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# Glass Ceiling Commission - The Glass Ceiling in Different Sectors of the Economy: Differences Between Government, Non-profit, and For-profit Organizations

Lynn C. Burbridge  
*United States Glass Ceiling Commission*

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# Glass Ceiling Commission - The Glass Ceiling in Different Sectors of the Economy: Differences Between Government, Non-profit, and For-profit Organizations

## **Keywords**

Key workplace documents, federal, ILR, Catherwood, sectors, economy, business, government, profit, glass ceiling, minorities, women, organizations, occupational, labor

## **Comments**

Glass Ceiling Report

**FINAL**

**The Glass Ceiling in Different Sectors  
of the Economy: Differences Between  
Government, Non-profit, and For-profit Organizations**

**Prepared for:  
The Glass Ceiling Commission  
U.S. Department of Labor**

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## EXECUTIVE SUMMARY

This paper explores the possibility of using a three-sector model of the economy for examining glass ceiling issues. It extends the work that has been done in the past fifteen years on the nonprofit sector, which suggests that non-governmental agencies that are predominately in the human services area are really part of a third sector. Although most third-sector agencies are private, they generally have a symbiotic relationship to the government that sets them apart from what is referred to here as the for-profit sector. This paper focuses specifically on patterns of employment for managers, professional and technical workers in three sectors: the government sector, the for-profit sector, and the third sector.

There has been a large literature that has examined differences in occupational status and earnings by sex and race. Generally, the literature on occupational status has found differences between men and women and between whites and nonwhites that cannot be explained by productivity differences between these groups. Studies that focus specifically on managers and professionals have similar results. Even highly-educated women and minorities have expressed dissatisfaction with their opportunities for advancement, because of discrimination. Very few studies have examined these issues in the context of a three-sector model of the economy.

The analysis presented in this paper relies on data generated from U.S. Census of Population public use tapes for 1950, 1960, 1970, 1980, and 1990. Wage and salary workers in the labor force were assigned to one of the three sectors--government, for-profit, and third sector--based on the class of worker and industry variables. It was possible then to examine trends from 1950 to 1990, with the help of a few adjustments that were necessary to insure comparability of the data across the different censuses.

The time from 1950 to 1990 was a time of major change in occupations, industries, and in the characteristics of the labor force:

- (1) There was a decline in agriculture and manufacturing and dramatic growth in a variety of service industries.
- (2) There was also a rapid expansion in highly-educated workers: managers, professionals, and technical workers. This was true for men and women and for American Indians, Asians, blacks, Hispanics, and whites.
- (3) Minorities doubled their representation in the labor force during this time, and the proportion of white women in the labor market increased by a third. White women experienced the largest numerical growth, however.

When focusing on sectoral change, both the government and the third sector grew, while the for-profit sector declined. The growth in the government ended by 1980, however, while the third sector continued to grow dramatically. In spite of declines in the for-profit sector, by 1990 70 percent of all employment was still in this sector, however.

Both government and the third sector drew in large numbers of minority and female workers, as these sectors grew. Part of the explanation for this may be the heavy reliance these sectors have of traditionally-female occupations. Nevertheless, black and American Indian women are more heavily reliant on these sectors for employment than any other group; and black and American Indian men are more reliant on these sectors for employment than any other group of men.

The government and third sector drew more heavily on highly-educated workers in general. In part, this can be attributed to the occupational structure of these sectors, which are more "top-heavy" in using professional and technical workers. Yet the for-profit sector employs more workers overall. Thus all sectors had opportunities for drawing in large numbers of minority and female managers, professional and technical workers over the course of the 40 years under question.

Throughout the 40-year period the percentage of female and minority male professional, technical and managerial workers (PTMs) in the government and third sector was higher than in the for-profit sector, with the possible exception of Asian males. Until

the 1970s as many as 85 percent of the new jobs for high-level workers in the for-profit sector were taken by white males. This changed in the past two decades, when white and Asian women began to take more jobs in the for-profit sector. Black, American Indian, and Hispanic female PTMs continued to be heavily reliant on government and third sector employment. Black men also began to lag behind black women in taking professional, technical and managerial jobs.

By 1990 clear differences by race and sex persist, with women of color being more heavily reliant on government and third sector employment:

- (1) Almost 90 percent of black female professionals, 74 percent of black female technicians and 50 percent of black female managers worked in government and the third sector.
- (2) American Indian female PTMs were a very close second in their dependence on government and third sector employment.
- (3) White and Hispanic female PTMs were also heavily dependent on these sectors, however: 83 percent of professionals, 57-59 percent of technicians, and 30-32 percent of managers depended on government and the third sector for employment.

- (4) Asian women had the least reliance on these two sectors, although like all women, they are over-represented in these sectors relative to men.

Although men are less reliant on government and the third sector overall, minority men are more reliant on these sectors than white men:

- (1) Among men, black men were most reliant on government and the third sector for employment: 70 percent of black male professionals, 48 percent of black male technicians, and 44 percent of black male managers.
- (2) As with women, American Indian males are a close second to black males in this respect.
- (3) This is in contrast to white males: 56 percent of white male professionals, 31 percent of white male technicians, and only 24 percent of white male managers are in the government and for-profit sectors.
- (4) Hispanic males follow blacks and American Indians in their reliance on these two sectors, while Asian male PTMs are slightly less dependent on these sectors in comparison to white males.

An examination of growth shares indicates that in the 1970s and 1980s white women took the largest share of new jobs for college-educated workers. But PTMs from minority groups were also taking a larger share of new jobs than they have in the past. For example, black female PTMs claimed a much larger share of occupational growth in government than would be expected given their size in the labor force: 13 percent in the 1970s and 9 percent in the 1980s. By the 1980s they surpassed black males in the shares of new jobs they claimed across all sectors. Nevertheless, American Indian and black female PTMs had the smallest shares of their growth going into the for-profit sector compared to other groups. In other words, while black women surpassed black males in the share of new jobs they obtained from the for-profit sector, their growth in the for-profit sector was a relatively smaller proportion of the total growth in black female PTMs. This anomaly is explained by the more rapid total growth in black female PTMs relative to their male counterparts.

An analysis of mean earnings suggests that in spite of the employment gains made by female PTMs in the past 40 years, by 1990 they were still earning less than their male counterparts. This was true for all women, in all racial and ethnic categories and in all sectors. White male PTMs have higher salaries than women and all other men. Only Asian men had salaries approaching those of white males, across all sectors. On average, college-educated women, in all sectors, earned as much as or less than a skilled blue-collar worker.

There does seem to be very good reasons for using a three-sector model of the economy since very clear patterns emerge by race and sex. It also provides a context for analyzing some of the changes that have occurred for women, since they have been benefitted from the growth in sectors that have relied heavily on female labor.

More work is needed to explore differences in the context of a three-sector model. It would be useful to examine more detailed occupations in this context, as this study only focused on one-digit occupations. More rigorous statistical analyses would be of value as well.

Policy implications fall into three categories. Affirmative action policies are needed to ensure that minorities and women have access to high-level jobs in all sectors of the economy. Education policies are needed to expand the pool of qualified persons from groups that have faced barriers to entry. Finally, attention needs to be paid to the implications of public policy changes which may have an impact on industries where particular demographic groups are over-represented or under-represented.





## I. INTRODUCTION

The glass ceiling concept is straightforward: minorities and women experience barriers to upward mobility unrelated to their characteristics and abilities. It is a simple case of discrimination based on sex, race, or ethnicity. Nevertheless, the glass ceiling exists within a context that is not without some complexity. Not only have certain groups experienced difficulties moving up, patterns of employment across occupations, industries, and sectors of the economy show marked differences by race and sex. In other words, there appear to be differences in lateral as well as upward mobility. Thus, upward advancement occurs within a specific context of occupational, industrial, or sectoral segregation (i.e. segregation is defined simply and broadly as the over-representation of certain groups in certain fields). In addition, economic restructuring has affected the growth potential of many fields which, in turn, affects the opportunities for upward mobility for all workers in those fields, regardless of race/ethnicity or sex.

This study examines the glass ceiling in the context of a three-sector model of the economy. The three sectors are the government sector, the private, for-profit sector, and the non-profit or third sector.<sup>1</sup> This three-sector concept has evolved out of the literature on the nonprofit sector, which posits that a

---

<sup>1</sup>. For reasons that shall be discussed shortly, the third sector--rather than the non-profit sector--will be the term used most often.

portion of what has traditionally been classified as the private sector has important financial and functional relationships to the public sector (e.g. Ginzberg, Hiestand, Reubens, 1965; Weisbrod, 1988; and Salaman, 1992). It has become, in a sense, a separable third sector that is neither public or private in the conventional sense of those terms. The third sector is primarily composed of non-governmental agencies in health, social welfare, and education fields, many membership organizations and associations, and arts organizations.

The research presented here is unique in that it examines glass ceiling issues in the context of this emerging literature. It is argued that some important patterns emerge when examining glass ceiling issues in a three-sector context. This study is also historical in presenting the changing employment patterns of women and minorities in managerial and professional jobs, within the three sectors, from 1950-1990. It relies on U.S. Census of Population Public Use Tapes from 1950, 1960, 1970, 1980 and 1990.<sup>2</sup>

The next section provides an overview of the literature that has contributed to the current analysis, followed by a discussion of the methodological issues involved in using the census data that are analyzed. The next three sections discuss the results from analyzing census data for 1950-1990: first giving an overview of occupational, industrial, and sectoral changes over this period; next examining the distribution of employment for professional,

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<sup>2</sup>. The one-percent sample was used for each census year. Altogether, the 5 censuses encompassed almost 15 million records.

technical and managerial workers across sectors, by race and sex, between 1950 and 1990; and, finally, a discussion of earnings differences as of 1990. The paper ends with a conclusion and recommendations for further research.

