THE DETERMINANTS OF SECTOR CHOICE AND EARNING ACROSS THE PUBLIC, FOR-PROFIT, AND NONPROFIT SECTORS: HIGHLIGHTING THE DIFFERENCES BETWEEN MEN AND WOMEN

by

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(Under the Direction of Vicky Wilkins)

ABSTRACT

As the nonprofit sector has become a more significant part of the economy in the United States, scholars have paid more attention to nonprofit employment. Despite this increased research interest in the nonprofit workforce, however, very little research has sought to understand its characteristics. This study examines the factors that affect a person's choice to work in a specific sector in order to understand one of the more distinctive characteristics of nonprofit employment – overrepresentation of women in the nonprofit sector. In this study, both aspects of utility maximization and availability of alternatives in sector choice are considered. Though existing research on sector choice focuses on a binary choice either between for-profit and nonprofit or between for-profit and public, this study views a sector choice of prime-age salaried workers as a three-way choice among for-profit, nonprofit, and public sectors using 2003-2007 Current Population Survey September supplement data.

This study further contributes to the literature on nonprofit employment by testing the impact of nonprofit status on an individual's earnings. When women account for an

overwhelming majority of the nonprofit workforce, examining the impact of nonprofit employment on wages is very important in terms of understanding women's economic well-being across different sectors. Because individuals self-select into a particular sector and one's earnings and sector of employment tend to be jointly determined, this study utilizes the endogenous switching regression to correct the self-selection bias in earnings determination.

The results of the study indicate that the so-called "feminine" industries are concentrated in the nonprofit sector, and this gendered industry structure of the nonprofit sector attributes to women's overrepresentation in the sector. The results also suggest that women with more education and more experience may choose nonprofit jobs over jobs in the other sectors, and therefore, there may a brain drain of females into the nonprofit sector. The findings show that nonprofit employment is generally associated with negative wage differentials, suggesting that nonprofit workers may accept lower earnings in the sector in order to achieve their intrinsic motivation or to have better job-related amenities.

INDEX WORDS: Sector choice, Nonprofit sector, Women, Overrepresentation, Wage, Motivation, Self-selection

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A Dissertation Submitted to the Graduate Faculty of the University of Georgia in Partial Fulfillment of the Requirements for the Degree

DOCTOR OF PHILOSOPHY

Athens, Georgia

2009

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August 2009

DEDICATION

I dedicate my dissertation to my father, Won-gil Lee, who has shown me what love and courage mean.

ACKNOWLEDGEMENTS

The motivation for this study goes back to 2004, when I was doing my internship at a small nonprofit organization in Austin, Texas. The organization I worked with had total of 5 full-time employees, and four of them were women. The situation was not very different in larger organizations where a vast majority of nonprofit employees were women. Then I started to wonder why there are so many women in the nonprofit sector. This study is the outcome of this inquiry. I am thankful to the staff at the Texas Partnership for End-of-life Care for motivating my curiosity.

Faculty and staff members of the Department of Public Administration and Policy at the University of Georgia (UGA) have provided me with all of the resources I needed in search for the answer to my research question. They have been an endless source for social, emotional, academic, and administrative support, and have helped me stay strong whenever I encountered challenges in the process. I am also thankful to Jeff Brudney, who has continued to be a mentor and research partner even after he departed from UGA.

I am deeply indebted to my dissertation committee, who provided me with guidance in developing and completing this study. Chao Guo has shared his invaluable insights as the only nonprofit specialist in the department. Ed Kellough was always a good source of advice despite his duties as the Department Head. Jeff Wenger has helped me with research methodology not only in developing this study but also for the

four years that I have spent at the University of Georgia. My committee chair, Vicky Wilkins, is the best advisor one could have. She has always given selflessly of her time, helping me with both research and teaching. As one of the most productive scholars in the field, she is an inspiration for young academics, especially for young female scholars, by proving that one's gender is not a variable included in the equation for academic performance.

I am also grateful to Melody Herrington, Mitzi Heck, and Kelly Beardon for their excellent help in finding resources, registering for courses, and other complicated administrative issues. Last, but not least, I am indebted to two individuals, Doyeon and Taehyun Won. My husband Doyeon has always been there for me, providing me with constructive comments and emotional support. My son Taehyun has been the greatest support in the entire process by motivating me to be a mother whom he will be proud of.

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CHAPTER 1

INTRODUCTION

The nonprofit sector is an increasingly important part of the US economy. Nonprofit organizations play a crucial role in providing Americans with health care, education, recreation, art, and social services, to name a few. According to the National Center for Charitable Statistics (NCCS), there were over 1.5 million nonprofit organizations in the United States in 2008. Between 1987 and 2006, the growth rate of nonprofit organizations was double that of the business sector (Independent Sector 2007). In terms of revenue, the nonprofit sector accounts for 12 percent of the U.S. Gross Domestic Product (GDP), which was approximately $11.3 trillion in 2006. This marked a 36 percent increase in revenue since 1996. In fact, the nonprofit sector's revenues increased by an inflation-adjusted 61.5 percent from 1994 to 2004 while the nation's gross domestic product grew by 36.6 percent for the same period (NCCS, 2007).

The nonprofit sector also has a significant share of employees in the labor market. According to Salamon and Sokolowski's analysis of the 2004 Quarterly Census of Employment and Wages, 501(c)(3) organizations alone employed 9.4 million individuals, or roughly 7.2 percent of the U.S. economy in 2004. If volunteers had been included, the total workforce of these organizations would have reached 14.1 million full-time equivalents (FTEs). Employees of 501(c)(3) organizations earned $36.1 billion

which accounted for 6.6 percent of total wages paid in the U.S. in 2004 (Salamon and Sokolowski 2006). Including other types of nonprofit organizations, nonprofits accounted for 8.3 percent of the wages and salaries paid in the United States in the same year. (NCCS 2007). The significance of the nonprofit sector employment has rapidly increased over the last three decades. According to Independent Sector (2002), the average annual growth in employment for nonprofits between 1977 and 2001 was up to 2.5 percent higher than the rate for business corporations (1.8 percent) or the rate for government agencies (1.6 percent). From 2002 to 2004, the number of paid nonprofit workers grew by 5.1 percent while the total number of workers in the US workforce actually decreased by 0.2 percent during the same time period (Salamon and Sokolowski 2006). The rapidly increasing importance of the sector provides a compelling reason for better understanding the nature of the nonprofit sector and identifying people working in the sector.

Despite the significance of the nonprofit sector in the United States, little is known about the characteristics of nonprofit employment. One of the more distinctive characteristics of nonprofit employment is the high concentration of women in the sector. Historically, the nonprofit sector has always been an important sector of employment for women (O'Neill 1994; Preston 1994). In the United States, women have been active members of voluntary associations by launching local charities, participating in suffrage movements, and creating philanthropic ventures (McCarthy 1994). Research unequivocally finds that women account for 68 percent of all nonprofit employees, though a small variation exists among sub-sectors and that the proportion of women has remained remarkably consistent over the past two decades (Halpern 2006;

Independent Sector 2002; Johnston and Rudney 1987; Light 2002; Mirvis and Hackett 1983). Considering that women account for 49 percent of total US workforce, they are clearly overrepresented in the nonprofit sector. If volunteers are included, the proportion of women in the nonprofit workforce is even higher (Salamon 1999; Salamon and Anheier 1997; Wilson and Musick 1997).

While women account for more than two thirds of nonprofit workforce, very little is known about why they work for nonprofits. Understanding why many women choose to work in the nonprofit sector is important to any type of organization, whether it is public, private, or nonprofit, because employers in recent times compete to recruit qualified women in order to have more diverse and balanced workforce (Mathews 1998; Thomas 2006). As an effort to increase diversity, many organizations have adopted recruitment policies to fill positions with women as well as ethnic minorities where these groups have been underutilized. Research also suggests that greater gender diversity in the workplace has many benefits including positive influence on group member morale and group cohesion (Jehn et al. 1999; Lee and Farh 2004).

With the intention to understand why more women work for nonprofit organizations, this study investigates the factors that determine an individual's choice of employment sector. Overrepresentation of women in the nonprofit sector is the byproduct of their choice. Consequently, by identifying the determinants of individual's employment sector, this study can also examine how women's sector choice differs from men's choice if their choices are different at all. Comprehending these divergences based on sex will then lead to identifying what is behind the concentration of women in the sector.

In studying people's decisions to work for nonprofits, one should ask first whether they actively choose to work for nonprofits because of the greater benefits associated with working in the sector relative to other sectors or whether they involuntarily choose a nonprofit sector job because of the external factors that influence their choice. On the one hand, a person may work in the nonprofit sector for the reason that he or she gets more both monetary and non-monetary benefits by working for nonprofits. On the other hand, this person may have no alternatives as one's employment opportunities are restricted to the nonprofit sector. Since one's sector choice is determined not only by utility maximization but also by availability of alternatives, both aspects need to be examined to properly model his or her choice.

A related, but distinctive question regarding an individual's choice to work in the nonprofit sector is what nonprofit employment means for workers in terms of their wages. What are the costs and benefits of nonprofit employment in terms of a person's earnings? The implication of nonprofit effect on earnings is more significant for women because of their concentration in the nonprofit sector. Are nonprofit women financially better or worse off in the nonprofit sector compared to their male colleagues? Are they financially better or worse off in the nonprofit sector compared to female employees in other sectors? Do women have the characteristics that result in higher wages in the nonprofit sector? The issue of women's overrepresentation in nonprofits is not limited to counting numbers, and it has a much broader implication on women's economic well-being.

In order to understand the relationship between women's concentration in the nonprofit sector and their welfare, this study investigates the effect of sector choice on

an individual's earnings, and especially the implication of the nonprofit employment on a worker's wage. While one's sector choice is influenced by earnings differentials across sectors, one's earnings is also partly determined by one's employment sector. Due to this endogeneity, estimation of sector-specific earnings should be corrected for self-selection bias from one's sector choice. By examining the simultaneous determination of one's earnings and employment sector, this study aims to reveal the meaning of nonprofit employment in terms of a worker's welfare. Provided that women account for a vast majority of nonprofit workforce, identifying the nonprofit effect on earnings will contribute to understanding women's economic well-being as participants in the labor force.

While this study attempts to answer broader research questions such as how people decide their employment sector and what impacts their sector choices have on their earnings, it also aims to contribute to better understanding of the sector and its "gendered nature" by focusing on how one's sex affects the sector choice and earnings. As Steinberg and Jacobs (1992, 80) point out, with women accounting for an overwhelming majority of the nonprofit workforce and with the occupations that are traditionally considered "women's work" concentrating in the sector, discussion of the nonprofit sector without focusing on the gendered aspect of nonprofit institutions would be "as curious as would be studying ghettos without noticing the race or ethnicity of the people who live in them." This gendered nature of the nonprofit institutions suggests that women's overrepresentation in the nonprofit sector has important implications for organizational structure and culture. As O'Neill (1994, 14) argues, "The symbols,

images, and values, and typical activities of the sector are female and soft." In this sense, the nonprofit sector is indeed the "feminine sector."

Approach of the Study

This study aims to examine how individuals choose employment within a sector. In analyzing sector choice, this research seeks to find the factors that affect a person's choice to work in a specific sector. The key questions that will be answered in this study are the extent that individuals make the active decision of nonprofit employment and the extent they are constrained to make such a decision by social restrictions imposed upon them. On the one hand, individuals must make decisions about their career as a way to satisfy their preferences which include satisfaction of nonmonetary benefits as well as monetary benefits. On the other hand, individuals' career choices are also influenced by factors that limit the set of choices available to them. This study examines both voluntary and involuntary dimensions of sector choice to better grasp how people decide employment sector and whether men and women have different preferences and opportunities. Studying the determinants of individual sector choice will help to better comprehend why more women are working for nonprofits, because their overrepresentation is a consequence of their choosing (or being compelled to choose) to work for the nonprofit sector.

After examining how people choose their employment sector, this study seeks to fulfill a second purpose: to analyze the association between a person's sector choice and wage. Because of the possible variation in salaries across the sectors, working in the nonprofit sector may have a special implication for its employees' welfare. Does

nonprofit employment mean a wage penalty, a premium, or otherwise? The implication of nonprofit employment on individual earnings may have even greater importance in regard to women's economic well-being provided that they account for a vast majority of the sector's labor force. Researchers generally find that wages in the nonprofit sector tend to lag behind those in both the for-profit and public sectors (Frank 1996; Leete 2000; McMullen and Schellenberg 2003; Salamon and Sokolowski 2006; Weisbrod 1983) while some find that nonprofit workers are actually paid better than for-profit employees in certain industries including education and social services (Holtmann and Idson 1993; Salamon and Sokolowski 2006; Shahpoori and Smith 2005). Others report no significant nonprofit wage differentials (Leete 2001; Mocan and Viola 1997; Ruhm and Borkoski 2003). Three competing hypotheses (nonprofit penalty, nonprofit premium, and no nonprofit differentials) on nonprofit wage differentials are introduced and examined later with empirical models.

In studying nonprofit wage differentials, it is crucial to recognize that the determination of employment sector and the determination of earnings are not two separate processes. In fact, while the prospective earning in each sector affects an individual's choice of employment sector, the choice of sector also influences her earning. When people possess a set of characteristics that pay them better in one sector than in the others, individuals may do financially better or worse depending on their choice among different sectors (Casero and Seshan 2006; Roy 1951). This question of simultaneous determination of employment sector and earnings is examined in this study. If nonprofit employees are financially better-off in the nonprofit sector than random individuals, they may select into the nonprofit sector because they have

comparative advantage in the sector. In regard to women's overrepresentation, women may possess personal traits and skills that are better rewarded in the nonprofit sector than in the other sectors. Therefore, they may choose nonprofit employment based on their comparative advantage. If nonprofit workers are financially worse-off in the nonprofit sector than random workers working in the sector, it implies that workers choose nonprofit employment despite the comparative disadvantage in the sector. Overrepresentation of women in the sector, in this sense, suggests that women are making a sub-optimal choice, sorting themselves into the least paying sector. This leads to the follow-up question of whether nonprofit workers donate their labor in order to produce socially desirable goods as labor donation theory claims or they are getting other benefits than salaries.

The present study examines the determinants of an individual's sector choice and its effect on his or her earnings, and is organized as following: Chapter two reviews the literature on an individual's sector choice and why more women may choose nonprofit employment. Various factors, including earnings differential, gendered industry structure, upward mobility, family-friendly policies, and intrinsic motivation, are examined. Chapter three provides a review of competing hypotheses on nonprofit wage differentials with empirical evidences for each. It also addresses the issue of self-selection in the determination of earnings and employment sector, and the need for using endogenous switching regression method. In Chapter four, the data source is identified and empirical models for sector choice and endogenous switching regression are presented. Chapter five demonstrates the findings of the sector choice model. In Chapter six, estimation results of the endogenous switching regression for earnings

model are presented and summarized. Chapter seven concludes the findings, summarizes the contributions, and suggests next steps for further research.

CHAPTER 2

WHAT DETERMINES AN INDIVIDUAL'S SECTOR CHOICE?

LITERATURE REVIEW AND HYPOTHESES

Jobs in the public, for-profit, and nonprofit sectors may differ in several ways, including pay, advancement opportunities, job security, skill requirements, and incentives (Blank 1985; Lewis and Frank 2002). Thus, workers with a particular set of personal characteristics and preferences may find employment in the nonprofit sector more attractive while others with a different set of characteristics and skills may prefer public or for-profit employment over nonprofit employment (Blank 1985). Provided that women's presence in the nonprofit sector is a consequence of their choice of employment sector, either voluntary or involuntary, there must be some factors that prompt more women to choose to work for nonprofit organizations. The present study views an individual's sector choice as a result of preference satisfaction, but it also recognizes that people's choices are shaped by societal factors which are out of their control. While individuals actively choose a specific employment sector to better satisfy their preferences, their choice sets are restricted by social norms and stereotypes.

First, in terms of actively choosing to work for nonprofits, individuals make sector choice decisions to maximize their utility. When saying people maximize utility, it does not necessarily mean they maximize their material self-interest only. As a matter of fact, contemporary rational choice theory says nothing about what utility consists of.

Contemporary rational choice theorists rather argue that utility maximization involves "doing what one most prefers to do" (Hausman and McPherson 2006). In this sense, preference satisfaction includes not only meeting the economic and self-interest needs and wants but also fulfilling the intrinsic motivations. Therefore, the choice of employment sector is based on both the economic gains and the desirability of working in a particular sector (Adamchik and Bedi 2000). Because a person's intrinsic motivation affects one's perception of desirability of working in a sector, estimation of the sector choice should include the intrinsic motivation of an individual. This research terms the intrinsic motivation associated with employment in the nonprofit sector as "nonprofit motivation."

Second, in terms of being constrained to choose to work for nonprofits, this research focuses on structural factors that shape an individual's choice. Apart from an individual's utility maximization, certain societal forces impose constraints on an individual's choices, (i.e., the alternatives from which they can choose). In the case of women, gender stereotypes tend to justify the social system by maintaining the division of labor between men and women (Cejka and Eagly 1999). This study focuses on industry segregation based on sex and industry structure of the nonprofit sector. When women's participation in paid work is often limited in certain industries and those industries are heavily concentrated in the nonprofit sector, women may have few other options but to work for nonprofit organizations. In this sense, women are involuntarily pushed to work for nonprofits rather than actively choosing the nonprofit employment over other types of employment.

In this study, the following factors that influence an individual's sector choice are examined: 1) earnings differential among the sectors, 2) industry, 3) managerial or professional occupation, 4) family situation, and 5) the intrinsic motivation that leads to nonprofit employment. Below, each hypothesis is explained in reference to the literature.

Earnings Differentials among the Sectors

Monetary compensation is one of the key considerations in an individual's career decisions. Utility maximization predicts that individuals choose careers that generate the highest income if other conditions are identical. If returns on worker characteristics are same across the sectors, that is, if one's potential earnings are determined only by one's own characteristics including human capital and demographic characteristics, an individual will earn the exact same salary regardless of one's employment sector. Since Roy's (1951) study of inter-sectoral mobility, however, scholars have shown that returns on worker characteristics may differ from one sector to another (Blank 1985; Casero and Seshan 2006). In Roy's model, workers choose sectors on the basis of income maximization, between fishing and hunting, and each of them requires input of different abilities (Sjögren 2000). Some skills and capabilities are valued more in the fishing sector than in the hunting sector, and vice versa. Casero and Seshan (2006) find that workers in the public sector earn higher rates of return to post-secondary education than private sectors workers. These findings suggest that two individuals with the exact same set of capabilities may earn different salaries depending on their choice of sector.

When pay-offs for individual characteristics vary across the sectors, individuals' wages will differ depending upon which sector they work in even though they possess identical human capital and socio-demographic characteristics. A rational individual, of course, will want to work in a sector where they earn the most income. As a consequence, people focus on the differences in sector-specific earnings when they compare employment opportunities in the for-profit, the public, and the nonprofit sectors. Individuals calculate what they would earn in each of the sectors based on their personal characteristics rather than simply comparing average earnings across the sectors, because one's earnings in a respective sector are determined by one's own human capital and other characteristics rather than those of an average worker.

Hypothesis 1: All else equal, individuals are more likely to work in the sector where they make more money.

Industries

A person's industry is another important determinant of sector choice because the distribution of different industries varies across for-profit, public, and nonprofit sectors. For instance, the manufacturing industry is concentrated in the for-profit sector while the education and health industries prosper in the nonprofit and public sectors. If a person works in an industry that is concentrated in a particular sector, he or she has little choice but to work in that sector.

