higher percentage of budget for personnel compensation implies that the agency administers labor-intensive business, thereby requiring "an extensive systems for monitoring compliance and for carrying out enforcement" (Chun, 2003; Levine et al., 1990; Salamon, 2002, p. 158). Thus, they argued that agencies that assign the high proportion of budget to personnel compensation are likely to be responsible for regulatory policy. However, this method does not distinguish between distributive and redistributive agencies. In addition, as agencies increasingly execute mixed policies and programs the characteristics of programs they administer might be a better measure in a broader sense. Future research should reduce these limitations developing and refining measures.

Finally, as with many quantitative studies, this study should be complemented by qualitative research. Interviews with public managers and employees from different backgrounds will provide us more realistic view on diversity and its impacts in public organizations. Although some measures are developed based on employees' responses to relevant survey questions and many control variables are included in my models, the findings still tell us very limited aspects of their thoughts and feelings in increasingly diversified work environments. Qualitative research will improve our understating of diversity enabling us to take a deeper look at what actually happen in organizations

7. 3 Practical Implications

This study aims to improve our understanding of diversity and its impacts on individual- and organizational-level factors. Further, it provides some important implications

for public managers and policy makers. Perhaps the most important implication for practitioners will be that demographic diversity in employee populations should be carefully managed in order to benefit their organizations and employees, especially in increasingly diversified work environments. As noted earlier, diversity may enhance individual and organizational performance as a great source of creativity, or jeopardize them by devastating conflicts, depending on how effectively the group handles conflict and differences (Chatman and Flynn, 2001; Chatman et al., 1998; Foldy, 2004; Jehn, Northcraft, and Neale, 1999).

Evidently, the results of this research demonstrate that diversity *per se* may not improve organizational performance or employees' job satisfaction. Rather, whether diversity benefits organizations depends on various process factors, such as diversity management, teamwork, and organizational culture. For example, when successful managed, the positive effects of diversity increase while the negative effects are alleviated. This clearly implies that the roles of managerial efforts and leadership are substantially important in improving organizational performance and retaining valuable human resources in increasingly diversified public organizations. Indeed, the Bush Administration announced the Human Capital Assessment and Accountability Framework (HCAAF) that provides HRM strategies, tools, and methods for agencies to use for their workforces. Diversity management has been considered as one of critical success factors in the result-oriented performance culture system. Then, public managers and policy makers will see that sufficient managerial efforts must be necessarily invested in harmonizing differences for successfully management of their organizations.

What determines the variation of diversity in federal agencies will also provide important insight to public managers and practitioners. While the federal government has been

successful in recruiting people with different backgrounds, in recent years the rate of progress

appears to have slowed down, affected by a new political conservatism (Brewer and Selden,

2003; Button and Rienzo, 2003; Kellough, Selden, and Legge, 1997; Riccucci, 1997). In order

not to lose the significant achievements made during the last half of the twentieth century,

policy makers and public managers should pay greater attention to what affects workforce

diversity in public organizations.

7. 4 Thoughts about Future Research

Although this study achieved a number of interesting findings, much more issues

remain for further research. Opening potential avenues for diversity research in public

administration will be one of the meaningful contributions of this research. In addition, the

limitations of this study should be revisited and addressed again in future research as well.

First, in the analysis of the determinants of diversity, regardless of some interesting

findings the results do not reveal strong consistent patterns in the relationships between the

three dimensions of diversity and exploratory variables. As discussed earlier, previous literature

examined a large array of variables, but failed to reach an agreement, suggesting that numerous

potential variables are involved in determining the variation of diversity in federal agencies. In

addition, this also indicates that the relationships between diversity and determinants may be

different depending on the attributes of diversity. Future research should take a careful look at

what relationship exists between each of the attributes of diversity and its predictors. Although

all of the models of diversity determinants are statistically significant, they appear to explain

only small proportions of the variations. Future research should focus on exploring more valid

predictors that have stronger explanatory power for the variation in diversity in federal agencies.

Various attributes of diversity may lead to different consequences in public organizations. While easily observable attributes of diversity, such as race/ ethnicity, gender, and age, have been usually considered as most important dimensions of diversity, diversity on less observable or underlying attributes, such as religion, education, functional or professional background, tenure in the organization, socioeconomic background, or personality characteristics or values, has been less frequently studied. However, given that these characteristics substantially affect an individual's thoughts and organizational behavior, this "invisible diversity" should be carefully investigated as well. For example, diversity in functional or professional backgrounds may affect organizational performance either positively or negatively, depending on the characteristics of tasks. In a similar line, diversity in socioeconomic background or values may affect interpersonal relationships among workgroup members. Future research should examine a broader range of diversity attributes and their impacts on individuals and organizations in order to improve our understanding on diversity further.

Refining and validating measures, such as diversity management and policy responsibility, are another important steps that should be accomplished. For example, agencies are required to report the number and issues of EEO complaints, demographic information of filers, and final agency actions. The agency's final decision and action involving discrimination represent how well the agency deals with the concerns of employees associated with EEO.

Considering both sides – complaints and the agency's response – will improve the reliability and validity of the measure.

Finally, this study did not find a consistent pattern between diversity management and turnover intention of employees. One possible explanation is that numerous factors influence employees' intention to leave their organizations. Scholars have argued that turnover may be affected by at least 26 separate variables, including social, organizational, job, and personal characteristics (Cotton and Tuttle, 1986). Therefore, possible effects of work characteristics and individual factors on turnover should be controlled to obtain a more accurate pattern of the relationships between diversity and turnover. As briefly mentioned earlier, an actual rate of turnover may show us a much different picture of the relationship between diversity and employee turnover. Intention to leave is more likely to be associated with organizational commitment and may not necessarily lead to actual turnover. Employing the actual number of turnover will contribute to explaining the effects of diversity on employee turnover, aiding public managers and policy makers in retaining their valuable human resources.

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APPENDIX

CONSTRUCTION OF INDEX VARIABLES

Organizational Performance

◆ How would you rate the overall quality of work done by your work group?

◆ Overall, how good a job do you feel is being done by your immediate supervisor/ team leader?

◆ The workforce has the job- relevant knowledge and skills necessary to accomplish organizational goals

◆ The skill level in my work unit has improved in the past year.

Diversity Management

◆ Supervisors/ team-leaders in my work unit are committed to a workforce representative of all segments of society.

◆ Policies and programs promote diversity in the workplace (for example, recruiting minorities and women, training in awareness of diversity issues, mentoring).

◆ Managers/ supervisors / team leaders work well with employees of different backgrounds.

Result-Oriented Organizational Culture

◆ 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.

◆ High-performing employees in my work unit are recognized or rewarded on a timely basis.

◆ Employees are rewarded for providing high quality products and services to customers.

◆ Creativity and innovation are rewarded.

◆ 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.

◆ In my work unit, personnel decisions are based on merit.

Team Processes

◆ The people I work with cooperate to get the job done.

◆ Employees in my work unit share job knowledge with each other.

Job Satisfaction

◆ Considering everything, how satisfied are you with your job?

◆ Considering everything, how satisfied are you with your organization?

◆ How satisfied are you with your involvement in decisions that affect your work?

◆ How satisfied are you with the information you receive from management on what's going on in your organization?

◆ How satisfied are you with the recognition you receive for doing a good job?

◆ How satisfied are you with the policies and practices of your senior leaders?

◆ How satisfied are you with your opportunity to get a better job in your organization?

◆ How satisfied are you with the training you receive for your present job?