Finally, before proceeding, it should be noted that the tables relevant to a given section are provided at the end of that section. Because of the large number of tables included in this analysis, this was the best way of presenting the tables close to the discussion of them, without interrupting the flow of the discussion.

## II. REVIEW OF THE LITERATURE

There is a very large amount of literature on discrimination faced by women and members of racial or ethnic minority groups (particularly African Americans and Hispanics). Glass ceiling issues are faced by a subset of these groups: those in professional and managerial positions who have the potential to achieve high-status positions of authority. The literature specifically focused on this group is more limited, but professionals and managers were affected by many of the broad trends that has affected all workers in the U.S. economy since the end of World War II.

Probably first and foremost has been the dramatic shift of employment into services, from health and human services to professional services (Browning and Singlemann, 1978; Stanback, Bearse, Noyelle, and Karasek, 1981). Concomitant with, and partly because of these changes, was a significant growth in the employment of professional and managerial workers (Singlemann and Tienda, 1985; Tienda and Ortiz 1987), the growth of traditionally-female occupations bringing in large numbers of new, female workers into the economy (Sokoloff, 1992), and the growth in the services-oriented public and non-profit sectors (Salaman, 1992).

At the same time, major political changes occurred resulting in civil rights legislation prohibiting discrimination in employment based on race, ethnicity, or sex. There is considerable disagreement as to the effect of affirmative action on employment outcomes (Leonard, 1985). Economic shifts may have been as

important or more important in motivating change (Sokoloff, 1992). Further, some have argued that affirmative action has only resulted in many professionals from excluded groups being directed into a narrow range of public relations-oriented jobs (Jones, 1986; Collins, 1989; Reskin and Ross, 1992). Some groups--such as low-income minority males--seem to have lost ground in spite of affirmative action, largely due to the loss of manufacturing jobs that occurred with the rise in services (Wilson, 1987). Nevertheless, overt discrimination in employment has become less acceptable although there is considerable evidence that minorities and women still do not get the same pay as white males even when controlling for their productivity characteristics (Treiman and Hartmann, 1981; Farley and Allen, 1989; Cotton, 1990; Sorensen, 1991).

An important variable in the wage differences found, particularly for women, has been occupational segregation, or the "crowding" of women in certain jobs that offer lower pay (Bergmann, 1980; Reskin, 1984). Some have argued that women choose less-demanding occupations that tend to offer lower wages, given their current or planned child-bearing and family responsibilities (Pollock, 1979; O'Neill 1983). But other studies show that occupational segregation occurs regardless of the work characteristics of women (Sorensen, 1989) and that many of the jobs taken by women can be just as onerous and stressful as those taken by men (Jacobs and Steinberg, 1990; Burbridge, 1994a). Segregation has not only been found in terms of occupations but in terms of

rank within occupations and across firms (Halaby, 1979; Bielby and Baron, 1984). Occupational segregation has been found for minorities as well as women, with minority women crowded into the lowest-status jobs (Tienda and Guhleman, 1985; Malveaux, 1988; Farley and Allen, 1989; and Sokoloff, 1992).

There is also considerable evidence that minorities and women are more highly represented in the public sector and less so in the private sector (Borjas and Tienda, 1985; Moss, 1988; Sokoloff, 1992). Even here, they are often concentrated in lower ranking or human services-oriented jobs (Stafford, 1991; Idson and Price, 1992). A related finding is that they are more highly concentrated in certain industries that often are dominated by government and nonprofit sectors (Woody, 1992; Burbridge, 1994a).

When specifically focusing on managers and professionals, the same patterns persist. Minority and female professionals receive lower returns to education, suffer from occupational segregation, and are highly concentrated in the public sector (Collins, 1983; Fulbright, 1986; Parcel and Mueller, 1989; Sokoloff, 1992; Reskin and Ross, 1992). Studies of black and female professionals and managers show high levels of dissatisfaction with their opportunities for advancement and feelings that they are not supported by their company or agency (Jones, 1986; Fulbright, 1986; Fernandez, 1981; Burbridge, 1994a). Analyses specifically focusing on authority and job responsibilities consistently find that minority and women managers have less job authority and autonomy, even when controlling for personal characteristics and occupational

attainment (Kleugel, 1978; Jaffee, 1989; Hill, 1980; Jacobs, 1992; Reskin and Ross, 1992; McQuire and Reskin, 1993).

Most studies of professionals and managers have focused on the private sector, but some have examined issues of upward mobility in the public and nonprofit sectors (Stafford, 1991; Rodgers and Smith, 1993; Burbridge, 1994b). While all studies indicate difficulties in achieving upward mobility for minorities and women in all sectors--private, non-profit, and for-profit sectors--very few comparative analyses have been conducted across all three sectors, particularly with an historical focus.

### III. METHODOLOGY

To date, much of the literature on the nonprofit sector has focused on philanthropy, tax issues, management and organizational issues, funding and revenues, and voluntarism. Less has focused on paid employment. One of the problems in estimating employment in the nonprofit sector, and in making comparisons to other sectors, is that surveys have not included nonprofit employment as a class of employment until the 1990 census. Generally, the data only identify government employees and private employees (i.e. nonprofit and for-profit employees in the same category). The solution to this has been to identify a set of three-digit industries in which nonprofits predominate and to assume that all non-governmental employees in these industries are nonprofit workers (Virginia Ann Hodgkinson, et al., 1992).

This methodology is problematic since some workers in the for-profit sector are mis-classified as nonprofit workers. For example, the health industry includes workers in all three sectors; yet with this methodology they will be coded as either government or nonprofit workers only. Further, the earlier census years present less industry detail; more three-digit industries are provided in the 1980 and 1990 census years than in the 1950 and 1960 census years. Thus, workers in some industries--for example, "doctors offices"--would be subsumed under "health services" and be coded as either government or nonprofit workers. In subsequent years, when this industry category is separated out, it is possible



to classify workers in doctors offices as in the private, for-profit sector.

These limitations do not defeat this analysis, however. The argument that is made here is that the expansion of health, education and social services industries has had a profound effect on the employment of minorities and women who have made tremendous gains in these areas. Defining a nonprofit sector, or more generally a third sector, as consisting of non-governmental workers in these industries is a valid category for making comparisons. As the literature on the nonprofit sector has documented, there is a symbiotic relationship between the government and third sector firms--including for-profit firms such as for-profit hospitals--since they are heavily reliant on government expenditures (e.g. Medicaid and Medicare expenditures) and are subject to a wide range of government regulations.

Tables 3.1 and 3.2 show which industries were classified as for-profit industries (i.e. all non-governmental workers are coded as for-profit workers) and which industries were classified as third sector industries (i.e. all non-governmental workers are coded as nonprofit workers). Since third sector industries come out of the Professional Services major industry category, these are listed using the two- and three-digit categories. The other industries--manufacturing, construction and so on--are just listed as one-digit categories (i.e. the detailed industry categories subsumed under the major categories are not listed).

While primarily comprising health, social service and education industries, the third sector also includes various membership and religious organizations, libraries and museums. Unfortunately, nonprofits such as legitimate theaters or public radio and TV stations are subsumed under larger categories in which there are large numbers of for-profits. Thus, data from these industries were not available to be included in the third sector.<sup>3</sup>

Each year new industries were added to the census but in most cases this represented a separating out of new categories out of old categories. For example, child day care services was taken out of the educational services category in 1970 and made into a separate industry category in 1980. In 1990 it separates into two categories: child day care services and family child care homes. These additional industries do not affect the sectoral classifications in most cases; child day care workers were classified as third sector workers, regardless of whether they are the educational services category, the child day care category, or the family child care category.

A few sectoral re-classifications were made, however. For example, in 1990 management and public relations services is classified as a for-profit industry, even though workers in this category were classified as third sector workers when this industry was subsumed under miscellaneous professional services in 1980. Generally, these kind of changes had minimal impact on the sector

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<sup>3</sup>. In this respect, the categories used for the nonprofit sector in this paper are more restricted than those used by others (e.g. Virginia Ann Hodgkinson, et al., 1992).

variable (less than .1 percent of the sector percentages). There were also some name changes in the industry categories that are not presented, since they are not relevant to the analysis.

The biggest changes that occurred were between the 1970 and 1980 census years, so for 1970 two census files were created: 1970a, which was made comparable to 1950 and 1960, and 1970b which was made comparable to 1980 and 1990. In 1970b, 1980, and 1990 it was possible to shift out of the third sector obvious private sector industries, such as doctors offices or non-governmental vocational and technical schools. The 1970a file, in being made comparable to 1950 and 1960, still includes doctors offices as a nonprofit industry, in spite of the availability of that industry category in the 1970 data. Nevertheless, the differences in the sector variable were small when comparing 1970a and 1970b. This is comforting since it suggests that estimates going back to 1950 are fairly accurate and that the availability of more detailed codes would only have made a difference of a few tenths of a percentage point at most.