Historically, employment options for women have been constrained to "pink-collar" and similar industries (Anker 1997; Bielby and Baron 1986). The "pink-collar" industries include a number of fields perceived as requiring feminine

personality traits, such as nursing and teaching (Glick et al. 1995). Research shows that despite the increase in women's participation in labor force and affirmative action policies, women continue to find it difficult to enter male-dominated fields (Kerr et al. 2002; Newman 1994; Sneed 2007). As a consequence, women tend to be concentrated in so-called "feminine" industries, for example, nursing, education, and social services. The organizational and social barriers that prevent women from pursuing a career in certain fields are called "glass walls" (Miller et al. 1999). Miller and colleagues (1999, 218) describe glass walls as "occupational segregation attributed to employment barriers that restrict the access of women to certain types of jobs or that trap them within certain types of jobs."

According to Independent Sector (2002), in 2001, 42 percent of all nonprofit workers were employed in health services, specifically in nonprofit hospitals. Educational institutions were second, employing 22 percent of all workers in the sector. This means that health services and education institutions combined employed 64 percent of all workers in the sector in 2001. A more recent report by Salamon and Sokolowski (2006) presents that, as of 2002, more than a half of nonprofit employment was in the health services and 15 percent was in education, a total of 65 percent of nonprofit employees working in the two industries. A majority of government jobs are also distributed in schools and libraries.

Historically, women have been a dominant part of the workforce in health and education industries although their participation in other industries has increased in the last half-century. Women account for 95 percent of all nurses (Davis and Bartfay 2001). They also account for 79 percent of all teachers in K-12 U.S. public schools (National

Education Association 2003). With these female-dominated industries being concentrated in the nonprofit sector, women's choice among different sectors may well be limited. Although women may choose to work only in particular fields based on their perception on what they are most capable of, one's beliefs of competencies for different occupations tend to be formed early on in life based on gender-specific stereotypes (Correll 2001; Wigfield and Eccles 2002). The industry structures as determining factors of sector choice suggest that many women may be pushed to work in the nonprofit sectors where the feminine industries are more prevalent rather than actively choose to work for nonprofit organizations.

Research on the nonprofit employment suggests that the industry and job characteristics of many nonprofit organizations may explain the overrepresentation of women in the sector. For instance, Preston (1990) found that after controlling for occupation, the difference in the probabilities of nonprofit employment between women and men decreases significantly. Johnston and Rudney (1987) also found that the kind of service performed by a particular service organization is a far more powerful determinant of employee characteristics, including sex, than whether the organization is profit- or nonprofit-oriented. These research findings together suggest that the concentration of the jobs and industries that are traditionally occupied by women in the nonprofit sector may provide an explanation for why women are overrepresented in nonprofit organizations compared to government agencies and business corporations.

Hypothesis 2: All else equal, individuals are more likely to work in the nonprofit sector or in the public sector if they work in health and education industries.

Holding Managerial or Professional Positions

Opportunities for career advancement are another important determinant in an individual's career choice. Individuals are expected to seek those opportunities if all else are equal. Research finds that opportunities for career advancement are less abundant in nonprofit firms compared to for-profit firms (DeVaro and Brookshire 2006; DeVaro and Samuelson 2004). De Varo and Samuelson (2004, 1) argue that the output in many nonprofit organizations is typically something of intrinsic interest to the workers and that incentives in those organizations are created "automatically." This allows, they conclude, nonprofit employers to use promotions as a tool for job assignment, but not as an incentive mechanism, and therefore, promotions are less likely in nonprofits.

If there are fewer opportunities for promotions, individuals will be less likely to be attracted to the nonprofit sector. However, the literature suggests that women, unlike their male counterparts, actually have a better prospect for career advancement in the nonprofit sector than they do in other sectors. As a matter of fact, there is a widely held view that the nonprofit sector has been more successful in providing women with the opportunities for leadership, power, and influence not available in other sectors (LeRoux and Sneed 2006; O'Neill 1994). Research suggests that the percentage of women in managerial, professional, and technical positions has been greater in the government and nonprofit sectors than in the for-profit sector (Burbridge 1998; Halpern 2006; LeRoux and Sneed 2006; Pitt-Catsouphes et al. 2004: Pynes 2000; The Federal Glass Ceiling Commission 2002). Pynes's study of nonprofit organizations reveals that there were more female chief executives and fiscal officers in nonprofit organizations than men (Pynes 2000), unlike in the for-profit sector where male chief executives outnumber

female counterparts. According to Halpern (2006), 60 percent of executive director positions in the nonprofit sector were taken by women. Burbridge (1998) also found that the percentage of women in managerial, professional, and technical positions was always greater in the government and the nonprofit sectors than in the for-profit sector between 1950 and 1990. The Federal Glass Ceiling Commission (2002) also found that most women managers were found in the nonprofit sector and the government sector. In their comparison of nonprofit organizations and for-profit firms with one hundred or more employees, Pitt-Catsouphes et al. (2004) found that higher percentage of women held executive positions in nonprofits than for-profits. LeRoux and Sneed (2006) find that women are even more likely to hold managerial positions in nonprofits than they are in local government agencies when similar occupational categories are compared.

The term glass ceiling refers to the set of invisible obstacles that prevent women from moving up in an organization. Despite increased participation of women in labor market, they are still concentrated in lower-level positions and hold a meager share of highest management positions (Mani 1997; Naff 1994; Powell and Butterfield 1994). Research suggests that contextual aspects of organizations substantially affect the opportunities for advancement within the organization (Blum et al. 1994; Goodman et al. 2003). Blum and colleagues (1994) also suggest that resource dependence and institutional considerations influence organization-level differences in percentage of management positions occupied by women. Specifically, they argue that organizations' perceptions of resource dependence and institutional isomorphism influence the placement of women into managerial positions (Blum et al. 1994). Following their logic, given nonprofit organizations' greater dependence on outside funding sources and the

pressure to conform to social norms, women are expected to have more opportunities to advance.

Provided that organizational glass ceilings limit the upward mobility of women to management positions, nonprofit employment may be perceived differently by men and women. Nonprofit employment will be a more attractive option for women than for their male counterparts if nonprofit organizations provide women with more opportunities for advancement. In other words, more women will work in the nonprofit sector because their upward mobility within organization is more likely to be limited by organizational glass ceilings in other sectors. Therefore, women's overrepresentation in the sector may be explained by the greater availability of managerial and professional positions that are open to women in the nonprofit sector.

Hypothesis 3-a: Individuals who hold managerial or professional positions are less likely to work in the nonprofit sector.

Hypothesis 3-b: Individuals who hold managerial or professional positions are more likely to work in the for-profit sector.

Hypothesis 3-c: Women who hold managerial or professional positions are more likely to work in the nonprofit sector.

Family Situation

People's career decision making is also influenced by their family situation (DeMartino and Barbato 2003; Roe 1957). Individuals with family obligations will act differently from those who do not have family members to support or care for. Workers who are married or have children are more likely to be attracted to an employer who

provides a family-friendly workplace, and literature has provided reasons why the nonprofit sector may be more family-friendly than other sectors. For instance, Osterman (1995) argues that organizations with high susceptibility to political environment and with high commitment work system tend to have better-developed work-life policies. The nonprofit sector has generally been believed to be more responsive to employee's family needs than either the for-profit or the public sectors because of higher societal expectations and ethical standards of fairness in the nonprofit sector in general (Gonyea 1999; Jeavons 1992). Goodstein (1994) argues that nonprofit organizations' greater resource dependency and receptivity to institutional pressures force nonprofit employers to get more involved in work and family issues than employers in other sectors. Moreover, nonprofits often require stronger commitment from their employees (Handy and Katz 1998; Mirvis and Hackett 1983), and therefore may well have incentives to engage more in work-life issues of the employees to boost organizational commitment among the employees.

While family-friendly policies are an attraction for everyone with families, there is a possibility that men and women may perceive those policies differently. Despite increasing participation of women in paid work, women still play a major role in providing care for family members (Hooyman and Gonyea 1995; Traustadottir 1988). In terms of assisting their elderly or infirm parents, women's responsibility has even grown over time with increased life expectancy (Pierret 2006). Women's role as the primary caregiver to children or other family members affects their decisions in the labor market because they may feel greater pressure to balance their work and family obligations (Becker 1985; Crosby et al. 2004; DeMartino and Barbato 2003; Ridgeway and Correll

2004). Since the responsibility of caring for family members falls primarily upon women, family-oriented work policies are an important consideration in their career choice. In other words, women are more likely than men to seek a job that allows them to balance their work and family obligations. Work-life policies such as parental leave, on-site child care, job sharing, and flexible hours would therefore be a great attraction for female candidates.

Research has generally supported the nonprofit sector's family-friendliness with findings that nonprofit organizations tend to offer more of these types of policies including flexible scheduling, child/elder care provisions and condensed workweeks (Gonyea 1999; Hakim 2000; Hohl 1996; Jeavons 1992; Pitt-Catsouphes et al. 2004). For example, Hohl (1996) found that most of the 156 Illinois-based nonprofit organizations she surveyed offered four types of flexible work arrangements, including flextime, part-time, compressed workweeks, and telecommuting. Pitt-Catsouphes and colleagues' (2004) analysis of the 1988 Business Work-Life Study also reveals that nonprofits with one hundred or more employees are more likely to offer various types of work-life policies and programs than for-profits. Scholars posit that the availability of these benefits may help to explain the overrepresentation of women in the nonprofit sector. For instance, Hakim (2000) argues that women are employed in the nonprofit sector in higher percentages than men based on the knowledge that nonprofit organizations provide more family-friendly policies than the other sectors. For any of the reasons listed above, if nonprofit organizations indeed provide more work-life policies than the public or for-profit sectors, individuals with families, especially women with

families, given their responsibility for family care, will be more likely to choose to work in the nonprofit sector rather than in other sectors.

Hypothesis 4-a: All else equal, Individuals with families are more likely to work in the nonprofit sector.

Hypothesis 4-b: All else equal, individuals with families are less likely to work in the for-profit sector.

Hypothesis 4-c: All else equal, women with families are more likely to work in the nonprofit sector than their male counterparts.

Intrinsic Motivation

Along with extrinsic benefits associated with an employment sector, an individual's sector choice is also shaped by one's intrinsic motivation. Intrinsic motivation is defined as working for the sake of the work itself rather than for some detachable outcomes (Ryan and Deci 2000). According to Deci and Ryan (1985, 4), individuals have different kinds of intrinsic needs and orientations, and "these intrinsic needs provide energy for them to act on the environment and manage aspects of their drives and emotions." When it comes to sector choice, people are expected to accept a job in a sector that provides a better fit for their own values and orientations than the other sectors do (Lee and Wilkins 2009).

Scholars suggest that nonprofits attract people with unique preferences that are most in consonance with the missions of nonprofit organizations (Handy and Katz 1998; Hansmann 1980; Mirvis and Hackett 1983). They argue that these organizations are organized along "different motivating and operational principles" than other types of

organizations (Leete 2000, 424), and therefore, nonprofit organizations will attract the types of employees dissimilar from those who work in the public and for-profit sectors. In other words, some people find working in the nonprofit sector more satisfying than others because they have distinctive intrinsic motivation associated with nonprofit employment. If women possess a higher level of this intrinsic motivation of nonprofit employment than that of men's, they will be more likely to work in the nonprofit sector.

Explaining the career choice with intrinsic motivation is not at all new. Public service motivation (PSM) literature is built around the emphasis on the role of intrinsic motivations in the individual's job choice. Defined as "an individual's predisposition to respond to motives grounded primarily or uniquely in public institutions and organizations" (Perry and Wise 1990), the PSM literature has argued that individuals who pursue public service careers have distinctive motivations from those of other members of society (Perry 1996). The PSM literature, in essence, argues that public employees are less likely to be motivated by material rewards and more likely to be motivated by intrinsic rewards that are derived from the satisfaction they experience from performing a task and that PSM is positively associated with the likelihood to work in the public sector (Houston 2000; Lewis and Frank 2002; Perry and Wise 1990; Vandenabeele and Hondeghem 2004).

Although it is believed that nonprofit employees are as intrinsically motivated by things other than monetary compensation as public sector employees are, the literature suggests that there remains an important difference between the two sectors, making generalizations of the intrinsic motivation of nonprofit and government workers problematic (Brown et al. 2000; DiMaggio and Anheier 1990; Goodin 2003; Kearns

1994; Salamon and Anheier 1997). The most fundamental difference is that nonprofit organizations are private in nature and institutionally different from government agencies (Salamon and Anheier 1997). The term “non-governmental organizations” is often used interchangeably with nonprofits. Nonprofits also contribute to pluralism by creating “centers of influence” outside the realm of the government and provide means through which disenfranchised groups can organize (DiMaggio and Anheier 1990, 151). Nonprofits also play a role as a voice from the margins by pointing out deficiencies and inequalities in government services and offering alternatives to them. Nonprofit organizations and public organizations also differ in setting policy priorities, the first striving to be responsive to individual clients, even at the expense of equity, and the latter trying to spread resources evenly over affected populations (Lipsky and Smith 1989). As a consequence, the human resources that each sector needs and those who are attracted to each sector will be different. In summary, as Goodin (2003, 21) argues, the nonprofit sector is “motivationally and organizationally distinct” from the state and the market, with a distinctive accountability regime from the other two. Under these circumstances, it is expected that nonprofit organizations and public agencies attract people with different motivations and characteristics.

Provided that the intrinsic motivation of nonprofit employment is differentiated from PSM, what is unique about this nonprofit motivation? This research finds the intrinsic motivation of nonprofit employees in the satisfaction of pro-social preferences. In order to qualify for tax-exemption, all nonprofit organizations must serve public purposes (Boris and Steuerle 2006). The majority (80 percent) of nonprofit organizations in the United States are 501(c)(3)s and 501(c)(4)s, which include public

charities, private foundations, civic leagues, social welfare organizations, and local associations of employees (Internal Revenue Service 2006). These two types of nonprofit organizations typically have missions of promoting community welfare and producing public goods, which typically involves caring for other people than (or in addition to) themselves.

Given the fact that charitable and welfare organizations consist of the largest part of the sector, nonprofit motivation may well be conceptualized as the satisfaction of pro-social preferences including helping and caring for others. Light (2002) reported that nonprofit employees were much more likely to state that reasons for taking their current job to help the public, make a difference, and do something worthwhile not only than for-profit sector but also than public sector employees. When nonprofit motivation is found in pro-social behaviors, a link can be found between volunteering and nonprofit motivation. Research shows that nonprofit employees are indeed more likely to volunteer than both for-profit and government employees, controlling for other social and demographic characteristics (Rotolo and Wilson 2006).

Literature on gender difference suggests that this unique nonprofit motivation may differ by sex. Women tend to view themselves as “connected” to others and therefore, are more likely to express a “morality of care” than men (Lyons 1983; Tronto 1987). Research reveals that women score higher on measures of altruism and empathy, attach more value to helping others (Donoghue 2001; Wilson and Musick 1997). Whether women were born with the caring nature or it is socially constructed is outside the scope of this research. Given these characteristics, women may view nonprofit employment more desirable and preference satisfying than men do. If the

nonprofit motivation is to be defined as helping and caring, women's stronger preference for the helping behavior may lead to employment in the nonprofit sector.

Hypothesis 5: Individuals who have greater nonprofit motivation are more likely to work in the nonprofit sector.

The five hypotheses on an individual's sector choice explained above are tested in this study. First, individuals choose nonprofit employment if they earn higher salaries than they do in other sectors. Second, people working in so-called "feminine" industries are more likely to work in the nonprofit sector. Third, individuals holding managerial or professional positions are less likely to work in nonprofits, but women in those positions are more likely to work in nonprofits. Fourth, individuals with families are more likely to work for nonprofits, and women with families are even more likely to do so. Lastly, people with greater nonprofit motivation are more likely to work for nonprofit.

Examining why people choose nonprofit employment is the first step in better understanding nonprofit employment. The next step to take is to appreciate what it means to work for nonprofits in regard to a person's earnings. Since sector choice and wage determination are not two separate processes, it is important to examine both questions. Chapter 3 reviews competing hypotheses on nonprofit wage differentials and addresses the issue of self-selection in wage determination.

CHAPTER 3

NONPROFIT WAGE DIFFERENTIALS: EARNINGS ACROSS THE SECTORS AND THE ISSUE OF SELF-SELECTION

A very important question related with people's sector choice is what the costs and benefits are, in terms of salary, of their choice. What is the impact of nonprofit employment on a person's wage? The increasing significance of nonprofit employment in the U.S. labor force suggests the need for studying the nonprofit wage differential. Although the exact percentage differs among scholars, the sector account for a significant part of total employment and its share has been rapidly increasing. Studying nonprofit wage differential is even more important in understanding women's welfare as participants in the labor market given women's overrepresentation in the nonprofit sector.

Salaries in the nonprofit sector are typically lower than salaries in the for-profit sector and in the public sector (Frank 1996; McMullen and Schellenberg 2003; Leete 2001; Preston 1989; Salamon and Sokolowski 2006; Weisbrod 1983). For instance, Salamon and Sokolowski (2006) reported that the average weekly wage for an employee of a 501(c)(3) organization was $627 in 2004, compared with $667 for a for-profit employee in their analysis of the Quarterly Census of Employment and Wages data. McMullen and Schellenberg (2003) also found that the median hourly earnings in the nonprofit sector were lower than those in the for-profit and quasi-public sectors from

their analysis of the 1999 Canadian Workplace Employee Survey. Preston (1989) reported that nonprofit white collar workers earn five to twenty percent less than for-profit white collar workers. In his comparison between for-profit and nonprofit sector lawyers' salaries, Weisbrod (1983) finds that nonprofit lawyers are paid substantially less. These findings suggest that nonprofit employees may accept lower wages than the market wage for some other reasons.

Not all research findings support nonprofit wage penalty, however. For example, Shahpoori and Smith (2005), with the data extracted from the July 2003 National Compensation Survey, found that the average hourly rate for all full-time workers in nonprofit hospitals ($20.20) was higher than the average hourly rate for full-time workers in private for-profit hospitals ($19.21). For part-time workers, the hourly salaries in nonprofit hospitals averaged $19.95 and those in for-profit ones averages $19.68. Borjas and colleagues (1993) and Holtmann and Idson (1993) found that employees in nonprofit nursing homes earned higher wages than those employed in for-profit nursing homes. Salamon and Sokolowski (2006) also reported that in 2004 nonprofit wages exceeded the for-profit wages of their counterparts in such industries as education, social services, residential care, and day care.

With more research being needed to understand nonprofit wage differentials, it is difficult to tell whether the nonprofit employment brings one's earnings up or down given the mixed and often contradictory research findings. The comparison of average earnings across sectors provides a very limited description of sector differences in earnings because differentials in earnings across the sectors may simply due to the variations in workers' personal characteristics. The fundamental question is, whether

there is indeed a nonprofit differential in wages. If there is a positive or negative nonprofit effect on a person's earnings, what does nonprofit premium or penalty mean in terms of women's economic well-being? Does nonprofit employment have same effect for men and women? In order to better understand the relationship between nonprofit employment and an individual's earnings, the following section of this study first reviews three conflicting hypotheses on nonprofit wage differentials. After reviewing the literature, the problem of self-selection in earnings determination is addressed.

Nonprofit Penalty in Earnings

Many believe that nonprofit wages generally lag behind those in for-profit firms and in governmental agencies, and scholars have proposed various explanations for the lower wages in the nonprofit sector. First, the labor donation theory views lower pay in the nonprofit sector as a consequence of employees' monetary donation to the production of public goods (Preston 1989). The theory predicts that nonprofit employees donate part of their labor and therefore, discount their wage in order to produce socially-desirable goods and services. François (2003) argues that because nonprofit workers care about the quality of services being provided to their customers, they tend to perform tasks beyond their strict job description, which, of course, is not reflected in their salary. This is possible because nonprofit status guarantees that management will not expropriate extra worker effort to lower costs or raise profits and ensures that workers' efforts will affect the final level of provision rather than increasing owner's profits (François 2003). In his comparison between earnings of lawyers in for-profit firms and earnings of lawyers in public interest firms, Weisbrod (1983) concludes that public

interest lawyers were perfectly aware of the negative differential in earnings and ready to accept it. Similarly, Frank (1996) explains nonprofit wage penalty with the concept of "social responsibility" of an occupation. He reports that expected salaries tend to fall as the social responsibility scale of an occupation increases. In summary, the labor donation theory claims that individuals knowingly make financial sacrifices to work in an organization whose mission is consistent with their own values and beliefs.

Another explanation for nonprofit wage penalty is self-sorting and screening. For instance, Hansmann (1980) argues that nonprofits tend to pay lower wage as a result of sorting mechanism through which individuals who are interested in accomplishing other meaningful things than monetary compensation signal their preferences. These individuals sort themselves into the lower-paying nonprofit sector because of the causes they believe in. Therefore, by not paying high wages to their employees, nonprofit organizations avoid attracting workers who may not have interests in line with the organization (Steinberg 1990). Handy and Katz (1998) also explain lower wage in the nonprofit sector with the concept of adverse selection. According to Handy and Katz, adverse selection issues dominate moral hazard issues in markets characterized by asymmetric information and the need for consumer trust. Put differently, in the nonprofit sector, the effect of self-selection indeed reduces the need for monitoring and the payment of an efficiency wage. Therefore, nonprofit firms tend to pay their employees lower pay than for-profit firms as an attempt to screen out uncommitted candidates rather than to monitor whether their employees shirk. In other words, by offering lower wage, nonprofit firms promote self-selection of committed candidates (Handy and Katz

1998). The self-sorting and screening theory claims that nonprofit workers will accept the below the market rate wage rate to pursue values and personal beliefs.

Others explain negative wage differential in the nonprofit sector with the amenities associated with nonprofit jobs. A number of scholars point out that nonprofits, especially philanthropic organizations, are likely to be situated in an environment where they ought to treat their employees in a manner that is consistent with the organization's overall mission (Jeavons 1994). Therefore, nonprofit organizations are more susceptible to institutional pressures which force them to make stronger commitment to employees' welfare (Goodstein 1994), by providing employees with various work-related amenities. Research supports this view by showing that nonprofits are more likely to provide better work-life policies than the policies of other type of organizations including flexible work hours, telecommuting, and condensed work weeks (Hakim 2000; Pitt-Catsouphes et al. 2004). Certain types of employees, most likely those who value work-related amenities more than others, will be more likely to accept lower wages in exchange for a more pleasant work environment.

Hypothesis 6: All else equal, employees in the nonprofit sector earn less than employees in the for-profit and public sectors.

Nonprofit Premium in Earnings

In contrast, a number of scholars have proposed reasons why nonprofit wages could be higher than wages in other sectors. First, the property right theory predicts nonprofit workers have a positive wage differential relative to for-profit workers because of nonprofit's non-distribution constraints. According to the property right theory,

managers will no longer minimize costs once the ownership and management are separated while the owner of a for-profit firm will always seek to maximize profits by minimizing costs (Preston 1988). The property rights theory, in essence, claims that non-distribution constraints on nonprofit organizations provide managers with weaker incentive to minimize costs, and consequently, tend to pay more for subordinates' labor (Borjas et al. 1983). As Borjas and colleagues (1983) explain, because of nonprofit organizations' freedom from taxes and from pressure to maximize profits, attenuated property rights of managers in nonprofits prompt them to distribute rents to their employees.

Another explanation for higher earnings in the nonprofit sector can be found in the efficiency wage theory. The efficiency wage theory claims that employers may choose to pay their employees a higher salary than market-clearing level because higher wages mean higher costs of shirking and turnover. Based on this efficiency wage theory, Ito and Domain (1987) argue that nonprofits tend to pay their employees an excessive wage because the higher the wage, the greater the penalty that shirkers would have to face when they are caught. Shirking is considered a more serious problem in nonprofit settings than for-profit settings due to the nature of nonprofit organizations' missions and activities. In summary, because shirking on employees' part may threaten the organization's survival itself, nonprofits have stronger incentives to prevent its occurrence. As a result, nonprofits give their employees above-market wage rates in order to minimize shirking behavior.

Alternatively, Holtmann and Idson (1993) suggest that market failure from information asymmetries may explain higher wages in nonprofit organizations. In his

article "The market for lemons: Quality uncertainty and the market mechanism," Akerlof (1970) discusses information asymmetry in the market, which occurs when the seller knows more about a product than the buyer, and explains how the bad drives out the good. Borrowing Akerlof's theory of a market for lemons, Holtmann and Idson (1993, 57) argue that nonprofit firms exist "to assure a particular type of quality of service" in industries where consumers are unable to judge the quality until after they actually purchase the service. In this type of market, there is an incentive for all providers to charge a high price for a low-quality service. Because of the non-distribution constraints of nonprofit organizations, consumers, who are unable to judge the quality of services ex-ante, tend to believe that nonprofits provide higher quality services than for-profit firms. With consumers' willingness to pay higher price, nonprofit organizations can pay higher wages to their employees.

Hypothesis 7: All else equal, employees in the nonprofit sector earn more than employees in the for-profit and public sectors.

No Nonprofit Differentials in Earnings

Despite much debate on whether there is nonprofit premium or penalty in earnings, a number of researchers argue that there is no significant difference between the compensation in the nonprofit sector and the compensation in other sectors. Mocan and Viola (1997) reported that nonprofit status had no impact on child care workers' salaries in their analysis of the data on 398 day care centers in four US states, including California, Colorado, Connecticut, and North Carolina. Using the 1994-1998 CPS Outgoing Rotation Group data, Ruhm and Borkoski (2003) also found that nonprofit

workers receive virtually the same wages as the for-profit employees. Although they do not rule out the possibility of nonprofit penalties or premiums for selected groups, Rhum and Borkoski conclude that the nonprofit differentials are generally negligible and compensation is determined competitively in the market. Leete's analysis of the 1990 Census data also found almost no difference between wages of nonprofit workers and those of for-profit workers (Leete 2001). She suggests that competition plays a dominant role in determining nonprofit wages rather than the nonprofit status itself.

Although these scholars acknowledge that there are observed nonprofit differentials, they explain the reason for the differential with other aspects of the organization than nonprofit status. For instance, Rose-Ackerman (1996) attributes nonprofit penalty and premium to organizational size. She argues that nonprofit premium in wages may exist in industries in which nonprofit organizations are dominant over for-profit ones, such as nursing homes and hospitals, because nonprofits tend to be larger organizations than for-profit ones in these fields and larger organizations often pay their employees higher wages (Rose-Ackerman 1996). A nonprofit penalty in wage, in this sense, may exist in industries where for-profit firms are more dominant than nonprofits. Salamon and Sokolowski (2006) also argue that the nonprofit wage disadvantage is more of an industry phenomenon, reflecting the fields in which nonprofits are dominant, including education, social services, and health care than it is of a sector phenomenon. These researchers argue that nonprofit status does not affect an individual's earnings, but the characteristics of occupation or industry determine one's salary. According to this view, everyone is paid the same wage, which is a market-clearing wage, if they have the same occupation in the same industry. Therefore,

once one's human capital, occupation, and industry structures are controlled, there should be no nonprofit differential.

Hypothesis 8: There is no nonprofit wage differential after controlling for human capital, industry and occupation.

Mixed findings in the literature make it difficult to predict the true "nonprofit effect" on earnings. Because people with higher earning potential can select into a particular sector, observed differences in earnings across the sectors may just reflect the differences in their earning potentials. In this sense, to estimate nonprofit wage differential, the characteristics affecting an individual's wage should be controlled. Furthermore, one's earning potential may also differ from one sector to another because returns on these characteristics are not necessarily identical across the sector. Given these difficulties in estimating nonprofit wage differentials, it is essential to examine how the returns on worker characteristics differ across sectors and how people select into a particular sector given the differences in returns.

Self-selection and Earnings Differentials

Understanding self-selection is important in examining nonprofit wage differentials because of the interdependence between determination of individual earnings and sector choice: a person's wage depends on one's sector choice while potential wages across the sectors also determine one's choice of employment sector. Theories on nonprofit wage penalty examined above focus on employees' self-sorting into the nonprofit sector based on their intrinsic motivation (Handy and Katz 1998; Hansmann 1980) or job-related amenities provided in the nonprofit sector. That is,

nonprofit workers will accept lower-than-market-level wages either because they donate their labor in order to fulfill something meaningful or because they discount their salaries in order to get more job-related amenities.

Although explaining nonprofit wage premium focuses mainly on nonprofit organizations' constraints on distributing profits and market failure (Borjas et al. 1983; Holtmann and Idson 1993), organization-level hypotheses are not testable with the CPS September supplements data because of the absence of organizational information. Nevertheless, theory of self-selection may also explicate positive wage differentials in the nonprofit sector as well as negative differentials. In Roy's model for earnings distribution between sectors, he claims that skills and abilities are fundamentally different from one person to another and that the marginal productivity of each set of skills and abilities differs from one sector to another, and therefore, result in different levels of earnings in each sector (Roy 1951). In other words, his model predicts that rational workers will self-sort into a sector where their skills are valued better when returns on an individual's characteristics are to differ across sectors.

If returns on one's characteristics and skills are greater in the nonprofit sector, the optimizing choice for this person is to find a job in the nonprofit sector. For instance, Holtmann and Idson (1993) find that nurses with longer tenure in the present job are more likely to work in the nonprofit sector than in the for-profit sector because the earnings differential according to tenure in the present job is greater in nonprofit hospitals than it is in for-profit ones. Moreover, an individual's characteristics associated with monetary compensation in each sector can be both observable and unobservable. In fact, the theory of self-selection suggests that there are unobserved characteristics

that influence both sector of employment and earnings in a sector including one's values, tastes, skills and preferences (Handy and Katz 1998; Hansmann 1980; Preston 1990).

This study examines whether a person is economically better- or worse- off by choosing nonprofit employment. Specifically, this study asks if nonprofit employees are getting comparative advantages in wages or if they are sacrificing their monetary compensation for something else. When some unobservable factors affect positively both people's choice of nonprofit employment and their earnings in the sector, they are selecting themselves into the sector where they have comparative advantages. In this case, they are actually rewarded for their characteristics by working in the nonprofit sector, and therefore, it is an optimal choice for them to choose nonprofit employment. On the contrary, if the factors affect positively individuals' choice of nonprofit sector in fact lowers their earnings in the sector, they are selecting themselves into a sector where they have comparative disadvantages, therefore making a sub-optimal choice. In this case, nonprofit employees may indeed donate their labor sacrificing their economic gains to produce socially desirable goods and services, or they may tolerate salary reduction to get other benefits associated with nonprofit employment than salaries.

In order to test the six hypotheses on an individual's choice of nonprofit employment, this study first tests a multivariate model for the sector choice with a nationally representative survey data. Next, this study tests the three competing hypotheses on nonprofit wage differentials with the endogenous switching regression for earnings. By modeling an individual's sector choice and the determination of wage in the three sectors with selection-bias correction, this study attempts to reveal why people

work for nonprofits and what nonprofit employment means in terms of one's economic well-being. In Chapter 4, the data source is identified and the empirical models to test the hypotheses are specified.

CHAPTER 4

DATA AND METHOD

The data used in this study are from the Current Population Survey (CPS) 2003-2007. The CPS is a monthly survey of a sample of 60,000 households conducted by the US Census Bureau for the Bureau of Labor Statistics (BLS). It is focused on the civilian, non-institutional population aged 16 years and older. The CPS data contain information not only on the sector of employment, but also on various socio-economic and work-related characteristics of individuals including age, sex, race, marital status, educational attainment, family relationship, occupation, and industry. The information is collected by personal and telephone interviews in a calendar week (Sunday through Saturday) of each month, which includes the 12th day of the month (US Department of Labor 2004). Each household is interviewed by this process for four consecutive months one year, and is interviewed again for the corresponding time period in the next year (National Bureau of Economic Research 2007b).

The CPS classifies an individual's employment status in 8 classes: for-profit, nonprofit, federal government, state government, local government, self-employed incorporated, self-employed unincorporated, without pay, and never worked (or never worked full-time) (NBER 2007a). This research focuses on the sector choice of prime age (25-54 years old) salaried (paid) workers in three sectors of employment: for-profit, public (combining federal, state, and local government), and nonprofit sectors. If being

self-employed is correlated with the choice of paid employment, limiting the choice set to paid work may result in a sample selection bias. However, as suggested by Verme (2000), self-employment tends to exist outside the realm of paid employment and the behavior of the self-employed may not be assimilated with the behavior of the salaried workers. Therefore, excluding the self-employed would not create sample selection problem. In addition, labor force participation of youth and older people is limited compared to that of prime-aged workers. Younger and older workers are likely to be in and out of the labor force and their salaries tend to lag behind prime age workers' salaries because of their limited availability, lack of experience and qualifications, or limited physical strength (Bound et al. 1999).

Basic labor force data in CPS are gathered every month, but data on special topics are collected in periodic supplements (US Department of Labor 2004c). Since 2002, September supplements of CPS have collected information about individual volunteering including incidence of volunteering, hours of volunteering, and types of volunteer activities. Respondents are asked to report their volunteering experience in the past year: "Since September 1st of last year, have you done any volunteer activities through or for an organization?" Since volunteering is a concept that is hard to define or measure, the interviewer provides examples of volunteer activities if respondents do not answer "yes" to the first question, "Sometimes people don't think of activities they do infrequently or activities they do for children's schools or youth organizations as volunteer activities. Since September 1st of last year, have you done any of these types of volunteer activities?" Respondents are considered volunteers if they answered "yes"

to either of these questions (US Department of Labor 2009). Proxy responses are allowed when self-responses are not attainable.

One disadvantage of using CPS in this study is that CPS does not ask about specific types of nonprofit jobs. “Nonprofit” is a very generic term, which includes various types of organizations (Boris and Steuerle 2006). The sector is composed not only of charitable service organizations including health, education, religious groups, but also of numerous other types including public and private foundations, trade unions (member benefit) organizations, and advocacy groups to name a few. These organizations differ not only in terms of types of services they provide, but also in terms of tax-exemption status and organization size. Despite the diversity within the nonprofit sector, however, two types of organizations - 501(c)(3)s and 501(c)(4)s – account for the vast majority (80 percent) of nonprofit organizations (IRS 2007). These charitable and social welfare organizations could be believed to be the most nonprofit-like, and the “nonprofit motivation” could be conceptualized as caring and helping preferences.

Estimation of Sector Choice: Model Specification

One’s choice of employment sector in this research depends on extrinsic and intrinsic motivations, and is also shaped by structural factors. The extrinsic motivation includes both monetary (e.g., salary and bonuses) and nonmonetary benefits (e.g., flexibility, prestige, and psychological satisfaction). These benefits, in turn, tend to be determined by individual characteristics. Apart from preference satisfaction, one’s choice among different sectors is also influenced by industry and occupation structure across the sectors.

The latent variable S_{ij}* below is individual *i*'s propensity to hold a job in *j* sector, which is not observable, and it is a function of weakly exogenous worker characteristics Z_i and the differentials in earnings (Diff) between the three sectors.

Equation 1…… $S_{ij}^* = \delta_{1i}(\ln Diff_{ijk}) + \delta_{2i}(\ln Diff_{ijl}) + \delta_{3i}Z_i + u_i$ ($j \neq k$ and $\neq l$)

$S_i = j$, iff $S_{ij}^* > S_{ik}^*$ and S_{il}^* ($j \neq k$ and $\neq l$)

$\ln Diff_{ijk} = \ln(E_{ij} - E_{ik})$, and $\ln Diff_{ijl} = \ln(E_{ij} - E_{il})$

The observed S_i is an indicator, which identifies one's choice of employment sector (1= the for-profit, 2= the public sector, and 3= the nonprofit sector).

Equation 2-(1) …… $S_i = 1$ iff $S_{i1}^* = \max(S_{ji}^*)$, j=1,2,3

Equation 2-(2) …… $S_i = 2$ iff $S_{i2}^* = \max(S_{ji}^*)$, j=1,2,3

Equation 2-(3) …… $S_i = 3$ iff $S_{i3}^* = \max(S_{ji}^*)$, j=1,2,3

$S_i = 1, 2, \text{ or } 3.$

As emphasized, the real earnings of E_{ij} is only observed when the person *i* works in the *j* sector. However, this study assumes that a well-informed worker can estimate her potential earnings in each sector ($\hat{E}_{ij}$) given her qualifications, and that she makes sector choice in reference to her prospective earnings in each sector. This way of modeling sector choice implies that individuals try to make a best guess of what they would earn in each of the sectors rather than simply comparing average earnings across the sectors. Comparing the potential earnings is more realistic given that simple comparison between average wages tends to ignore variations in individuals' qualification.

A conventional approach to estimate the wage differentials across n sectors is to include n-1 dummy variables. Then the earnings equation would look like the following:

Equation 3…… $\ln E_i = \beta_0 + \beta_1 X_i + \delta_1 d_1 + \delta_2 d_2 + e_i$,

where d_1=0 and d_2=0 when an individual is employed in the nonprofit sector, d_1=1 and d_2=0 when an individual is employed in the for-profit sector, and d_1=0 and d_2=1 when in the public sector. However, an ordinary least squares (OLS) estimation of the wage using sector dummies such as equation 3 is problematic because the returns on human capital and other personal characteristics can also differ across the sectors (Noguchi et al. 2007; Van Ophem 1993). By restricting the coefficients for all Xs the same across the sectors, the estimation is prone to suffer selection bias because assignment to each sector of employment may not be random (Heitmueller 2004).

Instead, estimation of an individual's weekly earnings is determined by the following process:

Equation 4····· $E_{ij} = \beta_{0j} + \beta_{1j}X_{ij} + e_{ij}$, j=1, 2, 3 ($i$=1, ……, N and j=1,2,3)

where i is an individual observation, and j indicates the sector. X_i denotes a series of Mincerian human capital such as education and age and other characteristics that affect the earnings, including sex, race, occupation, marital status, presence of children, metropolitan status, and years of interview. Unlike equation 3, where all the coefficients across the sectors are the same, equation 3 allows the coefficient for exogenous variables including human capital and demographic characteristics to vary depending on which sector a person works in.

Equation 4-(1) ····· $E_{i1} = X_{i1}\beta_1 + \varepsilon_{i1}$ iff S_i=1

Equation 4-(2) ····· $E_{i2} = X_{i2}\beta_2 + \varepsilon_{i2}$ iff S_i=2

Equation 4-(3) ····· $E_{i3} = X_{i3}\beta_3 + \varepsilon_{i3}$ iff S_i=3

One problem in estimating cross-sector earnings of an individual is that one's earnings are observable only in the sector she is currently employed. That is, one's

wage in the sector j (E_{ij}) is observed if and only if one is employed in sector *j*. To observe an individual's potential earnings in each sector, three separate earnings equations for the public, the for-profit, and the nonprofit sectors are estimated with standard Mincer-type specifications. By estimating these three earnings regressions separately, returns on observed individual characteristics can vary by sector, and the coefficients from the three earnings regressions are used to predict an individual's wage in each sector. For instance, for a nonprofit sector worker, her for-profit and public sector earnings are estimated using the earnings regressions in those sectors.