Two 1970 files were created for other reasons, however. First, reliable data on Hispanics are not available in 1950 and 1960, so the 1970a file is made comparable to 1950 and 1960 in having no separate category for Hispanics; 1970b is made comparable to 1980 and 1990 in having a separate category for Hispanics.

The occupational categories were also subject to major changes in between 1970 and 1980. While in this study only one-digit occupational codes (major occupational categories) were used, even

these changed. By re-ordering the 1970 three-digit codes (detailed occupational categories), however, it is possible to obtain one-digit occupational codes in 1970 that are fairly comparable to the one-digit occupational codes in 1980 and 1990 (Rytina and Bianchi, 1984). Thus, the 1970a file contains the old one-digit occupational codes, comparable to 1950 and 1960; and the 1970b file contains the new one-digit codes, comparable to 1980 and 1990, based on a re-ordering of the underlying three-digit codes.

Table 3.3 shows the relationship between the categories used for 1950-1970a and those used for 1970b-1990. The earlier censuses combine professional and technical workers into one category, but professional specialty workers and technicians are separated in the later censuses. Similarly, service workers split into two categories: protective service and service occupations. The two farm-related occupations are collapsed into one, however, in the later census years. In addition to these changes, the titles of the occupational classifications are changed even when they essentially represent the same types of workers. The reader may find Table 3.3 useful when following the discussion of results for 1950-1970a and 1970b-1990.

Thus, the 1970a and 1970b files are different in three respects: the coding of the sector variable, the coding of the sex-race variable (to include Hispanics in 1970b), and in the coding of the one-digit occupational codes. What this means, of course, is that the 1950, 1960 and 1970a data files requires separate analysis from the 1970b, 1980, and 1990 data files. While this does not

permit a clean data series from 1950 to 1990, it is a reasonable to solution to the problems created by the continual changes that have been made in the census data over the years.<sup>4</sup>

Conceptually, the division of the analysis into two periods, 1950 to 1970 and 1970 to 1990, also makes sense. The period from 1950 to 1970 represents the time of the post-World War II expansion. It was a time of tremendous growth in all sectors, but the emergence of the service sector was manifesting. From early 1970 to the present, growth in the U.S. economy slowed considerably, manufacturing employment declined, and the service sector--led by the health field--continued to grow as a percent of GNP. Wages stagnated during this period, particularly the wages of men (Levy, 1988). Thus, again, the data limitations do not have to defeat the study since the conceptual aspects of the analysis can accommodate these limitations.

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<sup>4</sup>. The problems discussed here represent a small portion of changes in the census. On the two- and three-digit levels the coding of occupations changed so much between 1950 and 1990, as to make comparisons across census years almost impossible without use of complex statistical applications out of the scope of this paper.

Table 3.1 Third Sector Industries and For-Profit Industries  
1950, 1960, and 1970a

Third Sector Industries  
(Non-governmental workers  
classified third sector)

1950

Medical and other health  
services, except hospitals  
Hospitals  
Legal Services  
Educational Services  
Welfare and religious services  
Nonprofit membership  
organizations  
Miscellaneous professional and  
related services

1960

same as 1950

1970

Offices of physicians  
Offices of dentists  
Offices of chiropractors  
Hospitals  
Convalescent Institutions  
Offices of health practitioners  
Health services  
Legal Services  
Elementary and secondary  
schools  
Colleges and universities  
Libraries  
Educational services  
Not specified educational  
services  
Museums, art galleries, and  
zoos  
Religious organizations  
Welfare services  
Residential welfare facilities  
Nonprofit membership  
organizations  
Miscellaneous professional and  
related services  
Professional and related  
services--allocated

For-profit Industries  
(Non-governmental workers  
classified as for-profit)

1950

Agriculture, forestry, and  
fisheries  
Mining  
Construction  
Manufacturing  
Transportation, communication,  
and other public utilities  
Wholesale and retail trade  
Finance, insurance, and real  
estate  
Business and repair services  
Personal services  
Entertainment and recreation  
services  
Engineering and architectural  
services

1960

same as 1950 but add:

Accounting auditing and  
bookkeeping services

1970

same as 1960

Table 3.2 Third Sector Industries and For-profit Industries  
1970b, 1980, 1990

Third Sector Industries  
(Non-governmental workers  
classified as nonprofit)

1970a

Hospitals  
Convalescent institutions  
Health services  
Legal services  
Elementary and secondary  
schools  
Colleges and universities  
Libraries  
Educational services  
Not specified educational  
services  
Museums, art galleries, and  
zoos  
Religious organizations  
Welfare services  
Residential welfare facilities  
Nonprofit membership  
organizations  
Miscellaneous professional and  
related services  
Professional and related  
services--allocated

1980

same as above (with some name  
changes) but add:

Job training and vocational  
rehabilitation services

Child day care services

Noncommercial educational and  
scientific research

1990

same as above but add:

Family child care homes

Labor unions

For-profit Industries  
(Non-governmental workers  
classified as for-profit)

1970b

Agriculture, forestry, and  
fisheries  
Mining  
Construction  
Manufacturing  
Transportation, communication,  
and other public utilities  
Wholesale and retail trade  
Finance, insurance and real  
estate  
Business and repair services  
Personal services  
Entertainment and recreation  
services  
Offices of physicians  
Offices of dentists  
Offices of chiropractors  
Offices of health practitioners  
Engineering and architectural  
services  
Accounting, auditing, and  
bookkeeping services

1980

same as 1970b but add:

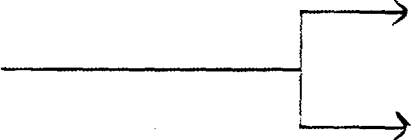
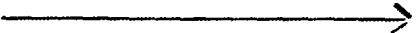


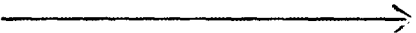

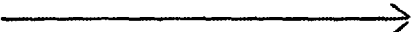



Offices of optometrists  
Business, trade and vocational  
schools

1990

same as 1980 but add:

Management and public relations  
services

Table 3.3 Relationship Between Occupation Codes  
for 1950-1970a and for 1970b-1990

<u>1950-1970a Major Occupation Titles</u>		<u>1970b-1990 Equivalent Occupation Titles</u>
Professional, Technical, and Kindred Workers		Professional Specialty Occupations  Technicians and Related Support Occupations
Managers and Administrators, Except Farm		Executive, Administrative and Managerial Occupations
Sales Workers		Sales Occupations
Clerical and Kindred Workers		Administrative Support Occupations
Craftsmen and Kindred Workers		Precision Production, Craft and Repair Occupations
Operatives		Machine Operators, Assemblers, and Inspectors  Transportation and Material Moving Occupations
Private House- hold Workers		Private Household Occupations
Service Workers, Except Household		Protective Service Occupations  Service Occupations, Except Protective and Household
Laborers, Except Farm		Handlers, Equipment Cleaners, and Laborers
Farmers and Farm Managers		Farming, Forestry and Fishing Occupations
Farm Laborers and Farm Foremen		



#### IV. OCCUPATIONAL, INDUSTRIAL, LABOR MARKET AND SECTORAL CHANGES

##### Industry, Occupation and Labor Market Changes

As indicated earlier, the period from 1950 to 1990 was a time of large, structural changes in the U.S. economy. An examination of labor force growth within industries shows dramatic declines in some industries and significant growth in others.<sup>5</sup> Table 4.1 shows the distribution of the labor force across industries from 1950 to 1970 and Table 4.2 shows the distribution of the labor force across industries from 1970 to 1990. The professional services category, because of its particular relevance to this discussion, is presented in greater detail than other industries (i.e. it is broken out into its components such as health services, legal services and so on). There is also greater industry detail for professional services in 1970 to 1990 than in 1950 to 1970, because the census provided more detail in these years.

From 1950 to 1970 there was a large decline in the extractive industries; the percentage of the labor force in agriculture and mining declined 69 and 53 percent, respectively. There were less severe labor force declines in transportation, communications and

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<sup>5</sup>. Unless otherwise indicated, data are for those in the civilian labor force who are wage and salary workers. The labor force is a broader category than the employed since it includes those who are out of work but actively seeking work. It was decided to use this broader category as it is a more accurate representation of the total supply of labor available in certain occupations, industries, and sectors. Further, if most periods of unemployment are short term, the labor force more accurately reflects what most workers are doing most of the time. The self-employed and those in the military were excluded since their inclusion would add greater complexity to the analysis.

public utilities, in personal services, and in entertainment and recreation services. Manufacturing and construction registered slight declines: a 3.4 percent decline in the percentage of the labor force in the former and a 3.1 percent decline in the percentage of the labor force in the latter. Major growth areas were in hospitals (106 percent change), medical and other health services (82 percent change), educational services (114 percent change), and miscellaneous professional services (567 percent change). More modest growth was also registered in a variety of other service-oriented industries: private sector industries such as finance, insurance, and real estate, business repair services, wholesale and retail trade; and third sector industries such as legal services, welfare and religious services, nonprofit membership organizations; and in the public sector.

From 1970 to 1990 declines in the percentage of the labor force in the extractive industries continued, although not as rapidly as in the earlier period. The percentage of the labor force in manufacturing, which had been the heart of the U.S. economy, declined by 31 percent. The percentage of the labor force in the personal services industry also declined by a third, continuing the pattern established in the 1950s and 1960s. The declines in manufacturing and in personal services were particularly relevant to low-income workers who depended heavily on these industries for employment. The percent change in the labor force in health care industries continued to be both positive and large: offices of health practitioners (70 percent), convalescent

institutions (71 percent), and other health services (150 percent). There was also significant growth in other services such as finance, insurance and real estate, business and repair services, legal services, entertainment and recreation services, and welfare services. Education-related services continued to grow but at a much slower rate than in the earlier decades. The percentage of the labor force in public administration declined by 13 percent.