The earnings equations are first estimated as level functions (i.e., with no logarithmic transportation) in order to avoid double logarithmic transformation, and the profit-public (E_{i2}- E_{i1}) and profit-nonprofit differentials (E_{i2}- E_{i3}) in earnings are predicted using the three equations. These differential terms are then put back into the selection equation in a logarithmic form in order to estimate one's likelihood to work in each of the three sectors depending on the logarithms of wage differentials between sectors.

Dependent Variable

The dependent variable of sector choice equation predicts in which sector a person is employed. A salaried worker must be employed in one of the three sectors: the public, the for-profit, and the nonprofit sectors. One potential problem in modeling three-way choice is that the choice among the three sectors may not completely independent. Rather, the choices may well be correlated with each other. The blurring distinctions among the sectors make the case more likely than ever. When there is a correlation among alternatives, the sector choices are not necessarily mutually exclusive, and as a result, the Irrelevance of Independent Alternatives (IIA) assumption

may not hold. That is, introducing a third alternative may affect the relative odds between the two alternatives considered. In order to take care of the IIA issue, the research estimates sector choice with a multinomial probit model, which does not suffer from IIA violation (McCulloch et al. 2000; Nobile 1998)

Independent Variables

Sex

The variable of the highest interest in the analysis is *sex*. When men and women behave differently in their decision for employment sector, the coefficients for the independent variables may vary depending on their sex. If the coefficients for independent variables are substantially different for men and women, estimating separate regression models for men and women would make more sense than estimating one regression with a pooled sample. Moreover, impacts of other socio-demographic characteristics, including education, marital status and age, on the probability of nonprofit employment may differ according to sex. The Chow test results suggest that there are significant differences in coefficients between men and women, that is, to reject the null hypothesis that there is no difference. Therefore, separate regressions are estimated for male and female workers.

Earnings differentials

Monetary compensation is one of the most crucial determinants of one's career choice. This study assumes that people compare potential earnings in one sector with potential earnings in other sectors before they decide where to work. The potential earnings, of course, are to differ depending on one's qualifications and demographic characteristics. Therefore, rational individuals are expected to make career decision by

comparing “their own” earning potentials in each sector rather than comparing average earnings across the sectors. In the equation, natural logarithms of differentials between an individual’s potential for-profit and government earnings and between her for-profit and nonprofit earnings are included to test whether positive differential in potential earnings in one sector would increase a person’s likelihood to work in the sector.

Education/health industries

The second hypothesis tests whether individuals are more likely to work in the nonprofit sector due to the limited choice of industries and occupations. A dummy variable for working in the two industries that have historically been dominated by women – health and education – are included in the equation to test the effect of gendered industry structure of the nonprofit sector. If working in education or health industry indeed predicts women’s overrepresentation in nonprofit organizations, it suggests that women may be forced into the nonprofit sector (rather than actively choose to work in nonprofits) because the glass walls that segregate jobs based on a person’s sex limit their choice across the different sectors.

Managerial/professional positions

The third hypothesis states that individuals choose to work in nonprofits when they see more opportunities to move up the organizational hierarchy in the sector. Because organizational glass ceiling prevents women’s upward mobility, they will be more likely to be attracted to those opportunities than their male counterparts. Literature suggests that nonprofit organizations have less of a glass ceiling that prevents women from being at the managerial level, which make them more attractive for women. Ideally, actual measures of an organization’s glass ceiling are needed in order to test this

hypothesis. However, no information on the respective employer's human resources policies is available from the CPS data. Instead, a dummy variable for holding a *managerial or professional occupation* is included in the model.

Family obligations

The next hypothesis is that people with families are more likely to work in a sector which provides a more family-friendly work environment. Women with families will be even more likely to do so because they have a major responsibility to take care of children and other family members. Although information on actual work-life policies is not observed in CPS September supplements, the present study hypothesizes that individuals with families will react more sensitively to work life policies than those without families and that women with family will be even more likely so. In the analysis, the respondent's family situation including *marital status* and *presence of children in the household* are included in order to examine whether an individual's family situation predicts the employment in the nonprofit sector.

Intrinsic motivation – Nonprofit motivation

The key in modeling the sector choice equation is to find a good proxy variable for nonprofit motivation. This research finds nonprofit motivation in the caring attitudes behind pro-social behaviors such as volunteering. In this study, a person's *participation in volunteering activities* during the last year is used as a proxy for having stronger nonprofit motivation than average. Actual hours of volunteering may provide more detailed information on intrinsic motivation than a dichotomous measure of participation in volunteering. However, only 26.2~28.8 percent of the respondents volunteered in each year, leaving more than 70 percent of the sample with having not volunteered in

the past 12 months. As a consequence, using the number of hours may produce biased estimates due to the extremely skewed distribution of volunteering hours. A 0-1 variable of whether the respondent volunteered in the last year is used instead.

Control Variables

Exogenous variables such as worker characteristics and social and economic forces also influence one's selection of employment sector. In addition to the independent variables, the following variables are included in the model:

Age

Researchers have examined whether there is an age difference among employees of different sectors, and many found a significant difference (Cornille et al. 2006; Mirvis 1992; Mirvis and Hackett 1983; Van Ophem 1993). For instance, Mirvis and Hackett (1983) and Mirvis (1992) found that a smaller proportion of younger (under age 24) and older (over age 55) workers was employed in the nonprofit sector than in government and for-profit firms. Mocan and Tekin (2003) reported that an average nonprofit worker was older than the for-profit counterpart in their analysis of child care workers. Although the estimation sample includes only prime age workers (age 25-54) there may be still age difference in the probability of working in a particular sector. Two variables *age* and age^2 are included in the model to see if there exists a non-linear relationship between age and the choice of employment sector.

Race

Literature suggests that one's likelihood to have a nonprofit job changes depending on one's race (Blank 1995; Burbridge 1994; Cohen 1993; Light 2002; Weitzman et al. 2002). Light (2002), in his analysis of the random sample of 1,140

nonprofit workers, reported that whites accounted for 84 percent of the nonprofit workforce, while about 70 percent of the entire US population were white. On the contrary, Burbridge (1994) found that Black and American Indian workers are more heavily reliant on the third sector employment than others. To test the race effect on sector choice, a dummy variable for being *white* (1, if the respondent is white, and 0 otherwise) is included in the regression.

Educational Attainment

Research has shown that there exists a pattern between educational attainment and the likelihood of nonprofit employment (Johnston and Rudney 1987; Mirvis 1992). For example, Mirvis (1992) found that more college graduates and persons with post-college education were employed in the nonprofit and government sectors than in the for-profit sector. Five different levels of education are specified – less than high school education, high school graduate, some college or associate degree, college graduate, and master's, professional, or doctoral degrees. Four dummy variables for *educational attainment* (as high school graduate the base category) are included in the regression to measure the effects of education on sector choice.

Being an Only Income Source in the Household

One's career choice is also influenced by the economic situation in his or her household. When a person is the only income source for one's family, one's career decision has a bigger effect on household economy. Therefore, monetary compensation may have less importance in dual-income families than in sole-income families, and one may be more sensitive to earnings differential between the sectors if he or she has to

support the family by himself or herself. In the analysis, whether the respondent is the only income source in the family is controlled.

Region

According to Salamon and Sokolowski (2006), more than half (52 percent) of paid and volunteer nonprofit workers are located in three regions — the Middle Atlantic (New Jersey, New York, Pennsylvania), South Atlantic (along the Atlantic coast from Delaware to Florida), and East North Central (Illinois, Indiana, Michigan, Ohio, Wisconsin). Given the skewed distribution of nonprofit organizations, where a person lives affects the availability of nonprofit jobs, therefore, the likelihood of having a nonprofit job. In order to control for the regional effect on nonprofit employment, an individual's *region* (northeast, south, mid-west, and west) is controlled in the model.

Citizenship

U.S. Citizenship is a requirement for certain jobs. Most federal agencies employ only U.S. citizens and nationals in the civil service and hiring non-citizens is limited to when there are no qualified citizens available and is subject to Office of Personnel Management approval (U.S. Office of Personnel Management 2008). Citizenship is also a part of requirements for the applicants in some state government agencies. Under these circumstances, foreign nationals may find it easier to find employment opportunities in the private sector (both the for-profit sector and the nonprofit sector) than in the public sector. A dummy variable for being a *U.S. citizen* is included in the model.

Interview year

Individual's career choice is always influenced by external macroeconomic factors such as industrial trends, unemployment rate and the financial situation. The nonprofit sector, as a part of national economy, is not independent from the external forces such as fiscal conditions and technology development. There is also a possibility that economic situation may have different impacts on each sector, making one sector more or less attractive than another. Therefore, controlling the time period may be necessary in the estimation. This research attempts to control these macroeconomic effects by including *year dummies* in the equations.

Estimation of Earnings: Model Specification

The theoretical foundation of standard wage equation is the human capital theory (Mincer 1958). It is based on the assumption that wages are determined only by marginal productivity of workers, which depends on an individual's human capital and other work-related characteristics (Van der Gaag and Vijverberg 1988). However, there are many reasons to believe why that is not always the case and that wages are partly determined by the sector of one's employment (Roy 1951). In his paper "Some thoughts on the distribution of earnings," Roy (1951) conceptualized how individuals choose between fishing and hunting sectors based on their skill sets and how they are valued in each sector.

In this research, individuals are assumed to decide their sector of employment partly based on their net monetary gains of working in the sector. In other words, they calculate their potential earnings in each of the sectors and choose the sector that

provides the most wages. They have a relatively good idea of how much they would earn in different sectors because they can estimate the returns on certain characteristics based on how much people make in each of the sectors. Thus, we need equations for individual's earnings in each sector. Equation 4-(1), (2), and (3) represent a person's wage equations in the for-profit, public, and nonprofit sectors respectively.

Dependent Variable

In the CPS, individual earnings are reported in the form of weekly earnings in US dollars. The dependent variable in the wage equation is the *natural logarithm of weekly earnings*. With large and strictly positive values such as wages and salaries, it is often beneficial to take a logarithmic form instead of original values for various reasons, including mitigating heteroskedastic or skewed distribution of the variable and narrowing its range (Wooldridge 2006).

Independent Variables

As previously stated, the wage equation includes a number of independent variables that are believed to affect one's earnings, including the standard Mincer-type variables and other personal traits, such as:

Educational attainment

In the absence of an accurate measure of the worker productivity, the level of education often works as a proxy for many employers. One's educational achievement is one of the most significant factors in determining one's earnings (Stelcner et al. 1989; Van ger Gaag and Vijverberg 1988). The standard Mincerian equation views the natural logarithm of wage as a linear function of the number of years of schooling. However, returns on education are more likely to follow a non-linear pattern, rather than a strict

linearity as Mincer's model (Belzil 2007; Belzil and Hansen 2002). Five differential levels of educational attainment are specified as in the selection model, and four dummies for *educational attainment* as high school graduate the base category are included in the earnings equation.

Age

Research suggests that in the determination of wage, age per se is a factor that cannot be ignored, especially given the difficulty to measure the amount of job-specific experience that one possesses (Lazear 1976). Although no consensus has been made on the shape of age-earnings relationship, many labor economists believe that age-earnings profile tends to change depending on the age group rather than following a strictly linear pattern (Lazear 1976; Murphy and Welch 1990). In other words, the marginal increase in wage according to age is different among younger and older workers. The two variables *age* and age^2 are included in the model accounting for this difference in age group specific wage growth.

Sex

Although almost a half century has been passed after the Equal Pay Action was passed in 1963, there exists a persistent sex pay gap. Scholars agree that the pay gap cannot be fully explained by human capital factors known to affect wages such as education, work hours, and experience (Blau and Kahn 2006; Dey and Hill 2007; Manning and Swaffield 2008), and suggest that there may be discrimination against women (Dey and Hill 2007; O'Neill 2003). Moreover, returns on human capital may well differ for women and for men. As in the selection model, the earnings equation is estimated separately for men and women.

Race

The literature suggests that racial gap in wage is another persistent discrimination in the labor market (Cancio et al. 1996). In the second quarter of 2008, the average weekly earning of an African American was $591 while it was $738 for a white (U.S. Department of Labor 2008). Although a large part of this gap is explained by differences in educational attainment, age entering the labor market, and occupation, research suggests there remains a portion that cannot be accounted for human capital difference (Cancio et al. 1996; Grodsky and Pager 2001). A dummy variable for being *white* is included in the earnings estimation.

Marital status

Research on the relationship between one's marital status and wage suggests that married men earn more than unmarried men while married women's earnings are equal to or less than those of unmarried women (Chun and Lee 2001; Hirsch and Stratton 2000). The male wage premium has been understood in the context of specialization of housework and selection of successful men into married life (Becker 1985; Breusch and Grey 2004; Chun and Lee 2001). For women, greater responsibility of housework and timing of childbearing attribute to the female wage penalty because these factors reduce women's investment in workplace (Breusch and Grey 2004; Caucutt et al. 2002). Given the research findings, it may be necessary to control for marriage effect on earnings for both men and women.

Metropolitan status

The average hourly wage in metropolitan areas is typically found higher than the average hourly wage in nonmetropolitan areas across industrial occupational categories

(U.S. Department of Labor 2004). There may be a number of reasons for higher wage in metropolitan areas, concentration of high-paying job and higher costs of living for example. According to Salamon and Sokolowski (2006), the metropolitan premium in wage persists in the nonprofit sector as well. In order to control for the metropolitan advantage in wage, a dummy variable for *metropolitan residence* is included in the analysis.

Interview year

Although individual earnings are determined at the micro level, meaning by one's possession of human capital and negotiation skills, they are also affected by macroeconomic factors such as industry structure, unemployment rate and other economic conditions. Macroeconomic forces may also affect earnings in each sector differently. Therefore, the impact of external economic forces should not be excluded in estimation of individual's earnings. In this analysis, these outside economic influences are to be controlled by including *year dummies*.

An individual is expected to calculate her prospective wage in each sector based on the factors listed above, and decide his or her employment sector based on potential wage gains and losses. Estimation of the three different earnings equations across the sectors accounts for the fact that returns on personal characteristics differ from one sector to the other by allowing the coefficients to differ across sectors. The underlying assumption is that individuals are aware of the returns on their observed characteristics across different sectors. However, an individual's earnings are determined by his or her unobserved characteristics as well as observable characteristics. The OLS estimation of wage regressions in the three sectors controls only for observed characteristics of an

individual, such as educational attainment, age and sex, but does not fully account for the self-selection issue in earnings determination. The endogenous switching regression described in the following section accounts for both observed and unobserved selection effects in the determination of earnings.

The Self-selection Bias: The Joint Determination of Sector and Earnings

Chapter 3 provided a review of three competing hypotheses on nonprofit wage differentials: nonprofit wage penalty hypothesis, nonprofit wage premium hypothesis, and no nonprofit differentials hypothesis. The first two hypotheses are based on the assumption that one's salary is at least partly determined by her self-selection into the nonprofit sector while the last hypothesis of no nonprofit wage differential views an individual's wage as being competitively determined in the market by one's human capital and other exogenous factors. The most fundamental question in the discussion of wages in the nonprofit sector is whether there is "nonprofit effect" on earnings.

In studying wage differentials across sectors, it is important to understand that sector choice and wage determination are not two separate processes. Rather, they are simultaneously determined. Results from the OLS estimation of earnings are likely to be biased when one's earnings and employment sector are interdependently and simultaneously determined. This problem has been rigorously studied in labor economics literature (Lee, 1978; Van der Gaag and Vijverberg; 1988). For example, Lee (1978) and Robinson (1989) modeled the joint determination of the extent of unionism and the effects of unionism on wage rates. They both point out that the propensity to join a union is not exogenous, and it depends on the net wage gains of union

membership along with other characteristics while wages are partly determined by union membership. Likewise, while propensity to work in a particular sector is influenced by the net wage gains by working in that sector, an individual's earnings are at least partly determined by one's selection into the employment sector. Christofides and Pashardes (2002) also estimated public and private sector wages with selection bias correction to decompose the public-private wage gaps into a portion attributable to differences in characteristics, the public sector advantages, the private sector disadvantages, and unobserved selection effect. In examining the selection-bias corrected wages, these researchers used the methodology called "endogenous switching regression."

While the OLS estimation of earnings in each sector accounts for selection effects based on observed characteristics, the endogenous switching regression provides information on both the observed and the "unobserved" selection effects on earnings. Most of the existing literature on sectoral wage differentials using the endogenous switching regression is based on a binary choice between two sectors, but in this study, selection into a sector is based on a three-way choice among for-profit, public, and nonprofit organizations. To account for all three alternatives, this study estimates the endogenous switching regression based on three binary choice models (nonprofit versus for-profit, nonprofit versus public, and public versus for-profit) instead of one three-way choice model[1]. If the results from three binary probit regressions are

[1] Although this approach is a more realistic view of the world, one limitation that this study confronts is that the statistical package for switching regression (Movestay) in STATA supports only binary choice models with the binomial probit regression. Due to this technical constraint a switching regression for earnings based on a multinomial probit (or multinomial logit) cannot be estimated in the current version of STATA program.

not very much different from those from multinomial probit regression, the use of three reduced-form equations will be a valid alternative.

In a binary choice between two sectors, a person's choice to work in *j* sector is modeled as the following:

$\pi Z_i + u_i > 0$, If a person *i* chooses to work in the j sector, which is described by $I_i=1$

$\pi Z_i + u_i \leq 0$, if a person *i* chooses not to work in the j sector (to work in the other sector), which is described by $I_i=0$.

Accordingly, a person's earnings (E_i) can be described as the following:

Equation 5-(1) ····· $E_{1i} = X_{1i}\beta_1 + \varepsilon_{1i}$ iff $I_i=1$

Equation 5-(2) ····· $E_{0i} = X_{0i}\beta_0 + \varepsilon_{0i}$ iff $I_i=0$

As in the three-way choice explained above, Z_i is a vector of worker characteristics that shape workers' decisions to choose j sector over the other. Two vectors X_{i1} and X_{i0} are the characteristics that affect an individual's earnings in each sector. After the parameters are estimated, it is possible to calculate both unconditional and conditional expectations of workers earnings each sector (Cai et al. 2008):

Equation 6-(1) ····· $Xb_{1i} = E(E_{1i} \mid x) = x_{1i}\,\beta_1$

Equation 6-(2) ····· $Xb_{01} = E(E_{0i} \mid x) = x_{0i}\,\beta_0$

Equation 6-(3) ····· $Ec_{1\_1i} = E(E_{1i} \mid I_i = 1, x_{1i}) = x_{1i}\,\beta_1 + \sigma_1\,\gamma_1\,f(\pi Z_i)/\,F(\pi Z_i)$

Equation 6-(4) ····· $Ec_{0\_1i} = E(E_{0i} \mid I_i = 1, x_{1i}) = x_{1i}\,\beta_0 + \sigma_0\,\gamma_0\,f(\pi Z_i)\,/F(\pi Z_i)$

Equation 6-(5) ····· $Ec_{0\_1i} = E(E_{0i} \mid I_i = 0, x_{0i}) = x_{0i}\,\beta_0 - \sigma_0\,\gamma_0\,f(\pi Z_i)/\,[1-F(\pi Z_i)]$

Equation 6-(6) ····· $Ec_{0\_0i} = E(E_{1i} \mid I_i = 0, x_{0i}) = x_{0i}\,\beta_1 - \sigma_1\,\gamma_1\,f(\pi Z_i)/\,[1-F(\pi Z_i)]$

The first two equations 6-(1) and 6-(2) estimate unconditional expectation of a person's earnings in each sector: Xb_{1i} represents the unconditional expectation of earnings in j

sector and Xb_{01} represents the unconditional expectation of earnings in the other sector. The last four equations 6-(3) through (6) estimate conditional expectation of a worker's earnings: Ec_{1_1i} represents the conditional expectation of a j sector worker's earnings in j sector and Ec_{0_1i} represents the conditional expectation of a j sector worker's earnings in the other sector. Ec_{0_1i} represents the conditional expectation of the other sector worker's earnings in j sector and Ec_{0_0i} represents the conditional expectation of the other sector worker's earnings in the other sector. σ_0 and σ_1 are the standard errors of ε_{1i} and ε_{0i}. γ_1 and γ_1 are the correlation coefficients between ε_{1i} and ε_{0i} respectively.

The coefficient estimates γ_1 and γ_0 indicate how the unobserved factors promoting self-selection into *j* sector influences an individual's earnings (Setboonsarng et al. 2008). Specifically, γ_1 shows how an individual's unobserved propensity for choosing *j* sector (I_i=1) affects one's earnings if everyone else also chooses to work in that sector controlling for an individual's characteristics (Xb_{1i}). Alternatively, the coefficient estimate for γ_0 indicates how an individual's unobserved propensity for not choosing *j* sector (I_i =0) affects one's earnings if everyone else also chooses not to work in that sector (choosing the other sector) controlling for an individual's characteristics. The endogenous switching regression for earnings determination helps understanding how unobserved factors affect a person's sector choice and earnings by providing the estimates of γ_1 and γ_0 as well as providing the selection-bias corrected coefficients estimates for all independent variables in earnings equation.

CHAPTER 5

RESULTS: SECTOR CHOICE

Salaried workers choose one of the for-profit, public, and nonprofit sectors. This chapter presents the results of the model for their sector choice. Descriptions of the characteristics of the prime-age salaried workers in the three sectors appear in table 1. Among 27,741 individuals, approximately 73 percent (20,219 persons) were working in the for-profit sector while about 19 percent (5,364 persons) and 8 percent (2,258 persons) were working in the public and the nonprofit sectors respectively during 2003-2007. The proportion of female workers in each sector also shows a consistent pattern with the findings in the literature (Halpern 2006; Independent Sector 2002; Light 2002; Mirvis and Hackett 1983; Salamon and Sokolowski 2006). In the nonprofit sector, female workers account for 68 percent of the entire workforce, compared to 38.8 percent of total for-profit workforce and 58.4 percent of total public workforce. Table 3 also shows that 4 percent of salaried male workers are working for nonprofits from 2003 to 2007, while 10 percent of total salaried female workers are working in the nonprofit sector.

The unequal distribution of male and female workforce in each sector suggests the possibility that male and female workers in each sector have dissimilar characteristics. Table 2 describes the female and male employees separately across the for-profit, public, and nonprofit sectors. The general patterns are similar for men and

women across the three sectors. A greater proportion of both male and female employees in the nonprofit sector works in health and education, holds managerial or professional positions, and volunteers than in the for-profit and in the public sectors. However, there are some sex-specific differences as well. Compared to men, more women work in education and health industries across sectors. Seventy six percent of women in nonprofits, 68.5 percent of women in government, and 26.5 percent of women in for-profits work in education and health while 53.4 percent of male employees in the nonprofit sector, 38.9 percent in government, and mere 4.6 percent in the business sector do so. Confirming the widely held view, women are much more likely to work in education and health industries than men.

The percentage of those holding managerial or professional positions is higher for women across all three sectors. Among women, 57.3 percent, 85.5 percent, and 83.8 percent hold a managerial or professional position in the business, government, and nonprofit sectors respectively. For men, the numbers are somewhat smaller as 39.2 percent in the for-profit sector, 62.3 percent in the public sector, and 80.1 percent in the nonprofit sector. The positive female-male gap in the percentage holding managerial or professional positions, however, does not imply women have more opportunities for advancement in general because none of the socio-demographic characteristics are controlled for in this analysis. The standardized regression in this section will examine whether women indeed have a higher likelihood to hold managerial or professional positions when controlling for individual characteristics.

Another difference can be found in weekly work hours and earnings. Compared to men, women work fewer hours a week, and make less money. Average weekly

earnings for men are $985.9 in the for-profit sector, $1001.8 in the public sector, and $984.9 in the nonprofit sector. Women's weekly earnings are $732.3 in the for-profit sector, $785.9 in the public sector, and $740.0 in the nonprofit sector. A part of the reason why women are paid less may be because women work fewer hours compared to men. In the for-profit sector, women work for 38.8 hours a week while men work for 44.1 hours. Women work for 39.7 hours in government, while their male co-workers work for 43.4 hours. In the nonprofit sector, women work for 37.5 hours and men work 44 hours. In sum, men generally work 5-6 hours more weekly than women in each sector.

Interestingly, although both male and female workers in the for-profit sector report the highest earnings, women tend to be better off in the nonprofit sector than in the for-profit sector while men are slightly better off in the for-profit sector than in the nonprofit sector. On average, women earn approximately seven dollars more a week in the nonprofit sector than the business sector, which suggests that better pay may attract women in the nonprofit sector relative to the for-profit sector. However, this inference may be wrong because none of the factors affecting earnings is yet controlled for. The selection model below tests whether pay differentials are factors in an individual's decision to work for nonprofits.

The estimation results of the sector choice model are presented in table 3. As the table shows, men's sector choice and women's sector choice are estimated separately. The reason is that if coefficients for men and women are significantly different in the choice equation, (i.e., if the differences between male coefficients and female coefficients are not different from 0), running two separate models makes more sense

than running a pooled model with a number of interaction terms. The Chow test result suggests that the null hypothesis of no difference be rejected. Because the coefficients of key predictors are significantly different for men and women, male and female equations are estimated separately.

Table 3 describes the marginal effects of a unit change in independent variables estimated by the multinomial probit regression. The coefficients in the table show how much the probability of working in a particular sector changes with a unit change (change from 0 to 1 in cases of categorical variables) in predictor variables. The logarithm of intersectoral differences in predicted earnings are significantly associated with the likelihood in an individual's decision to choose employment in the public sector over the for-profit sector. A 1 percent increase in the difference between for-profit and nonprofit earnings would result in a 1.2 percent increase in men's likelihood of for-profit employment and a 1.7 percent increase in women's likelihood of for-profit employment. A 1 percent increase in the difference between for-profit earnings and public earnings decreases men's likelihood of working in the public sector by 1.2 percent and that of women's by 1.4 percent. Women appear to react more sensitively to the difference in earnings in their decision to work in business firms and government agencies.

The intersectoral earnings difference term, however, has no significant influence on one's choice of nonprofit employment, either for men or for women. These findings do not support the first hypothesis that earnings differentials between sectors are determining factors of an individual's sector choice. Unlike in the career choice in for-profit and nonprofit sectors, the decision to work in the nonprofit sector does not seem to be influenced by earnings differential between for-profit and nonprofit firms. If

monetary compensation matters less for the choice of working in the nonprofit sector, what then are other factors that influence nonprofit career choice?

The second hypothesis, glass wall argument, claims that those who are working in “feminine” industries are more likely to work in the nonprofit sector because of the concentration of those fields within the sector. Since women account for an overwhelming majority in those industries, they are more likely to work in the sector. The marginal effect of working in education and health industries is 0.129 for both men and women in their decision to work in the nonprofit sector. That is, working in those industries increases the likelihood of nonprofit employment by almost 13 percent. Working in the education and health industry, on the contrary, decreases the probability of for-profit employment by 45.7 percent for men and 35.3 percent for women. Belonging to the education and health industries has even bigger effects on public employment. Working in the two fields increases probability of having government jobs by almost 33 percent for men and 22.4 percent for women.[2] These findings support the hypothesis that working in education and health industries increases the likelihood to work for nonprofits, and it is not too surprising given the fact that a majority of government jobs are also distributed in schools and libraries (Kettl and Fesler 2005).

The third hypothesis is that individuals are less likely to choose nonprofit employment because of the limited availability of managerial and professional positions in the nonprofit sector. On the contrary, women have more opportunities for career advancement in the nonprofit sector because their upward mobility along the organizational hierarchy is not as limited by the glass ceiling as it is in the public and

for-profit sectors. Therefore, female managers and professionals will be more likely to work in the nonprofit sector while male managers and professionals will be less likely to work in nonprofits. The marginal effect of holding a managerial or professional occupation shows the change in the probability of working in each of the sectors. Holding a managerial or professional position is negatively associated with for-profit employment both for men and women. For men, holding a managerial or professional position increases their likelihood to work for nonprofits by 3 percent, but it does not affect their likelihood to work for government organizations. All else equal, women managers and professionals are 10.7 percent more likely to work in the public sector and 4.4 percent more in the nonprofit sector compared to women in non-managerial and non-professional positions.

Contrary to the expectation, male managers and professionals are also more likely to work in nonprofits than their non-managerial and professional counterparts. One noticeable result is that being in a managerial or a professional position has 1.5 times greater effect on women's likelihood to work in the nonprofit sector compared to that of their male counterparts. To put it another way, women managers and professionals are 1.5 times more likely to work in the nonprofit sector than male managers and professionals. This finding suggests that compared to the for-profit firms, nonprofit organizations provide female managers and professionals with positions that fit their work experience, and there are even more opportunities to do so for women than men.

[2] When more detailed industry classifications are included in the model, although working in education and health industries increases the likelihood to work in both the public and nonprofit sectors, a worker in education and health industries is 1.5 times more likely to work in the nonprofit sector than in the public sector.

The fourth hypothesis is that the nonprofit sector has more family-friendly environment which attracts individuals with families, especially women who have more family obligations upon them. Without a direct measure for work-life policies in organizations available, this research has to use measures of family obligation as proxies. The two family obligation measures are whether the respondent was married and whether he or she had children at the time of the interview. Coefficients for both terms show that family obligation does not increase the likelihood of nonprofit employment. Being married does not affect the likelihood of working in the nonprofit sector. Having children in the household even decreases the probability of nonprofit employment by 1.2 percent for men and by 1.7 percent for women.

The last hypothesis is that individuals are more likely to work in nonprofits because of their stronger nonprofit motivation. As explained, participation in volunteer activities in the past year was used as a proxy for having strong nonprofit motivation. If women have stronger nonprofit motivation than that of men, they will be more likely to work in the nonprofit sector. Participating in volunteer activities increases the likelihood of both working in the public and nonprofit sector while it negatively affects the likelihood of working in the for-profit sector. Volunteers are more likely to work in the nonprofit sector than non-volunteers, and women volunteers are more likely to work in nonprofits than male volunteers. Specifically, it increases the likelihood of nonprofit employment by 2.2 percent for men and 3.2 percent for women. However, it also increases the likelihood of public employment by 2.3 percent for men and 3.4 percent for women. In sum, while the participation in volunteering increases the probability of both public and nonprofit employment, it does as much, if not more so, the probability of public

employment.[3] This finding suggests that volunteering may not capture the unique nonprofit motivation that is differentiated from PSM as hoped. Volunteering, instead, seems to reflect the commonality between PSM and nonprofit motivation. Given the fact that women account for an overwhelming majority of nonprofit workforce, there must be something else that has not been found in the analysis affecting women's decision to work in the nonprofit sector.

Table 3 also shows the marginal effects of control variables on an individual's sector choice. The findings present an interesting pattern between education and sector choice according to sex. For women, college education increases their likelihood to work in the nonprofit sector. Women with some college education or an associate's degree are 5 percent more likely to have nonprofit jobs than women with less than high school education. Women with bachelor's degrees are approximately 7 percent more likely to have nonprofit jobs than those women less than high school education. On the contrary, men's likelihood to work for nonprofits does not differ significantly based on their level of education at all. In sum, educational attainment has different effects the likelihood of nonprofit employment of men and of women.

Provided that individuals with certain characteristics are more likely to select into the nonprofit sector than others, the next part of the study examines the relationship between the self-selection into the sector and one's sectoral earnings. Specifically, this study focuses on the question of whether people choose nonprofit employment because

[3] When the types of volunteer organizations are specified, however, there are important differences between public and nonprofit employees. For instance, having volunteered in an educational group increases the likelihood of working for government, but not that of working for nonprofits. On the contrary, while having volunteered in a religious or community organization affects positively the likelihood for working in the nonprofit sector, it does not affect the likelihood to work in the public sector. These results suggest that a particular type of volunteer activity may capture the unique aspect of public service motivation and nonprofit motivation.

they have comparative advantage in salary in the sector or they select into the nonprofit sector although they have no advantage or even comparative disadvantage in salary in the sector for reasons other than purely economic ones. Roy's (1951) model for mobility decisions across industries suggests that people look for comparative advantages in earnings when they choose careers in a specific industry. His model suggests that nonprofit workers have a comparative advantage at the nonprofit activities (they are paid better for their skill and characteristic sets) compared to the workers in the government or public sectors performing the government or business activities. However, if they are working in nonprofits despite a comparative disadvantage or no advantage in earnings, a different explanation is needed to understand the relationship between sector choice and earnings.

CHAPTER 6

RESULTS: WEEKLY EARNINGS ACROSS THE SECTORS

In the previous chapter, a model for sector choice of individuals is estimated. In this chapter, a model for their earnings determination is estimated to test the three alternative hypotheses on nonprofit wage differentials reviewed in Chapter 3. Does the self-selection into the nonprofit sector lower a person's earnings? Does it increase one's earnings in the nonprofit sector? Or, does it affect one's earnings at all? The endogenous switching regression model for earnings estimates the coefficients of the factors that determine one's weekly earnings controlling for one's self-selection into a particular sector. This way of modeling earnings determination provides selection-bias corrected estimates. That is, the estimates show the impact of predictor variables for a randomly chosen individual. In order to examine the changes after correcting for selection bias, results from the simple logarithm form of earnings equations across the sectors and the endogenous switching regressions results with selection bias correction are compared. The estimation results suggest that unobserved factors influencing a person's sector choice affect his or her earnings in each sector as well. Particularly, the latent propensity to work for nonprofits tends to lower a person's earnings.

Table 4 illustrates the effect (percentage change in earnings since the dependent variable is natural logarithm of earnings) of a unit change of independent variables (change from 0 to 1 in cases of dummy variables) on one's weekly earnings, and table 5

displays the estimation results based on the endogenous switching regression for earnings. In this part of the study, estimation results for earnings determination is provided and then compared to the endogenous switching regression for earnings with selection bias correction. For more accurate estimation, those who reported their weekly earnings were lower than the federal minimum hourly wage ($ 5.15 per hour between 2003 and 2007) are considered having misreported their earnings, and therefore are removed from the sample.

Earnings in Each Sector: Ordinary Least Squares (OLS) Regression

Table 4 displays OLS estimation results for the earnings equation in the for-profit, public, and nonprofit sectors. The coefficients estimates are the impacts of individual variables on a person's weekly earnings without the selection bias correction. The first variable examined is holding a blue- or pink-collar occupation. Having a blue- or pink-collar occupation is always negatively associated with earnings across the sectors. That is, blue- and pink-collar workers earn lower wages than white collar workers no matter which sector they work in, and this tendency is as twice as strong for women than men. While the blue- and pink-collar penalty on earnings is between negative 12 percent and negative 14 percent for men in for-profit, public and nonprofit sectors, it is between negative 24 percent and negative 33 percent for women. The size of the penalty is greater in the nonprofit sector for both men and women. Considering that women are more likely to have a pink collar job than men and that more nonprofit jobs are pink-collar jobs rather than blue-collar jobs, the wage penalty associated with pink-collar occupations may be greater than blue-collar penalty in earnings.

The next variable examined is the number of hours worked per week. Weekly work hours are positively associated with one's earnings in each sector, and the return on an additional work hour is greater in the for-profit sector regardless of sex. An additional hour of work in a given week increases men's earnings by 2.3 percent in the public sector, 2.7 percent in the nonprofit sector, and 2.8 percent in the for-profit sector. For women, an extra hour of work increases their earnings by 3.2 percent in the public sector, 3.7 percent in the nonprofit sector, and 3.8 percent in the nonprofit sector. An extra hour of work pays off most in the for-profit sector for both men and women, and it does more for women than men. A greater return on an extra hour of work for female workers is possibly due to the fact that women tend to work fewer hours than men to begin with and therefore, the marginal productivity of an additional hour is greater for women. Women, compared to men, work six to seven hours fewer weekly in each of the sectors.

The OLS regression also analyzes the impact of a person's age on weekly earnings. Overall, a person's earnings tend to increase as they get older, and the rate of increase is greater for men than for women across the three sectors. Men's earnings increase most by 8.1 percent in the nonprofit sector as they become a year older, and least in the for-profit sector by 7 percent. Women's weekly earnings increase by 6.1 percent in the public sector, 5.2 percent in the nonprofit sector, and 4.9 percent in the for-profit sector as their age increases by additional year. For both men and women, age effect on earnings is smaller in the for-profit firms and bigger in the public and nonprofit organizations.

The model also examines how one's race affects his or her earnings. The findings suggest no racial differential in women's earnings in all three sectors. White women do not earn more than their non-white counterparts. For men, however, there is a black-white differential in male earnings in the public and for-profit sectors, with an exception in the nonprofit sector. White males earn 8 percent more in salaries in the public sector and 11 percent more in the for-profit sector compared to non-white males, when other things are equal. There is no racial differential in both male and female earnings in the nonprofit sector controlling for an individual's education, age, marital status, and other characteristics included in the equation.

The next variable examined in the model is a person's marital status. The findings demonstrate there is a marriage premium in earnings across the sectors regardless of sex. The magnitude of the premium, however, is as twice as big for men than for women in each of the sectors. For-profit sector marriage premium is 11 percent for men and 5 percent for women. The size of the premium is greater in the nonprofit sector for both men and women (16 percent and 8 percent respectively). In the public sector, the marriage premium is 8 percent for men. However, marital status does not affect public sector women's earnings. The findings support the literature by confirming that men have greater marriage premium in earnings than women (Becker 1985; Breusch and Grey 2004: Chun and Lee 2001).

In addition to the marital status, the earnings estimation includes another family situation variable of whether an individual has children in his or her household. The effect of having children in the household varies across the sectors. In the for-profit sector, a child premium exists for both men (4.0 percent) and women (1.7 percent),

holding everything else in the equation constant. In the public sector, there is no premium for men, and there is even a penalty (-3.3 percent) for working mothers. In the nonprofit sector, parental status does not affect one's earnings.

The model also analyzes how educational attainment affects an individual's weekly earnings. Higher educational attainment increases one's earnings across sectors. Compared to those who graduated from a high school, individuals with less than high school education earn significantly less, between 19-25 percent less for women and between 25-32 percent less for men. The size of the penalty for not having graduated from high school is greater in the nonprofit sector for both men and women a negative 32 percent and negative 25 percent respectively holding other things constant. Having some college education or an associate's degree increases one's earnings by anywhere between 5 to 9 percent compared to earnings of high school graduates, and the effect is greater for women than men in all three sectors. In the nonprofit sector, men with some college education or an associate's degree do not earn significantly more than high school graduates. Having a bachelor's degree increases one's earnings in every sector compared to high school graduates. The college premium is greater in the nonprofit sector for men as 39 percent, and in the for-profit sector for women as 35 percent. The return on college education is smaller in the public sector for both men and women, as 26 percent and 29 percent respectively. Having completed graduate education increases one's earnings by approximately 50 percent compared to those who completed high school, and the size of the premium is always greater for women than for men in all three sectors. Men with a master's or an advanced degree earn 40 percent more than male high school graduates in the public sector, and 47 percent in

the nonprofit sector. Women earn 50 percent more in the public sector and 49 percent more than high school graduates in the nonprofit sector with graduate or advanced degrees. The pay off of completing graduate education is biggest in the for-profit sector for both men and women as of 51 percent and 55 percent each.