At the same time these industrial changes were occurring, a major occupational upgrading was also evident. These were not unrelated, since the service occupations that were growing rapidly relied more on educated and professional labor. Table 4.3 shows how dramatic the occupational upgrading was from 1950 to 1990. It is important to note, again, that the census changed the major occupational categories between 1970 and 1980, resulting in differences in those presented for 1950-1970a and for 1970b-1990.<sup>6</sup>

Given the decline in agriculture, it is not surprising that farm-related occupations declined precipitously, particularly between 1950 and 1970. Given declines in manufacturing, it is not surprising that the blue collar occupations also declined in both periods: a three percent change and a 12 percent change for craftsmen and operatives, respectively, from 1950 to 1970; and a 16 percent change and 50 percent change in precision production and machine operators from 1970 to 1990. These declines have had a major impact on the job opportunities available to non-college-educated males, particularly non-college-educated black males. The

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<sup>6</sup>. See discussion of this in the section on methodology.

percent employed in private household work also declined greatly, 39 percent between 1950 and 1970 and 75 percent between 1970 and 1980, as would be expected given declines in the personal services industry.

While low-income women were affected by declines in private household work, they also benefitted from growth in non-private-household services which had a percent change in the labor force of 44 percent in the 1950s and 1960s and a percent change in the labor force of 11 percent in the 1970s and 1980s. Clerical workers also grew from 1950-1970 by a 44 percent change in the percent of the labor force in this category. From 1970-1990 the comparable administrative support occupation shows a 10 percent decline, however, although not enough to eliminate the gains made in the earlier period.

But it is professional and technical employment growth that has been the largest since 1950: professionals and technicians, taken as a single category in 1950-1970, increased their percent of the labor force by 67 percent; between 1970 and 1990 those in the professional specialty occupation increased by 5 percent, those in the technicians and related occupation grew by 125 percent. In addition, those in the executive, administrative, and managerial occupation increased by 48 percent between 1970 and 1990, although in the earlier period those classified as managers declined slightly (7 percent change).

Concomitant with declines in agriculture and manufacturing, and with the growth in occupations relying on college-educated

labor, were major shifts in the demographic content of the labor force (Table 4.4). In 1950, 65 percent of the labor force was composed of white males; in 1990 this percentage dropped to 43 percent. White women increased as a percentage of the labor force from 24.2 percent in 1950 to 35.3 in 1990. Nonwhites doubled as a percent of the labor force, from 10 to more than 20 percent. Although the percent changes were the greatest for Asians and Native Americans, their actual percentages in the labor force are quite small. Blacks were about 10 percent of the labor force in 1990, similar to their percentages in 1950, except the percentages of black women increased while the percentages of black men decreased. Black women now have slightly larger percentages than black men, a cause of some concern (Burbridge, 1994c). Hispanics were approximately 8 percent of the labor force in 1990 and had rapid growth rates over the past 20 years.

An interesting methodological note is the small number of people classified as other races, especially from 1970 - 1990. Once those who classified themselves as being from other races and as being Hispanic were re-classified as Hispanic, the other race category drops to less than .1 percent.<sup>7</sup> Unfortunately, it is difficult to determine what percentage of those in the other races category in the 1950 and 1960 data are Hispanic, as well. Nevertheless, in subsequent tables, the other races category will

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<sup>7</sup>. Hispanics were defined as those who classified themselves as being either black, white, or "other race" and as being of Hispanic ethnicity.

be dropped from analysis in the 1970b-1990 data, because of small sample sizes.

### Sectoral Growth and Change

Given the underlying changes discussed above, what has happened to the three sectors outlined earlier? Table 4.5 shows how the labor force has grown in the three sectors from 1950 to 1990. Between 1950 and 1970 the percent of the labor force in government and in the third sector grew by 44 percent and 70 percent, respectively, while the percent of the labor force in the private, for-profit sector declined by 10 percent. From 1970 to 1990 the percent of the labor force in the third sector continued to grow (54 percent change), driven by the increases in the health industry discussed earlier. The percentage of the labor force in the government and for-profit sectors declined over this period, by 6 percent and 4 percent respectively. So the percent of the labor force in the for-profit sector declined in both periods; the percent in government declined in the later period, particularly after 1980.

Table 4.6 shows the distribution among sectors by race and sex.<sup>5</sup> All race-sex groups, with the exception of Native American women, increased their reliance on government employment from 1950 to 1970. The decline for Native American women should not obscure

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<sup>5</sup>. The table looks at the distribution of each race-sex group among sectors. So, for example, the percentages of Asian males in government, in the third sector, and in the for-profit sector add up to 100%.

their over-representation in government employment at the beginning of the period. The fastest rates of growth in the government sector were for Asian men, black men and women, and other races. Since blacks were a significantly larger percent of the labor force than Asians and other races, the doubling of their representation in government is a more significant demographic shift, (although it was undoubtedly very significant for Asians). Growth in the third sector labor force was also positive for all groups, with no exceptions. Percent changes were largest for black and Native American women and for other races. The largest declines in the labor force in the for-profit sector was among black women, followed by other races and Asians.

Between 1970 and 1990, most groups showed declines in their representation in the government, with the exception of black men and women, and Hispanic women. Every race-sex group showed increases in their representation in the third sector. Interestingly, there is a higher percentage change for men in the third sector than for their female counterparts, although by 1990 women were still much more heavily reliant on this sector. Some groups, like Asians and Hispanic men, increased their representation in the for-profit sector. Other groups showed declines with black women, again showing the largest decline.

By 1990, almost half of all black women in the labor force were either in government or the third sector (46 percent) and had the lowest representation of all other groups in the for-profit sector. They are closely followed by American Indian women (43

percent in government and the third sector); then white, Asian and Hispanic women (37, 33 and 30 percent respectively. Of the males, black and American Indian males were the most reliant on government and third sector employment (28 percent), followed by Asian, white, and Hispanic males (25, 21, and 15 percent respectively).

Clearly, women in general depend more heavily on government and third sector employment. One reason for this is the extent to which government and the third sector rely on predominately-female occupations. This is shown in Table 4.8., which indicates the percentage of total employed in each of the sectors that are in predominately-female occupations.<sup>9</sup> Three definitions of predominately-female occupations are used: those that are more than 50 percent female, those that are more than 65 percent female, and those that are more than 80 percent female.

Between 1950 and 1970, all sectors increased their reliance on female-intensive occupations. Some of the biggest increases were in the for-profit sector which had the lowest percentages to begin with. In this period, the largest growth was in the highly-female-intensive occupations, those that were 80 percent or more female: the percentage change in the 80 percent or more female occupations ranged from 59 percent in the third sector to 74 percent in the for-profit sector to 179 percent in the government sector. From 1970 to 1990 growth in the sectors' reliance on female-intensive occupations declined for the 80-percent-female occupations but

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<sup>9</sup>. Please note, in this table the percentages are for the employed, not for those in the labor market.



continued to increase for moderately-female- intensive occupations (50 or 65 percent or more female). Percent change was more modest, however, ranging from 7 to 16 percent.

By 1990, 74 percent of those employed in the third sector were in occupations that were more than 50 percent female, compared to 54 percent in government and 36 percent in the for-profit sector. The reasons for the dependence of the third sector and--to a lesser extent--government on female-intensive occupations had been discussed elsewhere (Burbridge, 1994a). It mainly is a result of the reliance of health and human service agencies--which are primarily in the government and nonprofit sectors--on those providing caretaking, administrative support and other services that have historically been the occupation of women.

Obviously, this cannot be the whole story since black and Native American men and women are dependent on these sectors more so than their counterparts from other race or ethnic groups. Possible reasons for race and ethnic differences are many: blacks and American Indians may have a greater commitment to public service; they may experience more discrimination in the for-profit sector; or they may have skills that are more relevant to work in the government and third sectors. Unfortunately, an exploration of these possible reasons is outside the scope of this study.

Thus far, an overview of the three sectors and underlying occupational, industrial and demographic shifts that have affected their development has been presented. Having done so, it is now possible to focus specifically on managers, professionals, and

technical workers who are most likely to face "glass ceilings" within these sectors.