Finally, the model estimates the changes in an individual's earnings between 2003 and 2007 across the sectors. In general, wages tend to increase over time, except for women in the nonprofit sector. Their weekly earnings do not change until 2006 compared to their earnings in 2003. Nevertheless, the size of the increase in the year 2007 (compared to the year 2003) is large enough to catch up increases for the previous years in the other sectors. This suggests that women's salaries in the nonprofit sector have remained relatively stable for the period 2003-2006, but the rate of growth dramatically increased in 2007 to match rate of growth in other sectors for the previous 4 years given that the coefficient measures the change compared to the base year (2003). This finding suggests that wages in the nonprofit sector have been more time-inelastic than wages in other sectors. As the nonprofit sector has become a more significant part of the labor market, however, nonprofit wages seems to have matched the growth in economy.

As mentioned previously in the study, an individual's predicted weekly earnings in each sector are estimated through the above process, and the intersectoral differentials are used as independent variables in multinomial sector choice equation. This process assumes that a person has relatively accurate information about returns on an individual's observed characteristics necessary for assessing the earnings in each of the sectors. At the same time, this approach assumes that people are not aware

of how their selection into a particular sector would affect their earnings. Accounting for self-selection may not only change the coefficient estimates for observed characteristics, but the sector choice itself may also have a significant impact on one's earnings. Both the changes in coefficients and net selection effects are examined with the endogenous switching regression for earnings model.

Endogenous Switching Regression for Earnings with Selection Bias Correction

As discussed in Chapter 3, an individual's employment sector and her earnings are jointly determined and the earnings estimation should account for the self-selection bias due to this endogeneity. The results from the endogenous switching regression for earnings in table 5 and 6 demonstrate how correction of self-selection bias changes the coefficient estimates for earnings determination. The results are presented in table 5 (for male workers across sectors) and table 6 (for female workers across sectors). Overall, the direction and the significance of the coefficients remain very similar as in the OLS estimation of *ln*(weekly earnings) presented in Chapter 5. An individual's weekly earnings tend to increase as one's level of education increases and as one's age increases. An additional weekly work hour still increase one's earnings in all three sectors, and the magnitudes are about the same. Metropolitan residence is positively correlated with earnings as well. Despite the similarities, there are some significant differences that are worth discussing and the differences may well vary depending on the choice set. For the simplicity of the discussion, the estimation results for the switching regression based on each choice set are explained separately.

Choice between the Nonprofit and For-profit Sectors

The far-left two columns in table 5 and 6 demonstrate the switching regression estimates for earnings in nonprofit and for-profit workers for male and female workers respectively. The model first examines the effect of holding a blue- and pink-collar occupation after controlling for the selection bias. Blue- and pink-collar workers still tend to earn less than white-collar counterparts in both nonprofit and for-profit organizations after the selection bias correction. The size of the wage penalty associated with blue- and pink-collar jobs is also greater for women than for men when they choose between nonprofit and for-profit jobs. However, the difference between blue- and pink-collar earnings and white-collar earnings disappears for male workers in the nonprofit sector. This could be due to the fact there is a relatively small number of blue- and pink-collar (and especially blue collar) male workers in nonprofits compared to the for-profit sector. In the nonprofit sector, one third of male workers have blue or pink collar occupations while almost two thirds of for-profit male workers have those jobs. Overall, the size of the blue- and pink-collar penalty on weekly earnings tends to decrease by almost a half for both men and women when the self-selection bias is corrected.

Second, in their choice between nonprofit and for-profit employment, one's race has a significant influence on male workers' earnings in the for-profit sector after the selection-bias correction. Being a white male is positively associated with earnings in the for-profit sector. White males earn from 8 to14 percent more in the for-profit sector. White male premium in weekly earnings, however, disappears in the nonprofit sector when accounting for endogeneity due to the self-selection. White females do not have wage premium over non-white females.

In terms of the marriage effect on earnings, married men earn more than those who are not married in both the for-profit and nonprofit sectors: married men's weekly earnings are between 10 to 11 percent higher than those of not-married men in the for-profit sector. However, the marriage premium disappears in the nonprofit sector after the selection bias correction. Married women are paid better in both the nonprofit and for-profit sectors than those who are not married. The marriage premium for women is anywhere between 5 to 6 percent in the for-profit sector and up to 10 percent in the nonprofit sector. Presence of children in the household is also positively associated with men's weekly earnings in the for-profit and the nonprofit sectors after controlling for endogeneity. For women, however, having children has no influence on their earnings in either sector.

The self-selection corrected coefficient estimates for the level of education indicates that additional educational attainment generally increases men's earnings in both nonprofit and for-profit organizations after correcting for selection bias. However, there is no difference between the earnings of those with some college or associate degrees and the earnings of those who have completed high school. The returns on education for men are greater in the for-profit sector than in the nonprofit sector. Men with graduate degrees earn between 55 to 60 percent more than male high school graduates in the business sector. Level of education is also positively associated with women's earnings. For women, returns on college education are higher in the for-profit sector by anywhere between 34 to 40 percent, and returns on advanced degree are higher in the nonprofit sector than in other sectors anywhere between 60 to 67 percent. Overall, women's educational attainment tends to be better rewarded in nonprofits than

in the for-profit sector after selection bias correction. Higher return on women's education in the nonprofit sector suggests that there could be a brain drain of highly educated women into the nonprofit sector from for-profit corporations.

The model also analyzes the changes in weekly earnings over time controlling for self-selection into the for-profit and nonprofit sectors. While weekly earnings have increased in the for-profit sector over time regardless of sex, men's earnings in the nonprofit sector tend to remain constant over the years compared to the base year 2003 both in simple earnings estimation and in the switching regression for earnings. There has been little increase over time in women's nonprofit earnings in general, but their nonprofit earnings caught the rate of increase in 2007, by jumping from no difference to 12 percent increase.

Choice between the Nonprofit and Public Sectors

The two columns on the right in table 5 and 6 show how correcting the self-selection bias changes the coefficient estimates for earnings determination in the nonprofit and public sectors when people choose between the nonprofit and public sectors. Additional educational attainment, additional work hours, additional experience, and metropolitan status tend to increase one's weekly earnings in both sectors.

In general, the results suggest that a negative wage differential exists for blue- and pink-collar occupations and that the magnitude is greater for women than for men after the selection-bias correction. While blue- and pink-collar penalty is more than 30 percent for women in both public and nonprofit sector, men only have 16 percent penalty in the public sector and no penalty at all in the nonprofit sector. As previously mentioned, no significant blue- and pink-collar penalty in the nonprofit sector could be

due to the fact there is a relatively small number of male workers with those jobs (and especially blue-collar ones) in nonprofits.

In regard to the effect of an individual's race on weekly earnings, race has no significant influence on one's earnings in the nonprofit sector regardless of sex. However, there is a wage premium of being white in the public sector for both male and female workers as of 9 percent and 6 percent respectively. After selection bias correction, nonprofit employers are doing better in providing the wage equity between whites and non-whites than government employers.

When people choose between public and nonprofit employment, the marriage premium works differently for men and women. Married men earn approximately 7 percent more than those who are not married in government, but not in nonprofits. On the contrary, married women earn approximately 10 percent more than those who are not married in the nonprofit sector, but not in government. Presence of children in the household positively affects men's earnings in the nonprofit sector, but does not change their earnings in government. Having children has nothing to do with women's earnings in either sector.

Regarding the impact of education, the findings suggest that additional educational attainment increase an individual's earnings in both nonprofit and public organizations after controlling for the selection bias. Compared to those who graduated from high schools, male workers with bachelor's degrees earn 31 percent more in the public sector and 37 percent more in the nonprofit sector. Men with advanced degrees earn 51 percent more in the nonprofit sector and 35 percent more in the public sector compared to those who graduated from high school. An interesting observation is that

male workers' advanced degrees pay less than bachelor's degrees in the nonprofit sector. For women, the earnings premium from college education is 35 percent in the nonprofit sector and 32 percent in the public sector when compared to high school graduates, and returns on advanced degree are 67 percent and 47 percent in the nonprofit sector and the public sector respectively. Overall, women's educational attainment tends to be better rewarded in nonprofits than in government. The higher return on women's education in the nonprofit sector suggests that women with more education may have incentives to work in the nonprofit sector rather than in government agencies.

The endogenous switching regression coefficients for different years indicate that the earnings in the nonprofit sector tend to remain constant over the years compared to the base year 2003 for both men and women. While earnings in the public sector tend to increase gradually over time, nonprofit sector earnings have remained constant for men and women.

Choice between the For-profit and Public Sectors

The two columns in the middle of table 5 and 6 display switching regression estimation results based on the choice between public and for-profit organizations. In regard to the impact of holding a blue- and pink-collar occupation, the findings suggest that blue- and pink-collar workers earn lower salaries than white-collar workers, by anywhere between 10 percent to 20 percent. The size of the blue- and pink-collar penalty is also greater for women than for men. Compared to choice between nonprofits and for-profits and the choice between nonprofits and government, the magnitude of

penalty tends to be smaller. It may be because of the greater number of people having those jobs in the public and for-profit sectors compared to the nonprofit sector.

An individual's race does not seem to influence one's earnings after the selection bias correction except men's earnings in the for-profit sector when they choose between the public and for-profit sectors. White males earn 8 percent more than non-white males in the for-profit sector, but they do not earn more than non-whites in the public sector. Women's earnings are not associated with their race in either sector.

The findings indicate that a person's marital status has different impact on earnings depending on one's sector and sex. In the for-profit sector, a marriage premium exists for both men and women. Compared to their non-married counterparts, married men earn 10 percent more and married women 6 percent more respectively in for-profits. In the public sector, however, the marriage premium exists only for men, and there is no marriage premium for women. While having children increases men's earnings by 5 percent in the for-profit sector, it does not affect women's earnings. In the public sector, men have no child premium and women even suffer a 5 percent penalty for having children in their household.

The model also estimates the effect of educational attainment on earnings after correcting for the selection bias, and the results indicate that additional education generally increases an individual's earnings in both for-profit and public organizations. Compared to those who graduated from high school, male workers with a bachelor's degree earn 33 percent more in the public sector and 39 percent more in the for-profit sector. Men with advanced degrees earn 54 percent more in the for-profit sector and 60 percent more in the for-profit sector compared to those who graduated from high school.

Overall, men's additional education has a higher return in for-profit firms compared to government agencies. For women, the earnings premium from college education are 37 percent in government and 38 percent in for-profits when compared to high school graduates, and returns on advanced degrees are 60 percent and 52 percent in government and for-profit firms respectively. This finding suggests women's advanced degrees result in higher returns in the public sector and their college education does so in the for-profit sector when compared to the returns on completion of high school education.

The selection-bias corrected coefficient estimates suggest that, since 2003, men's wages increased continuously by approximately 3 percent each year in both the for-profit and public sectors. Women's wages also increased by 2-4 percent every year in the for-profit sector, but they remained relatively stable in the public sector until 2006 although it increased by 8 percent in 2007 compared to 2003.

The endogenous switching regression results for three binary choices indicate that wage premiums associated with one's personal characteristics tend to increase in size and penalties to decrease when correcting for selection bias compared to the simple OLS estimation. This finding suggests that individuals may be aware of the costs and benefits in terms of salary associated with their demographical, occupational, and socioeconomic characteristics. If people are selecting into the sector where they can maximize the benefits and minimize the costs, are they also aware of the unobserved selection effect on their earnings? In terms of choosing nonprofit employment, does nonprofit employment provide wage penalties or premiums after accounting for

selection due to the observed characteristics? The following section discusses the findings of the unobserved selection effect on an individual's earnings.

The Unobserved Selection Effects

As summarized in Chapter 3, the self-selection into a particular sector should account for both observed and unobserved characteristics associated with sector choice. While the OLS estimation of sectoral earnings controls only for observed variables, the endogenous switching regression accounts for both aspects in self-selection. The endogenous switching regression has two selection parameters, *rho*1 (*ρ1*) and *rho*0 (*ρ0*), where *ρ1* is a parameter for the unobserved propensity to choose alternative 1 and *ρ0* is a parameter for the unobserved propensity not to choose alternative 1, that is, to choose alternative 0. As explained in Chapter 4, the coefficient estimate for *rho*1 (*γ1*) indicates how an individual's unobserved propensity for choosing *j* sector (S_j=1) affects one's earnings if everyone else also chooses to work in that sector controlling for an individual's characteristics. Alternatively, the coefficient estimate for *rho*0 (*γ0*) predicts how an individual's unobserved propensity for not choosing *j* sector (Y=0) affects one's earnings if everyone else also chooses not to work in that sector (choosing the other sector) controlling for an individual's characteristics. The switching regression results for men are illustrated in table 5, and those for women are shown in table 6.

<u>Choice between nonprofit and for-profit</u>

Men

- *A negative and significant selection effect of nonprofit employment on nonprofit earnings for nonprofit employees*

- *A positive but not significant selection effect of for-profit employment on for-profit earnings for nonprofit employees*

The negative (and significant) coefficient estimate for $\rho 1$ means that if everyone decides to work for nonprofits, the current nonprofit workers would earn less than the current for-profit male workers. The coefficient estimate for $\rho 0$ that is not significantly different from 0 indicates that there will be no difference in earnings if current nonprofit male workers decide to work for for-profits. A negative (and significant) $\gamma 1$ and a $\gamma 0$ that is not different from 0 mean that nonprofit workers' earnings would have been higher than the current for-profit workers' earnings in the for-profit sector if they had chosen for-profit employment. That is, nonprofit male workers have chosen the sector where they have comparative disadvantage in earnings in their choice between for-profit and nonprofit employment.

The fact that male workers in the for-profit sector would have made the same salary if they had worked for nonprofits casts a doubt on the stereotype that nonprofit workers earn less than the for-profit sector because of their lack of qualification. Rather, the findings suggest that nonprofit male workers select into a sector where they have a *comparative disadvantage* and that those men may gain something unobserved other than monetary compensation by working in the nonprofit sector that is not included in the equation. Perhaps by working for nonprofits, these men satisfy their unique nonprofit motivation which is not captured by volunteering. The findings in sector choice analysis in Chapter 5 suggest that participation in volunteering activities captures the common area between public service motivation and nonprofit motivation rather than capturing the unique nonprofit motivation. As the literature suggests, "the motivational context in

one sector is someway different from that of the other" (Wright 2001, 563). The unique nonprofit motivation then, may work as a mechanism that attracts people to the nonprofit sector even when they have *comparative disadvantage* in the sector.

Alternatively, nonprofit employment may provide them with more non-pecuniary benefits that are not measurable in CPS data. Jeavons (1993) and Goodstein (1994) argue that nonprofit organizations tend to make stronger commitment to employees' welfare than for-profit firms because they are more prone to institutional pressures to treat their employees according to their missions. If nonprofits indeed provide more job-related amenities and non-pecuniary benefits, employees may be willing to work in the nonprofit sector despite the comparative disadvantage in weekly earnings depending on how important those amenities are to individuals.

Women

- *A negative and significant selection effect of nonprofit employment on nonprofit earnings for nonprofit employees*
- *A negative and significant selection effect of for-profit employment on for-profit earnings for nonprofit employees*

The negative (and significant) coefficient estimate for $\rho 1$ means if everyone chooses to work for nonprofit organizations, those who are currently working in the nonprofit sector would earn smaller salaries than current for-profit workers (negative selection into nonprofit sector) given their characteristics. The negative (and significant) coefficient estimate for $\rho 0$ means if all the people choose to work for for-profit organizations, those who are currently working in the for-profit sector would still earn more than current nonprofit workers. Significant and negative $\gamma 1$ and a $\gamma 0$ together

suggest that for-profit female workers have an *absolute advantage* in both the for-profit and nonprofit sectors compared to current female workers in the nonprofit sector. In other words, for-profit women have characteristics associated with higher earnings in both the for-profit and nonprofit sectors holding the variables in the equation constant.

Why do female nonprofit workers have lower earning potential than female for-profit workers in both for-profit and nonprofit sectors? A possible answer is that nonprofit workers possess fewer skills and poor work ethics, which is consistent with the common perception of nonprofit workers. However, literature suggests that nonprofit workers are often more motivated and they get more satisfaction from their jobs (Light 2002). Alternatively, the literature suggests that nonprofit workers' attitudes toward the quality of the services they provide may explain their lower salaries (François 2003). François (2003) argues that such tendency of nonprofit workers encourages them to donate their labor and to other tasks out of their responsibilities, therefore lowers their earnings. This tendency of nonprofit employees would not disappear even if they work for other types of organizations, and it will discount their earnings eventually by putting their efforts in tasks that are not reflected in their performance assessment. For example, while a for-profit minded person helps two clients by dividing up their time, a nonprofit minded person may only help one client more thoroughly in the same time. If one's salary is based on how many clients they have served, the for-profit minded employee has better performance score than the nonprofit-minded one.

Choice between nonprofit and public

Men

- *A negative and significant selection effect of nonprofit employment on nonprofit earnings for nonprofit employees*
- *A positive and significant selection effect of government employment on government earnings for nonprofit employees*

The negative (and significant) coefficient estimate for $\rho 1$ means if everyone chooses to work for nonprofits, the male employees who are currently working in the nonprofit sector would earn less salary than current government workers. The positive (and significant) coefficient for $\rho 0$ indicates that the current male workers in the public sector would earn less than current male workers working for nonprofits if everyone decides to work for government. A negative (and significant) $\gamma 1$ and a positive (and significant) $\gamma 0$ suggest that men choose the sector where they have *comparative disadvantage* when it comes to choosing between nonprofit and public employment. In other words, nonprofit workers would be financially better off in the public sector while government workers would be better off in the nonprofit sector.

Many factors may motivate people to choose economically a less-desirable employment sector. For instance, in their comparison between public and nonprofit managers in Georgia and Illinois, Lee and Wilkins (2009) find that nonprofit managers tend to assign greater importance on increased responsibility and autonomy while managers in public agencies value more the opportunities for advancement as well as the pension and other retirement benefits. Public and nonprofit employees may get more of these non-monetary benefits in the sector they are currently employed,

therefore chose their current job over the other although it is not testable with the current data.

Women

- *A negative and significant selection effect of nonprofit employment on nonprofit earnings for nonprofit employees*
- *A positive and significant selection effect of government employment on government earnings for nonprofit employees*

The negative (significant) coefficient estimate for $\rho 1$ means if everyone chooses to work for nonprofits, the women who are currently working in the nonprofit sector would earn smaller salaries than current female workers in government. On the contrary, the positive (significant) coefficient for $\rho 0$ signifies that the women who are currently working in government would earn less than current nonprofit female workers if everyone chooses to work in government. Having a negative $\gamma 1$ and positive $\gamma 0$ suggests that in their choice between nonprofit and public sector employers, women tend to choose the sector in which they have a *comparative disadvantage*. There may be factors that attract people to choose an economically less-appealing sector, and the possible answers for women are the same as for men. Public and nonprofit employees may get more of the non-monetary benefits in the sector they are currently employed, therefore they choose to work in the sector despite the disadvantage in salary.