Table 4.1. Distribution of Wages & Salary  
Labor Force in Industries, 1950-1970

	<u>1950</u>	<u>1960</u>	<u>1970</u>	<u>Percent Change 1950-1970</u>
Agriculture, Forestry and Fisheries	12.3	6.9	3.8	-69.1
Mining	1.7	1.1	.8	-52.9
Manufacturing	26.5	28.5	25.6	-3.4
Transportation, Commu- nication & Public Utilities	7.8	7.1	6.6	-15.4
Wholesale/Retail Trade	19.2	18.9	20.4	6.3
Finance, Insurance, Real Estate	3.4	4.3	4.7	38.2
Business Repair Services	2.6	2.6	3.4	30.8
Personal Services	6.3	6.3	4.8	-23.8
Entertainment and Recreation Services	1.0	.8	.9	-10.0
Construction	6.4	6.6	6.2	-3.1
Medical and Other Health Services	1.1	1.4	2.0	81.8
Hospitals	1.7	2.7	3.5	105.9
Legal Services	.4	.4	.5	25.0
Educational Services	3.7	5.3	7.9	113.5
Welfare and Religious Services	.7	1.0	1.1	57.1
Nonprofit Membership Organizations	.3	.4	.4	33.3
Misc. Professional Services	.3	.7	2.0	566.7
Public Administration	4.5	5.0	5.4	20.0

Table 4.2. Distribution of Wage & Salary  
Labor Force in Industries, 1970-1990

	<u>1970</u>	<u>1980</u>	<u>1990</u>	<u>Percent Change</u> <u>1970-1990</u>
Agriculture, Forestry, Fisheries	3.8	3.0	2.8	-26.3
Mining	.8	1.0	.6	-25.0
Construction	6.2	6.4	6.6	6.5
Manufacturing	25.6	22.7	17.7	-30.9
Transportation, Commu- nication & Public Utilities	6.6	7.2	7.0	6.1
Wholesale and Retail Trade	20.4	20.5	21.5	5.4
Finance, Insurance and Real Estate	4.7	5.9	6.7	42.6
Business & Repair Services	3.4	4.3	4.9	44.1
Personal Services	4.8	3.2	3.2	-33.3
Entertainment and Recreation Services	.9	1.1	1.4	55.6
Offices of Health Practitioners	1.0	1.2	1.7	70.0
Hospitals	3.5	4.4	4.3	22.9
Convalescent Institutions	.7	1.1	1.2	71.4
Other Health Services	.4	.6	1.0	150.0
Legal Services	.5	.7	1.1	120.0
Elementary & Secondary Schools	5.4	6.1	6.3	16.7
Colleges & Universities	2.1	2.2	2.3	9.5
Libraries	.2	.1	.2	-0-
Other Educational Services	.2	.2	.2	-0-
Museums, Art Galleries and Zoos	*	.1	.1	--
Religious Organizations	.6	.7	.7	16.7
Welfare Services	.4	.5	.7	75.0
Residential Welfare Facilities	*	.1	.3	--
Nonprofit Membership Organizations	.4	.4	.4	-0-
Other Professional Services	2.1	1.2	2.3	9.5
Public Administration	5.4	5.2	4.7	-13.0

\* less than .1 percent

Table 4.3 Distribution of Wage & Salary  
Labor Force in Major Occupations, 1950-1990

	<u>1950</u>	<u>1960</u>	<u>1970a</u>	<u>Percent Change</u> <u>1950-1970a</u>
Professional, Technical	8.6	11.4	14.4	67.4
Farmers/Farm Managers	7.4	3.9	1.8	-75.7
Managers, Officials & Proprietors (Ex Farm)	8.7	8.5	8.1	-6.9
Clerical	12.3	14.9	17.7	43.9
Sales Workers	7.0	7.5	7.2	2.9
Craftsmen, Foremen	14.1	14.3	13.7	-2.8
Operatives	20.4	19.9	17.9	-12.3
Private Household	2.6	2.8	1.6	-38.5
Service	8.0	9.0	11.5	43.8
Farm Laborers/Foremen	4.3	2.4	1.4	-67.4
Laborers	6.6	5.4	4.8	-27.3

	<u>1970</u>	<u>1980</u>	<u>1990b</u>	<u>Percent Change</u> <u>1970b-1990</u>
Executive, Administrative Managerial	8.1	10.1	12.0	48.1
Professional Specialty	12.9	11.9	13.6	5.4
Technicians & Related	1.6	2.9	3.6	125.0
Sales	7.2	9.9	11.8	63.9
Admin. Support	17.7	17.0	16.0	-9.6
Private Household	1.6	.6	.4	-75.0
Protective Service	1.2	1.5	1.7	41.7
Service, except PHH	10.3	11.0	11.4	10.7
Farming, Forestry, Fisheries	3.1	2.9	2.5	-19.4
Precision Production	13.7	13.0	11.5	-16.1
Machine Operators	14.1	9.7	7.1	-49.6
Transportation	3.8	4.6	4.2	10.5
Handlers	4.8	4.9	4.3	-10.4

Table 4.4. Distribution of Wage & Salary Labor Force  
by Race/Ethnicity and Sex, 1950-1990

	<u>1950</u>	<u>1960</u>	<u>1970</u>	<u>Percent Change</u> <u>1950-1970</u>
<u>Females</u>				
American Indian	*	.1	.1	--
Asian	.1	.2	.4	300.0
Black	3.4	3.9	4.4	29.4
White	24.2	28.7	33.3	37.6
Other	*	*	*	--
<u>Males</u>				
American Indian	.1	.1	.2	100.0
Asian	.2	.4	.5	150.0
Black	6.4	5.9	5.3	-17.2
White	65.5	60.7	55.8	-14.8
Other	*	.1	.1	--
	<u>1970b</u>	<u>1980</u>	<u>1990</u>	<u>Percent Change</u> <u>1970-1990</u>
<u>Females</u>				
American Indian	.1	.2	.3	200.0
Asian	.4	.8	1.3	225.0
Black	4.4	5.0	5.4	22.7
Hispanic	.6	2.3	3.3	450.0
White	32.6	34.3	35.3	8.3
Other	*	*	*	--
<u>Males</u>				
American Indian	.2	.3	.4	100.0
Asian	.5	.9	1.6	220.0
Black	5.3	5.1	5.0	-5.7
Hispanic	1.2	3.4	4.7	291.7
White	54.6	47.5	42.7	-21.8
Other	.1	*	*	--

\* less than .1 percent

Table 4.5. Distribution of Wage and Salary Workers  
in the Labor Force Among Sectors, 1950-1990

	<u>Government</u>	<u>For-Profit</u>	<u>Third Sector</u>
<b><u>Percent of All Employed</u></b>			
1950	12.1	83.3	4.6
1960	14.3	79.9	5.9
1970a	17.4	74.8	7.8
1970b	17.4	74.6	8.0
1980	18.4	72.5	9.2
1990	16.4	71.3	12.3
<b><u>Percent Change</u></b>			
1950-1970a	43.8	-10.2	69.6
1970b-1990	-5.7	-4.4	53.8

Table 4.6. Distribution of Labor Force in Sectors by Race/Ethnicity and Sex, 1950-1970

	<u>1950</u>		<u>1960</u>		<u>1970a</u>		<u>Percent Change</u> <u>1950-1970</u>	
	Females	Males	Females	Males	Females	Males	Females	Males
<u>American Indian</u>								
Government	33.7	18.6	26.4	19.4	28.3	23.9	-16.0	28.5
For-Profit	60.8	79.3	64.8	75.8	59.8	72.7	-1.6	-8.3
Third Sector	5.5	2.1	8.8	4.9	11.9	3.4	116.4	61.9
<u>Asian</u>								
Government	13.9	7.2	17.9	18.6	23.5	22.5	69.1	212.5
For-Profit	77.9	88.6	71.6	76.7	61.7	71.9	-20.8	-18.8
Third Sector	8.1	4.2	10.5	4.7	14.8	5.6	82.7	33.3
<u>Black</u>								
Government	10.1	10.0	14.5	14.3	24.3	19.1	140.6	91.0
For-Profit	84.6	87.6	76.6	82.5	62.9	77.2	-25.7	-11.9
Third Sector	5.3	2.3	8.9	3.2	12.7	3.8	139.6	65.2
<u>White</u>								
Government	15.0	11.2	16.6	12.9	19.4	15.3	29.3	36.6
For-Profit	74.9	86.4	71.5	84.3	66.4	81.0	-11.3	-6.3
Third Sector	10.0	2.4	11.9	2.8	14.2	3.7	42.0	54.2
<u>Other</u>								
Government	4.9	1.7	23.4	32.8	15.5	17.2	216.3	911.8
For-Profit	89.1	95.8	64.7	63.5	69.8	75.8	-21.7	-20.9
Third Sector	6.1	2.6	12.0	3.7	14.7	7.0	141.0	169.2
<u>Total</u>								
Government	14.4	11.1	16.4	13.1	20.0	15.7	38.9	41.4
For-Profit	76.1	86.5	72.1	84.0	66.0	80.6	-13.3	-6.8
Third Sector	9.4	2.4	11.6	2.9	14.0	3.7	48.9	54.2



Table 4.7. Distribution of Labor Force in Sectors by Race/Ethnicity and Sex, 1970-1990

	1970b		1980		1990		Percent Change 1970-1990	
	Females	Males	Females	Males	Females	Males	Females	Males
<u>American Indian</u>								
Government	28.3	23.9	34.6	25.2	27.3	22.6	-3.5	-5.4
For-Profit	59.5	72.2	52.3	71.4	57.0	71.7	-4.2	-.7
Third Sector	12.1	3.9	13.1	3.4	15.7	5.7	29.8	46.2
<u>Asian</u>								
Government	23.5	22.5	19.1	17.2	15.7	15.9	-33.2	-29.3
For-Profit	61.4	71.4	64.6	74.8	66.9	74.7	9.0	4.6
Third Sector	15.1	6.2	16.2	8.0	17.4	9.5	15.2	53.3
<u>Black</u>								
Government	24.3	19.1	31.2	22.9	26.1	20.8	7.4	8.9
For-Profit	62.0	76.6	53.5	72.0	53.9	71.9	-13.1	-6.1
Third Sector	13.7	4.3	15.4	5.1	20.0	7.3	46.0	69.8
<u>Hispanic</u>								
Government	15.2	15.0	18.2	13.2	16.0	10.7	5.3	-28.7
For-Profit	74.3	82.3	71.2	83.2	70.5	84.9	-5.1	3.2
Third Sector	10.5	2.7	10.6	3.6	13.5	4.4	28.6	63.0
<u>White</u>								
Government	19.5	15.3	19.9	15.4	17.4	14.3	-10.8	-6.5
For-Profit	66.7	80.6	65.0	80.1	63.4	79.2	-4.9	-1.7
Third Sector	13.9	4.1	15.2	4.5	19.2	6.5	38.1	58.5
<u>Total</u>								
Government	20.0	15.7	21.2	16.1	18.4	14.7	-8.0	-6.4
For-Profit	66.2	80.2	63.8	79.4	62.8	78.8	-5.1	-1.7
Third Sector	13.8	4.1	15.0	4.6	18.8	6.5	36.0	58.5

Table 4.8. Percent of Employment in Female-Intensive Occupations  
by Sector and Degree of Female Intensity

<u>Female Intensity</u>	<u>Government</u>	<u>For-Profit</u>	<u>Third Sector</u>
<u>More than 50%</u>			
1950	34.7	15.9	63.2
1960	40.5	25.6	68.7
1970a	48.2	33.2	72.5
1970b	48.2	33.5	69.2
1980	52.3	33.3	72.6
1990	53.5	36.3	74.1
Percent Change			
1950-1970a	38.9	108.8	14.7
1970b-1990	11.0	8.4	7.1
<u>More than 65%</u>			
1950	28.9	13.5	46.5
1960	27.3	17.9	52.1
1970a	35.4	21.9	60.9
1970b	35.4	22.4	55.7
1980	40.7	26.7	62.3
1990	40.5	25.9	61.9
Percent Change			
1950-1970a	22.5	62.2	31.0
1970b-1990	14.4	15.6	11.1
<u>More than 80%</u>			
1950	10.0	10.3	33.3
1960	22.7	14.5	42.2
1970a	27.9	17.9	52.8
1970b	27.9	18.5	46.4
1980	22.8	19.8	47.7
1990	18.2	14.8	44.0
Percent Change			
1950-1970a	179.0	73.8	58.6
1970b-1990	-34.8	-20.0	-5.2

## V. PROFESSIONAL, TECHNICAL AND MANAGERIAL WORKERS (PTMS)

### Occupational Structure of the Sectors

It was suggested earlier that one possible reason for occupational upgrading over time is that those industries that grew in the post-World War II era relied more on educated labor. One way of examining this issue is to look at the occupational structure of the three sectors over the 40-year period under consideration. It is clear that in 1950 the government and the third sectors relied much more heavily on professional and technical workers. Thirty percent of government workers and 51 percent of third sector workers were in the professional and technical category, compared to only 4 percent of for-profit workers. Government and the for-profit sector had similar percentages of managers (5 percent), however, and the third sector a lower percentage (3 percent).

From 1950 to 1970 government and the for-profit sector increased its percentages of professional and technical workers, while in the third sector professionals declined as a proportion of total employment. This does not mean that the number of professional workers declined, only that other occupational categories claimed a larger percent of the workforce in the third sector; in this case service workers and--to a lesser extent--managers. Although the for-profit sector had the largest increase in the percentage of professionals, at the end of 1970 it still had a much lower percentage of professionals (7 percent) than

government (35 percent) or the third sector (38 percent). Although the third sector had a large increase in the percentage of managers, they were still a lower percentage of total employment in that sector (5 percent) than in the government and for-profit sectors (7 percent).

In Table 5.2, using revised occupational categories for 1970 to 1990, professional specialty workers only significantly increased their percentages in the for-profit sector (26 percent change) over the past two decades, while increasing only slightly as a percent in the third sector and declining slightly as a percentage in government. Technicians and related workers increased their percentages dramatically in all three sectors: 78 percentage change in government, 157 percentage change in the for-profit sector, and 72 percentage change in the third sector. The executive, administrative and managerial field also grew dramatically in all three sectors: 91 percent change in government, 66 percent change in the for-profit sector and 185 percentage change in the third sector.

So while it is true that government and the third sector rely more on educated workers, all sectors experienced dramatic growth in these workers. Nevertheless, by 1990, approximately half of the labor force in government and the third sector were executives and managers, professional specialty workers, or technicians, compared to a little more than 20 percent of for-profit workers. It is important to note, however, that the for-profit sector is much bigger than the other two: it represents 70 percent of the labor

force. Thus, in spite of these differences in occupational structure, the total number of top jobs in the for-profit sector is approximately equivalent to those available in the other two sectors.

#### Demographic Differences

There are a number of ways one can examine the status of minority and women professional, technical and managerial workers (hereafter referred to as PTMs) within and across sectors. One can focus on their gross percentages in each sector. This is limited because the percentages for many minorities will be very small because, as minorities, they are a small part of the labor force. Another approach is to examine the dependence of each race-sex group on the sectors: of all those in each group which percentage is in each of the sectors? This is a measure of the extent to which each group, regardless of its total size, relies on employment in a given sector. Both viewpoints are presented below.

Percentage in Sectors. Table 5.3 gives the percentage of professional and technical workers, and the percentage of managers in the three sectors by race and sex, for 1950 to 1970. The problem in using percentages is evident in the small percentages found for Asians, American Indians and other races. The discussion will focus primarily on blacks, whites, and--to a lesser extent--on Asians.

For all groups of women--black, white and Asian--the percentages in professional, technical and managerial jobs were generally higher in government and the third sector, throughout this period. The percentage of black women in these jobs in the for-profit sector ranged from .2 to .9 percent; for white women from 11 to 17 percent; for Asian women from .1 to .3 percent. For black women, the percentage of professional and technical workers in government approximated the percentage of black women in the labor force and, while lower in the third sector, there was substantial growth through this period. Black women were a very small percent of managers in government and the third sector, however, about 2 percent in either by 1970.

The percentages of white women in professional and technical jobs in government and the third sector exceeded their overall percentages in the labor force throughout this period. And while they did considerably less well as managers, by 1970 35 percent of all managers in the third sector were white women. Asian women generally did less well than their percentages in the labor force.

For black males a similar pattern can be seen as was evident for black women: they had higher percentages in professional, technical and managerial jobs in the government and third sector throughout this period, although there are some exceptions. It should also be noted that their percentages were lower than for black women in these jobs overall. Interestingly, among Asian male professional and technical workers were more likely to be in the

for-profit sector while managers were more likely to be in the public sector.

White men were very different than other groups since their professional and technical workers, and their managers, had their highest percentages in the for-profit sector throughout this period. From 80 to 86 percent of workers in these higher status jobs in the for-profit sector were white men, significantly higher than their percentages in the overall labor force. In the other sectors it was much more likely that they had to share these high status positions with other groups, particularly white women.

Some dramatic changes surface in the period from 1970 to 1990, however. By 1990, the percentages of Asian and white women who are managers and technical workers in the for-profit sector are similar to that in the government sector. The percentage of white female managers, professionals and technicians in the third sector also grew rapidly, so that by 1990 white women represented the majority of those in these occupational categories, far exceeding their percentages in the labor force. The percentages for black women in the for-profit sector continued to remain significantly lower than their percentages in government and the third sector. The percentage of black female professional and technical workers grew dramatically in these two sectors, however, so that in 1990 they were well above the percentages of black women in the labor force.

American Indian and Hispanic women were more similar to black women in having higher percentages in government and the third sector. Hispanic women tended to be under-represented in these

occupations relative to their percentages in the labor force, across all sectors. American Indian women were over-represented in these occupations in government and the thirds sector relative to their percentages in the labor force.

White men continue to dominate the top jobs in the for profit sector but to a much lesser extent: 51 to 58 percent of PTMs in the for-profit sector were white males in 1990. Black men made gains in all three sectors in these jobs, although their percentages continue to be lower than those of black women, except in the for-profit sector. Asian and American Indian men had the most dramatic changes, doubling and tripling their percentages in these jobs, across all sectors. Unlike American Indian males, however, Asian males and Hispanic males generally did as well in the for-profit sector, as they did in the other sectors.

By 1990, white male PTMs were over-represented relative to their percentages in the labor market in government and in the for-profit sector but not in the third sector, probably because of the tremendous gains made by white women in the third sector. Black male PTMs are only over-represented relative to their percentages in the labor market in the government. Asian male professional and technical workers are over-represented relative to their percentages in the labor force, while the percentage of Asian managers is approximately equivalent to the percentage of Asian males in the labor force. American Indian males are under-represented in these jobs except as managers in government and technical workers in government and the for-profit sector, where



their percentages are approximately equal to their percentages in the labor force. Hispanic male PTMs are under-represented in all top jobs, in all sectors, relative to their percentages in the labor force.

Distribution Among Sectors. The alternative way of examining these issues is the distribution of PTMs in each race-sex group across sectors. Among women in 1950, professional and technical workers were highly concentrated in government: 74 percent of black female professionals, 52 percent of white female professionals and 100 percent of American Indian female professionals were in government (Table 5.5). Only 4 percent of black female professionals and 11 percent of white female professionals were in the for-profit sector. Asian female professionals were different: almost a third were in the for-profit sector. By 1970 Asian and white females became more similar as the percentage of Asian female professionals in the for-profit sector declined and the percentage of white female professionals in the for-profit sectors increased. American Indian and black women remained heavily dependent on the government sector, however, in spite of some declines.