Choice between public and for-profit

Men

- *A positive and significant selection effect of government employment on government earnings for government employees*

- *A positive and significant selection effect of for-profit employment on for-profit earnings for government employees*

The positive (and significant) coefficient estimate for $\rho 1$ signifies that men who are currently working in the public sector would earn more salary than the current for-profit sector male workers if everyone chooses public employment. The positive (and significant) coefficient estimate for $\rho 0$ means if everyone chooses for-profit employment, the current for-profit male workers would earn less than those who are working in the public sector. Having significant and positive $\gamma 1$ and $\gamma 0$, in summary, suggests that public sector male employees have an *absolute advantage* in their earning potential in both public and for-profit sector compared to for-profit male workers. That is, public sector male employees have characteristics associated with higher earnings in both the public and for-profit sectors over those who have chosen for-profit employment after controlling for the individual characteristics included in the model. A potential reason found in the literature for the absolute advantage of public sector male workers is that public sector employees are likely to value achievement more than for-profit sector employees (Guyot 1960; McClelland 1961). In their analysis of 1989-1998 data from General Social Survey, Frank and Lewis (2004) also find that government employees have slightly higher work effort than those in the private sector. However, whether this is due to public employees' productivity, work ethics or attitudes, or some other unobserved factors cannot be concluded in this study because it is not possible to measure them with the CPS data.

Women

- *A positive and significant selection effect of government employment on government earnings for government employees*
- *A negative and significant selection effect of for-profit employment on for-profit earnings for government employees*

The positive (and significant) coefficient estimate for $\rho 1$ indicates that women who are currently working in government would earn more than current for-profit female workers if everyone decides to work for government. The negative (and significant) coefficient estimate for $\rho 0$ indicates, on the other hand, that those who are currently working in the for-profit sector would earn more than current public sector workers if everyone decides to work in the for-profit sector. Having a positive $\gamma 1$ and a negative $\gamma 0$ means women tend to sort into the sector where they have higher earning potential compared to the other sector. Therefore, both for-profit and public sector female employees are selecting into the sector where they have a *comparative advantage*. The fact that both groups make efficient choices suggests that women's choice between public and for-profit sector is determined by economic consideration, which is consistent with the findings in the selection model.

In sum, the findings suggest that people face disadvantages in earnings when they choose nonprofit employment over for-profit or public employment. When people choose between for-profit and nonprofit employment, female nonprofit workers tend to have absolute disadvantages in both sectors, and male nonprofit workers have comparative disadvantages in the nonprofit sector and no advantages or disadvantages in the for-profit sector. In their choice between public and nonprofit employment, people

select into the sector where they have comparative disadvantages regardless of sex. This finding provides support for the nonprofit wage penalty hypothesis examined in Chapter 3. Nonprofit employees may indeed donate their labor as labor donation theory predicts, or they may gain non-pecuniary benefits by working for nonprofits. Provided that women account for predominant part of nonprofit labor, this implies that they are giving up economic gains by working for nonprofits, and they are doing so knowingly.

CHAPTER 7

CONCLUSION

This study examined how individuals choose their employment sector and what impact of their sector choice has on their earnings. The first part of the study tested the five hypotheses on the determinants of the sector choice, including wage differential between sectors, gendered industry structure, career advancement opportunities, family-friendly environment, and intrinsic motivation. The findings shed light on a number of important aspects of people's decision to work in the nonprofit sector. First, the findings showed that the industry structure of the nonprofit sector contributes to the overrepresentation of women. In fact, working in education and health industries seems to be the most critical determinant of nonprofit employment. Although the sizes of the coefficients for working in health and education industries are same for men and women, a lot more women are already working in those fields to begin with, therefore more women are likely to work in nonprofits. This empirical finding suggests that much of the sector choice may be a consequence of involuntary decision embedded in the industrial structure within the sector which limits women's choice over different industries.

One may argue that the selection of industries and occupations is a result of an individual's voluntary choice. However, the literature on women's career choice argues that the gender differences in the perceptions of task competence foster gender differences in commitment to paths leading to that career even before an actual choice

is made (Correll 2001). In other words, there are sex differences in the beliefs of competences for various fields even in one's early stages of life such as childhood and adolescence (Wigfield and Eccles 2002). As a consequence of these stereotypes for competences by sex, there are far more female students than male students studying so called "feminine" subjects such as nursing, primary education, and library science, while there are more male students majoring masculine fields such as mathematics and engineering. The different paths that men and women take in preparing themselves for the job market then lead to different career choices, and the career choices made in turn affect the paths of younger generation.

Second, positive and significant association between holding managerial or professional positions and the probability to work in the nonprofit sector suggests that greater availability of those positions open to women may exist in the sector. As the finding shows, the effect of holding a managerial or professional position is 1.5 times greater in magnitude in terms of increasing women's likelihood to work in the nonprofit sector compared to that of their male counterparts. The greater effect of holding a managerial or professional position on women's likelihood to work in all sectors suggests that women react more sensitively to the opportunity for advancement than men. Provided that women more often than men encounter the organizational glass ceiling, chances for moving up the hierarchy may be a greater attraction for women. In the analysis, women are almost four-times less likely to work in the for-profit sector if they have managerial or professional occupations than men.

This sex-specific pattern, combined with the positive association between women's likelihood to work for nonprofits and having college education, implies that

women with more education and experience may find working in the public and nonprofit sector more attractive than working in the for-profit sector as the first two sectors provide positions that fit their qualifications. Greater availability of managerial and professional positions in nonprofit organizations, however, may be due to the fact that a majority of nonprofit organizations are a lot smaller than for-profit organizations. Women managers may not be qualified for managerial positions in for-profits or there may be invisible barriers preventing them from working in larger for-profit firms, therefore, they may choose an alternative position in smaller nonprofit organizations. Since information on organizational sizes is not available, no conclusion can be made.

Third, family obligation does not seem to be a major reason to work in nonprofit organizations. Marital status is not a significant factor affecting the sector choice in general. The presence of children in the household even decreases the probability to work in the nonprofit sector, and more likely so for women than men. This finding implies that contrary to the common perception, nonprofit organizations may not do as great job as presumed in providing better work-life balance. Alternatively, this can suggest that either younger or older workers (without children in the home) are more likely to work for nonprofit organizations than other demographic cohorts. As shown in table 1, nonprofit workers are indeed younger than public and for-profit workers on average with the largest standard deviation. Given the absence of measures of actual family-friendly policies, however, neither argument is conclusive.

The hypothesis on nonprofit motivation tests the role of intrinsic motivation behind volunteering in the decision to work for nonprofits. Given that caring attitudes are bases of the nonprofit sector and the idea behind volunteering, this study used an

individual's participation in volunteer activity as a proxy for nonprofit motivation. The findings show that although volunteering does increase the probability of working in the nonprofit sector, it increases the probability of working for government to an equal, if not greater, extent. The result is consistent with Houston's (2005) finding that both public and nonprofit employees are more likely to volunteer than private sector employees and the difference between government and nonprofit workers are not statistically significant. The findings suggest that volunteering may not reflect the unique nonprofit motivation, but rather it captures the common area between the two types of intrinsic motivation. There is also a possibility that employment in the public and nonprofit sectors may increase probabilities for volunteering rather than motivation behind volunteering increases likelihood of working in those sectors.

DeHart-Davis, Marlowe, and Pandey (2006) argue that public service motivation (PSM) is an area of discourse that contains both feminine and masculine imagery. They categorize PSM into three motivational dimensions including compassion, attraction to policy making, and commitment to public service, and view compassion as a feminine dimension of public service motivation, whereas attraction to policy making and commitment to public service are masculine dimensions (DeHart-Davis et al. 2006). Volunteering as an expression of pro-social preferences in this context fits the feminine dimension of public service motivation. In other words, volunteering may capture one aspect of intrinsic motivation where PSM and nonprofit motivation intersect. This in turn, means that PSM and nonprofit motivation share an important commonality although they are not identical.

Another important finding in the study is that the earnings differentials between sectors affect a person's decision to work either in the public or in for-profit sectors, but they do not have influence one's decision to work in the nonprofit sector. Positive earnings differentials in predicted earnings in the for-profit sector compared to the public sector increase one's likelihood to work in the for-profit sector, and decrease one's likelihood to working in government. One's decision to work for nonprofits, however, is not determined by predicted wage gains. This finding implies that money may not be a determining factor in choosing nonprofit employment. There may be some other unobserved reasons influencing the choice to work in the nonprofit sector that has not yet been observed instead of monetary compensation. The negative nonprofit wage differential identified in the second part of the study also supports this view.

While the findings of first part of this study indicate that certain individuals are more likely to work in the nonprofit sector than others, the second part of the study examines the issues of self-selection into the nonprofit sector and determination of one's earnings. The findings suggest that the self-selection has different effects on earnings depending on sex and the choice sets. For both men and women, nonprofit workers tend to have an absolute disadvantage in earnings in the nonprofit sector when they choose between nonprofit and for-profit sector employment. In their choice between nonprofit and for-profit employment, women who choose for-profit firms would have done better in both the for-profit sector and the nonprofit sector. In other words, nonprofit female workers have lower earning potential in both nonprofit and for-profit sectors. For-profit sector male employees do not have a comparative advantage in the for-profit sector, but they have a comparative advantage in the nonprofit sector. That is,

current nonprofit male workers have lower earning potential in the nonprofit sector than current for-profit male workers.

Poorer earning potentials of nonprofit workers in both the nonprofit and for-profit sector may be understandable to some people and surprising to others. In essence, the absolute disadvantage of nonprofit workers in salary suggests that nonprofit workers and for-profit workers are different types of employees, and that nonprofit employee characteristics are associated with lower earnings. Some may argue that nonprofit sector employs less qualified workers, with poorer human capital. However, the empirical model in this study controls for work hours, educational attainment, age, and other conventional human capital measures identified in the literature. An alternative explanation is that nonprofit employees may indeed have tendency to donate their labor in the nonprofit sector. Especially, male nonprofit workers do not have disadvantage in earnings in the for-profit sector, that is, they could have done as well as the current for-profit workers if they had worked in a for-profit firm. Another possibility is that nonprofit employees may value other amenities of work which are more abundant in the nonprofit sector than in the for-profit sector. They may demand a better benefits package rather than negotiating over the salaries, or in other words, they are willing to accept lower wages to get some other amenities.

When people choose between nonprofit and public employment, both men and women are likely to select into the sector where they have a comparative disadvantage. Nonprofit workers, both males and females, would have earned more than the current public sector workers if they had chosen to work for government. Government workers, on the other hand, would have earned more than the current nonprofit workers if they

had worked in the nonprofit sector. Both government and nonprofit workers select into the sector where they have a comparative disadvantage, which is not efficient. Why do they make financially inferior choice? The findings of the sector choice model in Chapter 5 suggest that nonprofit motivation and public service motivation are overlapped in certain areas (including motivation behind volunteering), but there are other areas that are unique to each employment sector. As Wittmer (1991) argues, there are sectoral differences related to reward preferences, and the preferences of government workers and nonprofit workers may also be different (Lee and Wilkins 2009). Perhaps nonprofit workers fulfill their intrinsic motivation in the nonprofit sector sacrificing their comparative advantages in earnings in the public sector, and public sector workers may satisfy their public service motivation while giving up their comparative advantages in earnings in the nonprofit sector. The findings in public-nonprofit choice support the job amenities hypothesis of nonprofit wage penalty rather than labor donation hypothesis although it is not directly testable.

When choosing between public and for-profit employment, men and women demonstrate different patterns. Male government employees have an absolute advantage in earnings in both the public and for-profit sectors. In other words, whether current male government employees work in a government agency or a business organization, they will always earn more than the current for-profit workers. Male government workers' absolute advantage in earnings in both sectors suggests that they possess the characteristics that are associated with better pay in both sectors. Although the literature suggests that government employees are more likely to value achievement

and have slightly higher work effort than those in the private sector, no conclusion can be made from this finding due to the limited information in the data.

When women face the same set of choices, they tend to select into the sector where they have a comparative advantage. That is, female employees in government earn more than for-profit female workers would have earned if they decided to work for government, and female workers in the for-profit sector earn more than female government workers would have if they chosen for-profit employment. This suggests that women's choice between for-profit employment and public employment tends to be shaped by financial considerations which in turn depend on their unobserved characteristics. To put differently, women's unobserved characteristics may yield higher return in the nonprofit sector, and they select into a sector where they have a comparative advantage in earnings.

In sum, individual's choice to work for nonprofits is influenced by his or her industry, occupation, and intrinsic motivation rather than being determined by monetary gains. Individuals even have tendency to accept lower wages when they choose nonprofit employment over employment in other sectors. This nonprofit wage penalty can be understood either as labor donation by nonprofit workers or as presence of non-pecuniary benefits of nonprofit jobs.

Contributions

This study attempts to explain women's overrepresentation in the nonprofit sector by examining people's employment decision. The study models an individual's sector choice as a choice among the three sectors of employment including the for-profit,

government, and nonprofit sectors. Previous research on this topic mostly analyzes either the choice between the for-profit and the nonprofit sectors or the choice between the for-profit and the government sectors. However, the analysis of choice only between the two is so limited that it loses much information on decision for employment sector because today's workers face a set of three choices instead of two. This three-way choice provides a more realistic description of an individual's career choice.

This study acknowledges that individuals make a rational choice, that is, they choose the sector of employment among the for-profit, government, and nonprofit sectors in a way that satisfies his or her preferences. It also accounts for the presence of structural influence in society that affects (or limits) one's sector choice, namely occupation and industry structure. By accounting for both aspects of decision making, this study provides a more realistic view of sector choice and earnings determination.

This study also attempts to examine the difference in intrinsic motivation between public and nonprofit workers. Although both public service motivation (PSM) and nonprofit literature has emphasized the role of intrinsic motivations in career choice, little research has questioned whether the intrinsic motivations behind nonprofit employment and PSM can be treated same. In fact, the dominant approach has considered nonprofit and public motivation basically the same (Houston 2005). Although the findings in this study do not support that volunteering captures the unique nonprofit motivation, it is not unusual to suspect that there must be difference between nonprofit motivation and PSM with the concept of PSM having multiple aspects (Lee and Wilkins, 2009; Wittmer, 1991). Nonprofit motivation may overlap with PSM in more than one of the dimensions of PSM suggested by scholars, and the reason that there is no

difference in the effect of volunteering on public and nonprofit employment is maybe because volunteering is situated in the overlapped area. Existence of the motivational differences between the two sectors has important implications for the design of incentive structure and management strategies in these organizations.

This study benefits from using the CPS data. First, the large size of the CPS data enables the research to be relatively free from the representativeness problem. In fact, previous research on the women's overrepresentation is typically based on small surveys rather than large data sets such as the CPS. Existing literature on women's employment in the nonprofit sector is mostly based on smaller data sets, for example, the 1977 Quality of Employment Survey (Preston 1990) and 1980 Survey of Job Characteristics (Preston 1989). Second, by using multiple years of data (2003-2007), the analysis accounts for seasonal changes in the labor market. In addition, this research is based on the most recent data available. Because external macroeconomic factors such as industrial trends and the financial situation in the nation may affect people's sector choice as well as their wages, controlling the time period is necessary in the estimation. This research attempts to control these macroeconomic effects by including year dummies in the equations.

Another important contribution of this study comes from controlling for the endogeneity in sector choice and earnings determination. The processes of wage determination and sector choice are not two separate processes. Rather, the choice of the sector influences one's wage while the prospective wage affects his or her choice of the employment sector. This research accounts for this interdependence between the sector choice and earnings, which has not been widely employed in public

administration literature. Although economics literature has considered this endogeneity issue, the focus has been limited mostly to two sectors, either public vs. private or nonprofit vs. private (Blank 1985; Frank 1996; Gyourko and Tracy 1988; Preston 1990; Van der Gaag and Vijverberg 1988; Van Ophem 1993). By employing the endogenous switching regression method based on three binary probit regressions, this research accounts for the self-selection issue in earnings across three different sectors. The findings suggest that nonprofit employment generally has negative impact on an individual's earnings. The nonprofit penalty in earnings suggests the possibility that nonprofit workers may donate their labor in order to achieve their beliefs and values uniquely associated with nonprofit employment or that they may accept lower wage in exchange for greater job amenities.

Next Steps

Although this research makes significant contributions in understanding the sector choice of women and their overrepresentation and wage rates in the nonprofit sector, there remain important challenges that require further research. More than anything, the implication of this research can be limited the blurring distinctions between the sectors. Recent research on the nonprofit organizations points out that the increasing intersectoral collaboration has blurred the distinction between nonprofits and organizations in other sectors (Svara 2007; Young 2002). Increasing influence from business and government has changed not only the outside relationship of nonprofit organizations, but also the internal management practices of the organizations, including personnel management (Young 2002). Many nonprofits now adopt the

practices of the for-profit corporations. Moreover, nonprofit organizations receiving funding from government are subject to rules and regulations of government. Given this situation, there may not be as clear patterns of sector choice as expected. This suggests that the blurred distinctions between sectors complicate the analysis of the nonprofit employment as a unique workforce. However, scholars argue that distinction remains even in the decade of large scale collaborations and partnerships (Hansmann 1980; Mirvis and Hackett 1983). As Rainey and colleagues (1976, 234) argue, “a distinction can be blurred and still be meaningful.”

Another limitation of this study is that it is impossible to model employers’ behaviors due to the lack of employer-side information. The absence of employer information may cause two problems. First, since employment is determined by both parties (i.e., employees and employer), an analysis of employment decision should consider the decisions of both. In other words, employers have to accept the candidates in order to establish employment. Unfortunately, the CPS data do not have information on the employer's part. Therefore, the estimation of sector choice without employer information is likely to suffer from an endogeneity problem. Collecting employer-employee matched data would help ease this bias. The second problem caused by the absence of employer information is that the analysis does not account enough for the heterogeneity within the nonprofit sector. CPS does not ask about types of nonprofit organizations when significant difference may exist depending on the types of nonprofits. The research hopefully controls for the diversity in the nonprofit sector by including industries and occupations in the estimation model to some extent. Future research based on employer-employee matched data could examine differences in

career choice depending on the types of nonprofit organizations. These data will also provide information on job-related amenities, and therefore help understand why nonprofit employees accept lower wages.

This research focuses on the decision for employment of prime-age paid workers who are 25-54 years old. The implication of the research should be limited to understanding the behavior of those workers. Focus on prime-age workers is justified by the fact that they account for the largest proportion of the workforce and their behaviors are expected to differ from those of younger and older workers. As a consequence, information on the sector choice and earnings of older workers are not known. However, older workers have increasingly become a significant part of workforce not only in the nonprofit sector, but also in the United States. Given the general trend of aging workforce, understanding career choice of workers over 55 is more important than ever. Future research on career choice, therefore, may have to pay special attention to this group of employees.

This research tries to control for an individual's nonprofit motivation using a proxy variable of participation in volunteering. The findings suggest that participating in volunteering reflects the common intrinsic motivation of both public and nonprofit employees, instead of capturing the unique nonprofit motivation. However, it is very likely that one's employment in public or nonprofit organizations increases volunteering rather than volunteering as a proxy for some intrinsic motivation affecting one's employment decision. Given the cross-sectional structure of the data, it is impossible to test the direction of influence in this research. Future research, therefore, could examine the relationship between participation in volunteering and nonprofit and/or public

employment. If participation in volunteering indeed positively affects public or nonprofit employment, the current human resource crisis in government (Lane and Wolf 1990: Liebowitz 2004) and as well as nonprofit organization (Saunders 2004) in recruiting and retaining qualified individuals may be alleviated by exposing citizens to volunteering activities in their early lives, e.g. childhood, adolescence, or early adulthood.

Another advantage of employing panel data in this research is being able to control for the movement across the sectors. In modern economy, many people build their careers moving across different sectors, therefore, it is important to understand how people move from one sector to another and what motivates them to do so. Due to the lack of longitudinal data, the present study focuses only on a person's current employment, and as a result, it cannot provide an answer for cross-sectoral mobility. Future research on sector choice will benefit greatly from analyzing people's movement across three sectors over time with panel data.

Lastly, this research will also benefit from employing more recent data in the empirical analysis. The current economic crises in the United States and other countries must have shaped many individuals' decision making including their career choice. In addition, the economic downturn may influence each sector to a different extent in terms of the wages in each sector. Therefore, incorporating more recent data will reveal the impacts of the economic downturn not only on people's choice among the three sectors, but also on their earnings across the sectors.

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Table 1. Descriptive Statistics:
Employees across the For-profit, Public, and Nonprofit Sectors

Variable	For-profit (*N* = 20219)	Public (*N* = 5364)	Nonprofit (*N* = 2258)
Percentage Female	38.8%	58.4%	68.0%
Education/Health Industry	13.1%	56.2%	68.8%
Managerial/Professional Occupation	46.2%	75.9%	82.6%
Married	65.0%	68.3%	65.1%
Presence of Children	51.7%	50.9%	48.4%
Volunteering	29.3%	45.5%	49.2%
Age	38.1 (8.3)	40.5 (8.5)	39.5 (8.8)
Only Income Earner	65.8%	64.9%	65.5%
U.S. Citizenship	90.7%	97.1%	95.1%
White	89.0%	85.4%	87.5%
Less than High School Graduate	7.5%	1.3%	1.4%
High School Graduate or GED	31.7%	15.4%	12.7%
Some College or Associate Degree	22.4%	17.4%	23.0%
Bachelor's Degree	28.3%	37.5%	36.9%
Master's or Professional Degree	10.1%	28.3%	26.0%
Weekly Work Hours	42.0 (9.6)	41.2 (9.7)	39.6 (11.5)
Weekly Earnings (in dollars)	887.5 (595.6)	875.7 (496.3)	818.4 (531.6)
Predicted For-profit Sector Weekly Earnings	884.6 (341.1)	1034.9 (321.6)	1012.3 (337.3)
Predicted Public Sector Weekly Earnings	755.3 (283.9)	871.3 (266.0)	843.0 (281.2)
Predicted Nonprofit Sector Weekly Earnings	704.2 (281.8)	839.5 (264.6)	823.0 (270.5)
Predicted Profit-Public Differential in Earnings	129.3 (97.9)	163.6 (104.9)	169.3 (101.9)
Predicted Profit-Nonprofit Differential in Earnings	180.4 (117.8)	195.3 (120.0)	189.3 (120.9)

(standard deviation)

Table 2. Descriptive Statistics:
Male and Female Employees across the For-profit, Public, and Nonprofit Sectors

	For-profit		Public		Nonprofit	
Variable	Male (N = 12376)	Female (N = 7843)	Male (N = 2231)	Female (N = 3133)	Male (N = 723)	Female (N = 1535)
Education/Health Industry	4.6%	26.5%	38.9%	68.5%	53.4%	76.0%
Manager/Professional	39.2%	57.3%	62.3%	85.5%	80.1%	83.8%
Married	67.4%	61.3%	71.0%	66.5%	67.2%	64.2%
Presence of Children	49.9%	54.5%	49.8%	51.7%	43.8%	50.6%
Volunteering	26.4%	34.0%	40.8%	48.9%	47.3%	50.2%
Age	38.4 (8.3)	37.5 (8.4)	40.6 (8.5)	40.2 (8.5)	40.1 (8.8)	39.2 (8.8)
Only Income Earner	66.8%	64.2%	66.4%	63.8%	65.4%	65.5%
U.S. Citizenship	89.3%	92.7%	96.5%	97.6%	92.4%	96.4%
White	89.6%	88.1%	85.3%	85.5%	85.2%	88.6%
Less than High School	8.2%	6.3%	1.4%	1.2%	1.5%	1.4%
High School Graduate or GED	34.2%	27.9%	18.2%	13.5%	12.2%	12.9%
Some College/Associate Degree	19.4%	27.1%	16.9%	17.8%	15.6%	26.4%
Bachelor's Degree	27.7%	29.4%	37.2%	37.8%	33.9%	38.4%
Master's or Professional Degree	10.5%	9.4%	26.3%	29.7%	36.8%	20.9%
Weekly Work Hours	44.1 (8.9)	38.8 (9.8)	43.4 (9.7)	39.7 (9.4)	44.0 (12.0)	37.5 (10.6)
Weekly Earnings (in dollars)	985.9 (621.9)	732.3 (514.8)	1001.751 (541.5)	785.9 (440.1)	984.9 (618.4)	740.0 (465.3)
Predicted For-profit Sector Weekly Earnings	982.2 (345.7)	730.7 (269.7)	1190.2 (354.8)	924.2 (240.9)	1289.0 (344.9)	882.0 (241.6)
Predicted Public Sector Weekly Earnings	841.9 (276.0)	618.7 (239.0)	994.5 (265.3)	783.5 (229.2)	1056.1 (265.7)	742.7 (227.3)
Predicted Nonprofit Sector Weekly Earnings	760.3 (289.2)	615.6 (244.7)	913.2 (200.1)	787.1 (221.7)	985.2 (295.6)	746.6 (219.8)
Predicted Profit-Public Differential in Earnings	140.3 (108.3)	112.0 (75.7)	195.7 (129.2)	140.8 (75.6)	232.9 (122.4)	139.4 (73.6)
Predicted Profit-Nonprofit Differential in Earnings	221.8 (125.0)	115.1 (64.3)	277.0 (129.1)	137.1 (68.2)	303.7 (129.7)	135.5 (67.0)

(standard deviation)

Table 3. Marginal Effect after Multinomial Probit Regression
Dependent Variable: Sector of Employment

	For-profit		Public		Nonprofit	
	Male	Female	Male	Female	Male	Female
Observed probability	Pr=0.82	Pr=0.70	Pr=0.14	Pr=0.20	Pr=0.04	Pr=0.10
Predicted probability	Pr=0.87	Pr=0.68	Pr=0.10	Pr=0.22	Pr=0.03	Pr=0.10
Variable	dy/dx	dy/dx	dy/dx	dy/dx	dy/dx	dy/dx
log(Profit-Public Diff. in Earnings)	0.012***	0.017*	-0.012***	-0.014*	0.000	-0.003
	(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)
log(Profit-Nonprofit Diff. in Earnings)	0.003	0.013	-0.002	-0.012	-0.001	-0.001
	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.00)
Education./Health Industry	-0.457***	-0.353***	0.329***	0.224***	0.129***	0.129***
	(0.02)	(0.01)	(0.02)	(0.01)	(0.01)	(0.01)
Managerial/Professional Occupation	-0.037***	-0.150***	0.007	0.107***	0.030***	0.044***
	(0.01)	(0.02)	(0.01)	(0.02)	(0.01)	(0.01)
Married	-0.015*	0.006	0.011	-0.002	0.003	-0.004
	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)
Presence of Children	0.009	-0.001	0.002	0.017*	-0.012***	-0.017**
	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)
Volunteering	-0.045***	-0.066***	0.023***	0.034***	0.022***	0.032***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)
Only Income Source	-0.001	0.016	0.004	-0.014	-0.003	-0.002
	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)
U.S. Citizenship	-0.097***	-0.130***	0.088***	0.125***	0.009**	0.005
	(0.01)	(0.02)	(0.01)	(0.02)	(0.00)	(0.02)
Weekly Work Hours	0.002***	0.001*	-0.002***	0.001	0.000*	-0.002***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Metropolitan Residence	0.070***	0.093***	-0.062***	-0.078***	-0.008*	-0.015*
	(0.01)	(0.02)	(0.01)	(0.01)	(0.00)	(0.01)
Age	0.003	0.010	-0.002	-0.006	0.000	-0.004
	(0.00)	(0.01)	(0.00)	(0.01)	(0.00)	(0.00)
Age^2	0.000	0.000*	0.000	0.000	0.000	0.000
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
White	0.036***	0.007	-0.029***	-0.010	-0.007	0.003
	(0.01)	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)
High School Graduate or GED	-0.095***	-0.079**	0.094***	0.058*	0.002	0.021
	(0.03)	(0.04)	(0.02)	(0.03)	(0.01)	(0.03)
Some College or Associate Degree	-0.143***	-0.059	0.138***	0.012	0.005	0.047*
	(0.03)	(0.04)	(0.03)	(0.03)	(0.01)	(0.03)
Bachelor's Degree	-0.220***	-0.215***	0.213***	0.148***	0.008	0.067**
	(0.03)	(0.04)	(0.03)	(0.04)	(0.01)	(0.03)
Master's or Professional Degree	-0.304***	-0.319***	0.285***	0.271***	0.019	0.048
	(0.04)	(0.04)	(0.04)	(0.04)	(0.02)	(0.03)
2004	-0.005	-0.019	-0.002	0.007	0.007	0.012
	(0.01)	(0.02)	(0.01)	(0.02)	(0.01)	(0.01)
2005	-0.005	0.006	-0.004	-0.016	0.009	0.010
	(0.01)	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)
2006	-0.002	0.004	-0.008	-0.004	0.010	0.000
	(0.01)	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)
2007	-0.018	0.000	0.003	-0.010	0.015**	0.010
	(0.01)	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)

* significant at .10 level; ** significant at .05 level; *** significant at .01 level (one-tailed test).
(standard error)

Table 4. OLS Regression Results
Dependent Variable: *ln*(Weekly Earnings)

	For-profit		Public		Nonprofit	
Variable	Male dy/dx	Female dy/dx	Male dy/dx	Female dy/dx	Male dy/dx	Female dy/dx
Blue/Pink Collar	-0.142***	-0.244***	-0.118***	-0.286***	-0.135***	-0.334***
Occupation	(0.01)	(0.01)	(0.02)	(0.02)	(0.05)	(0.03)
Weekly Work Hours	0.028***	0.038***	0.023***	0.032***	0.027***	0.037***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Metropolitan	0.091***	0.147***	0.186***	0.154***	0.146***	0.132***
Residence	(0.01)	(0.01)	(0.02)	(0.01)	(0.04)	(0.02)
Age	0.070***	0.049***	0.080***	0.061***	0.081***	0.052***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)
Age^2	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
White	0.103***	0.012	0.081***	-0.020	0.067	0.031
	(0.01)	(0.01)	(0.02)	(0.01)	(0.05)	(0.03)
Married	0.108***	0.051**	0.076***	0.009	0.163***	0.082***
	(0.01)	(0.01)	(0.02)	(0.01)	(0.04)	(0.02)
Presence of Children	0.040***	0.017***	0.025	-0.033**	0.072	0.000
	(0.01)	(0.01)	(0.02)	(0.01)	(0.04)	(0.02)
Less than High School	-0.245***	-0.191***	-0.272***	-0.233***	-0.320***	-0.253***
Education	(0.01)	(0.01)	(0.04)	(0.04)	(0.08)	(0.05)
Some College or	0.063***	0.091***	0.054**	0.061***	0.056	0.145***
Associate Degree	(0.01)	(0.01)	(0.02)	(0.02)	(0.06)	(0.03)
Bachelor's Degree	0.335***	0.387***	0.264***	0.293***	0.351***	0.321***
	(0.01)	(0.01)	(0.02)	(0.02)	(0.06)	(0.03)
Master's or	0.512***	0.546***	0.401***	0.503***	0.474***	0.487***
Professional Degree	(0.01)	(0.02)	(0.03)	(0.02)	(0.06)	(0.03)
2004	0.023**	0.020*	0.035	0.012	0.041	-0.017
	(0.01)	(0.01)	(0.02)	(0.02)	(0.06)	(0.03)
2005	0.057***	0.046***	0.083***	0.068***	0.136***	0.038
	(0.01)	(0.01)	(0.02)	(0.02)	(0.05)	(0.03)
2006	0.084***	0.061***	0.096***	0.067***	0.095*	0.034
	(0.01)	(0.01)	(0.02)	(0.02)	(0.05)	(0.03)
2007	0.120***	0.095***	0.114***	0.101***	0.108**	0.123***
	(0.01)	(0.01)	(0.02)	(0.02)	(0.05)	(0.03)
Constant	3.489***	3.389***	3.375***	3.420***	3.019***	3.358***
	(0.01)	(0.03)	(0.09)	(0.07)	(0.17)	(0.10)

* significant at .10 level; ** significant at .05 level; *** significant at .01 level (one-tailed test).
(standard error)

Table 5. Endogeneous Switching Regression Results for Male Workers
Dependent Variable: *ln*(Weekly Earnings)

	Nonprofit v. For-profit (Nonprofit=1)		Public v. For-profit (Public=1)		Nonprofit v. Public (Nonprofit=1)	
Variable	Earnings Nonprofit dy/dx	Earnings For-profit dy/dx	Earnings Public dy/dx	Earnings For-profit dy/dx	Earnings Nonprofit dy/dx	Earnings Public dy/dx
Blue/Pink Collar	-0.072	-0.161***	-0.094***	-0.139***	0.059	-0.160***
Occupation	(0.07)	(0.01)	(0.03)	(0.01)	(0.07)	(0.03)
Weekly Work Hours	0.025***	0.026***	0.017***	0.024***	0.028***	0.022***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Metropolitan	0.240***	0.089***	0.144***	0.070***	0.134	0.229***
Residence	(0.06)	(0.01)	(0.03)	(0.01)	(0.07)	(0.02)
Age	0.074***	0.071***	0.091***	0.074***	0.067***	0.071***
	(0.01)	(0.00)	(0.01)	(0.00)	(0.02)	(0.01)
Age^2	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
White	0.098	0.137***	0.038	0.078***	-0.043	0.087**
	(0.08)	(0.01)	(0.03)	(0.02)	(0.08)	(0.03)
Married	0.090	0.110***	0.059*	0.099***	0.063	0.068*
	(0.05)	(0.01)	(0.03)	(0.01)	(0.06)	(0.03)
Presence of Children	0.166**	0.050***	0.032	0.049***	0.261***	-0.007
	(0.06)	(0.01)	(0.03)	(0.01)	(0.07)	(0.03)
Less than High School	-0.048	-0.183***	-0.376***	-0.273***	-0.521*	-0.271**
Education	(0.18)	(0.02)	(0.07)	(0.02)	(0.21)	(0.09)
Some College or	0.049	0.075***	0.050	0.067***	0.152	0.089**
Associate Degree	(0.08)	(0.01)	(0.04)	(0.01)	(0.09)	(0.03)
Bachelor's Degree	0.337***	0.364***	0.333***	0.388***	0.371***	0.309***
	(0.07)	(0.01)	(0.04)	(0.02)	(0.09)	(0.03)
Master's or	0.471***	0.555***	0.537***	0.604***	0.349***	0.520***
Professional Degree	(0.08)	(0.02)	(0.04)	(0.03)	(0.10)	(0.04)
2004	0.068	0.021	0.003	0.038*	0.052	-0.009
	(0.08)	(0.01)	(0.03)	(0.02)	(0.09)	(0.03)
2005	0.146*	0.054***	0.085**	0.064***	0.125	0.072*
	(0.07)	(0.01)	(0.03)	(0.01)	(0.08)	(0.03)
2006	0.052	0.096***	0.120***	0.090***	0.116	0.082*
	(0.09)	(0.01)	(0.03)	(0.01)	(0.09)	(0.04)
2007	0.108	0.112***	0.106**	0.122***	0.082	0.091**
	(0.07)	(0.01)	(0.03)	(0.01)	(0.08)	(0.03)
Constant	3.335***	3.563***	3.087***	3.653***	4.400***	3.783***
	(0.27)	(0.05)	(0.15)	(0.06)	(0.35)	(0.15)
*rho*0	0.042		0.448		0.875	
	(0.09)		(0.15)		(0.02)	
*rho*1	-0.167		0.416		-0.923	
	(0.06)		(0.04)		(0.02)	

* significant at .05 level; ** significant at .01 level; *** significant at .001 level (two-tailed test).
(standard error)

Table 6. Endogeneous Switching Regression Results for Female Workers
Dependent Variable: ln(Weekly Earnings)

	Nonprofit v. For-profit (Nonprofit=1)		Public v. For-profit (Public=1)		Nonprofit v. Public (Nonprofit=1)	
Variable	Earnings Nonprofit dy/dx	Earnings For-profit dy/dx	Earnings Public dy/dx	Earnings For-profit dy/dx	Earnings Nonprofit dy/dx	Earnings Public dy/dx
Blue/Pink Collar Occupation	-0.334*** (0.05)	-0.228*** (0.01)	-0.204*** (0.04)	-0.191*** (0.01)	-0.317*** (0.04)	-0.305*** (0.03)
Weekly Work Hours	0.034*** (0.00)	0.035*** (0.00)	0.027*** (0.00)	0.034*** (0.00)	0.043*** (0.00)	0.033*** (0.00)
Metropolitan Residence	0.165*** (0.04)	0.143*** (0.01)	0.128*** (0.02)	0.164*** (0.01)	0.148** (0.05)	0.180*** (0.03)
Age	0.054*** (0.01)	0.057*** (0.00)	0.069*** (0.01)	0.065*** (0.00)	0.066*** (0.01)	0.048*** (0.01)
Age^2	-0.001*** (0.00)	-0.001*** (0.00)	-0.001*** (0.00)	-0.001*** (0.00)	-0.001*** (0.00)	0.000*** (0.00)
White	-0.019 (0.04)	0.005 (0.02)	-0.033 (0.02)	0.000 (0.01)	-0.040 (0.05)	0.059* (0.03)
Married	0.095** (0.03)	0.047*** (0.01)	0.010 (0.02)	0.057*** (0.01)	0.102* (0.04)	-0.017 (0.02)
Presence of Children	0.010 (0.03)	0.011 (0.01)	-0.049* (0.02)	-0.007 (0.01)	0.004 (0.05)	-0.017 (0.03)
Less than High School Education	-0.260* (0.10)	-0.202*** (0.02)	-0.305*** (0.06)	-0.226*** (0.02)	-0.105 (0.12)	-0.323** (0.09)
Some College or Associate Degree	0.034 (0.05)	0.073*** (0.01)	0.040 (0.03)	0.082*** (0.01)	0.167** (0.05)	0.112*** (0.03)
Bachelor's Degree	0.218*** (0.04)	0.391*** (0.01)	0.366*** (0.03)	0.375*** (0.02)	0.353*** (0.05)	0.319*** (0.03)
Master's or Professional Degree	0.388*** (0.05)	0.556*** (0.02)	0.597*** (0.04)	0.515*** (0.03)	0.670*** (0.06)	0.472*** (0.03)
2004	0.030 (0.04)	0.023 (0.02)	-0.010 (0.03)	0.015 (0.02)	0.040 (0.06)	0.000 (0.03)
2005	0.068 (0.04)	0.048** (0.02)	0.046 (0.02)	0.040* (0.02)	0.056 (0.05)	0.068* (0.03)
2006	0.084 (0.04)	0.059*** (0.02)	0.034 (0.03)	0.057*** (0.02)	0.063 (0.06)	0.034 (0.03)
2007	0.117** (0.04)	0.106*** (0.02)	0.079** (0.03)	0.092*** (0.02)	0.035 (0.05)	0.111** (0.03)
Constant	3.848*** (0.18)	3.378*** (0.05)	3.311*** (0.13)	3.261*** (0.06)	3.420*** (0.25)	3.869*** (0.17)
*rho*0	-0.165 (0.04)		-0.233 (0.03)		0.840 (0.02)	
*rho*1	-0.434 (0.10)		0.227 (0.05)		-0.834 (0.04)	

* significant at .05 level; ** significant at .01 level; *** significant at .001 level (two-tailed test).
(standard error)