Among managers it was very different. In 1950 most female managers were in the for-profit sector, across all racial groups. But by 1970 there had been significant declines. The lowest percentages were for black female managers (44 percent in the for-profit sector); while for Asian, American Indian, and white women two-thirds of all managers were in the for-profit sector.

In 1950 most male professionals were more evenly distributed among the sectors, than was the case for women. Nevertheless, black males had the lowest percentages in the for-profit sector, 24 percent; compared to 54 percent for white males, 34 percent for Asian males and 39 percent for American Indian males. By 1970 the percentages of black and Asian professional in the for-profit sector increased, but black male professionals still had significantly lower percentages in this sector than the other groups.

Eighty-five to 100 percent of male managers were in the for-profit sector in 1950. By the 1970s these numbers declined dramatically. Forty-two percent of American Indian managers and 60 percent of black managers were in the for-profit sector; compared to 72 percent of Asian managers and 80 percent of white managers.

From 1970 to 1990 some significant re-shifting took place as well. Most female professionals decreased their reliance on government employment, while increasing their reliance on third sector employment. Most female professionals, across races, made small or modest gains in the for-profit sector. More significant gains in the for-profit sector were made by female technicians. Asian, black and white managers also made gains in the for-profit sector.

By 1990, however, in spite of similar patterns of growth, some clear racial differences were found among women. As for black women and American Indian women overall, black and American Indian female PTMs were disproportionately reliant on government and the

third sector for employment. In 1990, almost 90 percent of black female professionals and 87 percent of American Indian professionals worked in the government or the third sector. Seventy-four percent of black female technicians and 73 percent of American Indian female technicians worked for these two sectors. Fifty percent of black female managers and 44 percent of American Indian female managers worked for these two sectors.

White female and Hispanic female PTMs were also heavily reliant on these sectors, but to a lesser extent. Eighty-three percent of white and Hispanic female professionals worked for government and the third sector. Fifty-nine percent of white female technicians and 57 percent of Hispanic female technicians worked for the two sectors. Thirty percent of white female managers and 32 percent of Hispanic female managers worked in government and the third sector. Asian women had the lowest distribution into these two sectors and the heaviest reliance on the for-profit sector: 79 percent of Asian female professionals, 55 percent of Asian female technicians, and 28 percent of Asian female managers worked for government and the third sector.

Changes for men were similar to those for women in many respects. Male PTMs became less reliant on government employment and more reliant on third sector employment, across most racial groups. Gains in the for-profit sector was not found across all groups of males, however, even among technicians. American Indians, Asians and Hispanics increased their reliance on for-profit employment, especially in the employment of technicians but

less so in terms of professionals. The reliance on for-profit employment declined for black and white men in all three occupational categories: executive and managerial, professional, and technical. Although similar patterns of change may be seen among black and white men from 1970-1990, black male PTMs are much more reliant on government and third sector employment than other groups of men. This is largely because black men were more reliant on these sectors to begin with. In 1990 almost 70 percent of black male professionals, 48 percent of black male technicians, and 44 percent of black male managers work for government and the third sector. As seen with women, American Indian males have a similar pattern to black males: 71 percent of American Indian professionals, 36 percent of American Indian technicians and 45 percent of American Indian managers work for government and the third sector.

Hispanics follow blacks and American Indians in their reliance on government and the third sector: 62 percent, 36 percent and 27 percent, respectively, for Hispanic male professionals, technicians, and managers. For whites, 56 percent, 31 percent and 24 percent, of white male professionals, technicians, and managers rely on these two sectors. Finally, Asian male professionals have the lowest reliance on government and the third sector (50 percent); Asian male technicians have a high reliance on these two sectors relative to white and Hispanic males (42 percent); and Asian male managers have the lowest reliance on government and the third sector (23 percent).

Growth Rates. It is obvious from the above discussion that the distribution of persons from various race and sex groups among different sectors, depends upon where these groups have started and the changes that have occurred over time. The entire issue of growth can be viewed from a variety of perspectives: from the point of view of the group experiencing growth; the growth a group experiences relative to total growth; the rate at which the group experiences change. The tables that follow summarizes the growth experienced by various groups--PTMs defined by race or ethnicity and sex--from several different perspectives:

1. **Numerical growth.** The total increase in persons who are PTMs in a race-sex group, in a given sector.
2. **Rate of growth.** The total increase in persons who are PTMs in a race-sex group, in a given sector, divided by the total number of persons in the group at the beginning of the period in question:  $L_t - L_{t-1} / L_{t-1}$ .
3. **Share of Occupational Growth.** The total increase in persons who are PTMs in a race-sex group, in a given sector, as a percentage of the growth of all PTMs in the sector.
4. **Share of Group Growth.** The total increase in persons who are PTMs in a race-sex group, in a given sector, as a percentage of all PTMs in that race-sex group.

Table 5.7 and Table 5.8 shows these growth rates for 1950-1960 and 1960-1970. The period begins at a time when white males comprised the largest portion of the labor market and throughout this period white male PTMs had the largest numerical growth rates. For American Indians, the smallest minority group in this table, numerical growth rates were in the hundreds. Only Asian females and black males had negative growth, the latter in the for-profit

sector and the former in the third sector, and only in 1950-1960 period.

While Asians and American Indians had the smallest numerical growth, they had some of the largest rates of growth. The large growth rates, in part, reflect the low numbers at the beginning of the period. Nevertheless, the number of Asian PTMs in government grew by over 1000 percent between 1950 and 1960, indicating a major shift for this group. Asians' actual shares of growth in government were small: .7 percent for women and 1.4 percent for men. Thus a change that may be extremely significant for the group, claimed a relatively small portion of total jobs.

The largest share of jobs went to white men and women. White males claimed the vast majority of jobs for PTMs in the for-profit sector in the 1950s and 1960s: 89 percent of all new jobs in this sector between 1950 and 1960 and 69 percent of all new jobs in this sector between 1960 and 1970. White female PTMs only out-stripped white male PTMs in claiming a larger share of new jobs in the third sector.

Black female PTMs claimed a larger share of new jobs in government and the third sector than did black male PTMs. From 1960 to 1970, black male PTMs did better than their female counterparts in the for-profit sector, however. The shares of black females and males were small in comparison to whites, but larger than other groups.

Government employment claimed very large shares of the total growth in black male, black female, and Asian female PTMs in the

1950s. This trend continues for black females in the next decade. While this trend was particularly marked for black women, government employment claimed large shares of the growth in all female PTMs regardless of race, during the 1950s and 1960s. In the 1960s particularly, male PTMs were different than their female counterparts in that growth in the for-profit sector was almost half of total group growth, across races.

Between 1970 and 1990 some interesting changes occur, as indicated on Table 5.9 and Table 5.10. First and foremost, the numerical increase of white female PTMs surpasses that of white male PTMs, reflecting the tremendous movement of white women into the labor market. Thus, white female PTMs show the largest numerical growth in the 1970s and 1980. While numbers were smaller for minority groups, similar patterns can be seen: the growth in black female PTMs surpasses that of black male PTMs in all sectors, except the for-profit sector in the 1970s; American Indian, Asian, and Hispanic female PTMs surpassed their male counterparts in government and the third sector, with some exceptions.

Rates of growth were generally higher for minorities relative to whites and for females relative to their male counterparts. A slow down in rates of growth for all groups is apparent in the 1980s, suggesting that patterns of change are beginning to stabilize.

In the 1970s and 1980s minorities claimed larger shares of occupational growth than in the previous two decades, but their shares remained small. Black female PTMs claimed a much larger

share of occupational growth in government than would be expected given their size in the labor force: 13 percent in the 1970s and 9 percent in the 1980s. This is the repeat of a pattern that has suggested itself throughout this analysis. Black female PTMs also continued to surpass black male PTMs in the share of new jobs that they claimed. In the 1980s they even claimed a greater share of for-profit jobs than their male counterparts.

The share of new jobs claimed by white males are drastically lower, in comparison to the 1950s and 1960s. White female PTMs claimed 40 to 60 percent of all new jobs in the 1970s and 1980s, depending on the decade and the sector. The other significant change in this period, is that Hispanic male and female PTMs are claiming shares of new jobs that are beginning to rival those of blacks.

Shares of group growth generally are not as uneven as in the 1950s and 1960s. The PTMs in government did not claim as large shares of group growth, across racial and ethnic groups. This is particularly true in the 1980s where growth in governments share dropped dramatically. Third sector work for PTMs took an increasing share of the growth in PTMs across all racial groups. For-profit sector work for PTMs also took an increasing share of the growth in PTMs, across all racial groups, in the 1980s.

American Indian and black female PTMs have the smallest shares of their growth going into the for-profit sector. In other words, although black females claimed a larger share of occupational growth in the for-profit sector than black males in the 1980s, this



represents a smaller proportion of the total growth in black female PTMs in comparison to black males. The explanation for this seeming anomaly is that the growth in black female PTMs overall is significantly higher than that for their male counterparts. Numerically more black female PTMs are taking new jobs in the for-profit sector than are black males, but since there has been larger growth in the former than in the latter, this still represents a smaller proportion of the total growth of black female PTMs in comparison to their male counterparts.

Table 5.1. Occupational Structure of Sectors, 1950-1970  
(Salaried Workers in the Labor Force)

	<u>1950</u>	<u>1960</u>	<u>1970</u>	<u>Percent Change 1950-1970</u>
<u>Government Sector</u>				
Professional/Technical	30.3	33.7	35.1	15.8
Managers	5.5	5.5	6.6	20.0
Clerical	25.3	23.9	24.1	-4.7
Sales	.4	.3	.5	25.0
Craftsmen	8.9	9.0	7.2	-19.1
Operatives	6.9	6.0	5.1	-26.1
Service	15.5	16.8	17.8	14.8
Private Household	*	--	*	--
Laborers	6.7	4.6	3.5	-47.8
Farm Related	.5	.2	--	--
<u>For Profit</u>				
Professional/Technical	3.7	5.3	7.3	97.3
Managers	5.3	6.5	6.8	28.3
Clerical	13.1	15.2	17.6	34.4
Sales	9.0	9.1	9.1	1.1
Craftsmen	17.3	16.9	16.6	-4.0
Operatives	28.0	26.6	24.0	-14.3
Service	7.4	7.0	8.7	17.6
Private Household	3.7	4.0	2.3	-37.8
Laborers	8.3	6.5	5.8	-30.1
Farm Related	4.2	2.9	1.8	-57.1
<u>Third Sector</u>				
Professional/Technical	50.8	43.4	38.3	-24.6
Managers	3.0	3.5	4.6	53.3
Clerical	19.5	21.6	22.0	12.8
Sales	.3	.4	.5	66.7
Craftsmen	2.3	2.7	2.0	-13.0
Operatives	2.4	2.0	1.6	-33.3
Service	20.4	25.6	30.1	47.5
Private Household	*	--	--	--
Laborers	1.2	.8	.8	-33.3
Farm Related	*	--	--	--

\* less than .1 percent

Table 5.2. Occupational Structure of Sectors 1970-1990  
(Salaried Workers in the Labor Force)

	<u>1970b</u>	<u>1980</u>	<u>1990</u>	<u>Percent Change</u> <u>1970b-1990</u>
<u>Government Sector</u>				
Executive, Administrative Managerial	6.6	10.2	12.6	90.9
Professional Specialty	32.8	29.6	31.6	-3.7
Technicians & Related	2.3	3.9	4.1	78.3
Sales	.5	1.0	1.1	120.0
Admin. Support	24.1	23.2	22.0	-8.7
Private Household	*	--	--	--
Protective Service	5.6	6.0	7.6	35.7
Service, except PHH	12.2	12.5	9.2	-24.6
Farming, Forestry, Fisheries	.2	1.0	.8	300.0
Precision Production	7.2	5.1	4.8	-33.3
Machine Operators	2.5	1.8	1.4	-44.0
Transportation	2.6	3.3	3.0	15.4
Handlers	3.5	2.4	1.7	-51.4
<u>For-Profit Sector</u>				
Executive, Administrative Managerial	6.8	9.5	11.3	66.2
Professional Specialty	5.8	4.4	7.3	25.9
Technicians & Related	1.4	2.3	3.6	157.1
Sales	9.1	12.2	14.0	53.8
Admin. Support	17.7	16.7	16.0	-9.6
Private Household	2.3	.9	.7	-69.6
Protective Service	.4	.7	.8	100.0
Service, except PHH	8.3	9.4	11.6	39.8
Farming, Forestry, Fisheries	1.8	1.9	1.8	-0-
Precision Production	16.6	15.9	13.1	-21.1
Machine Operators	19.3	13.8	9.4	-51.3
Transportation	4.8	5.7	4.8	-0-
Handlers	5.8	6.6	5.6	-3.4
<u>Third Sector</u>				
Executive, Administrative Managerial	4.8	7.5	13.7	185.4
Professional Specialty	35.8	33.0	36.7	2.5
Technicians & Related	3.2	8.3	5.5	71.9
Sales	.6	.8	2.7	350.0
Admin. Support	21.1	20.3	18.6	-11.8
Private Household	--	--	--	--
Protective Service	.4	.6	.8	100.0
Service, except PHH	29.3	25.0	13.7	-53.2
Farming, Forestry, Fisheries	--	.3	.8	--
Precision Production	2.1	1.8	2.8	33.3
Machine Operators	1.5	1.1	2.1	40.0
Transportation	.3	.7	1.3	333.3
Handlers	.9	.5	1.2	33.3

\* less than .1 percent

Table 5.3. Percentage of PTMs in Sectors by Race and Sex 1950-1970a

	1950		1960		1970	
	Prof/Tech	Manager	Prof/Tech	Manager	Prof/Tech	Manager
<b>FEMALES</b>						
<u>American Indian</u>						
Government	.1	---	.1	*	.1	*
For-Profit	---	*	*	*	*	*
Third Sector	---	---	*	.1	.1	---
<u>Asian</u>						
Government	*	---	.3	*	.6	.2
For-Profit	*	*	.1	*	.3	.1
Third Sector	.1	---	.4	---	1.0	.2
<u>Black</u>						
Government	4.6	.5	4.9	.9	5.6	1.8
For-Profit	.3	.3	.2	.3	.9	.4
Third Sector	2.1	1.6	2.7	.9	4.0	2.0
<u>White</u>						
Government	53.3	16.8	48.7	21.0	47.8	19.8
For-Profit	13.0	12.1	11.1	12.2	16.6	14.2
Third Sector	58.4	29.0	59.3	31.3	59.4	35.0
<u>Other</u>						
Government	---	---	.1	*	*	*
For-Profit	---	---	*	*	*	*
Third Sector	---	---	.1	.1	.1	---
<b>MALES</b>						
<u>American Indian</u>						
Government	*	*	.1	.1	.1	.2
For-Profit	*	*	*	*	.1	*
Third Sector	*	---	.1	.2	.1	.2

Table 5.3. Percentage of PTMs in Sectors by Race and Sex 1950-1970a (Cont'd)

	1950		1960		1970	
	Prof/Tech	Manager	Prof/Tech	Manager	Prof/Tech	Manager
<u>MALES (Cont'd)</u>						
<u>Asian</u>						
Government	.1	.1	.5	.4	.7	.6
For-Profit	.1	.1	.6	.3	1.0	.4
Third Sector	.2	.2	.3	.2	.5	.3
<u>Black</u>						
Government	1.6	.9	2.2	1.3	2.6	3.7
For-Profit	1.0	1.2	.8	.7	1.9	1.5
Third Sector	2.1	1.3	1.8	1.4	1.7	2.3
<u>White</u>						
Government	40.4	81.7	43.1	76.2	42.4	73.6
For-Profit	85.5	86.2	87.1	86.4	79.2	83.2
Third Sector	37.0	67.9	35.2	66.0	33.1	60.0
<u>Other</u>						
Government	*	---	.1	.1	.1	.1
For-Profit	*	*	.1	*	.1	*
Third Sector	*	---	.1	---	.1	.1
<u>Total (Both Sexes, All Races)</u>						
Government	30.3	5.5	33.7	5.5	35.1	6.6
For-Profit	3.8	5.3	5.3	6.5	7.3	6.8
Third Sector	50.8	3.0	43.4	3.5	38.3	4.6

Table 5.4. Percentage of PTMs in Sectors by Race and Sex 1970b-1990

1970b			1980			1990		
Exec/Man	Prof Spec	Tech	Exec/Man	Prof Spec	Tech	Exec/Man	Prof Spec	Tech
n								
*	.1	.1	.3	.4	.3	.5	.4	.4
*	*	---	.1	.1	.1	.2	.1	.1
---	.1	---	.1	.2	.4	1.3	2.2	2.9
.2	.6	.6	.7	1.1	1.3	1.1	1.5	2.0
.1	.3	.2	.5	.7	.7	1.2	1.2	1.7
.1	.8	2.5	.6	2.1	2.2	.2	.3	.5
1.8	5.8	2.3	5.5	7.8	8.7	7.3	7.6	8.0
.4	.8	.5	1.6	1.3	2.0	2.6	1.9	2.5
2.0	3.9	6.7	4.7	4.5	9.8	5.7	5.4	9.0
.2	.4	.1	1.3	1.9	1.6	2.5	2.9	2.2
.2	.2	.1	1.0	.7	1.0	2.0	1.4	1.7
.3	.5	.7	1.5	1.6	2.5	2.4	2.2	3.1
19.6	49.3	21.0	28.2	49.0	33.3	33.9	51.0	29.6
14.1	17.9	12.7	26.3	23.0	23.2	36.3	28.7	27.2
33.5	56.8	56.8	42.7	58.0	64.2	50.9	57.7	57.6
n								
.2	.1	.1	.5	.2	.4	.5	.2	.5
*	.1	.1	.2	.2	.3	.2	.2	.4
.1	.1	.2	.1	.1	.1	.1	.1	.1

Table 5.4. Percentage of PTMs in Sectors by Race and Sex 1970b-1990 (con't)

	1970b			1980			1990		
	Exec/Man	Prof Spec	Tech	Exec/Man	Prof Spec	Tech	Exec/Man	Prof Spec	Tech
<u>MALES (Cont'd)</u>									
<u>Asian</u>									
Government	.6	.6	1.3	1.1	.9	2.0	1.3	1.5	3.4
For Profit	.4	1.0	.8	1.2	2.8	2.3	1.7	3.5	3.2
Third Sector	.4	.5	.8	.9	1.0	1.5	1.3	1.4	2.2
<u>Black</u>									
Government	3.7	2.4	4.0	5.1	3.0	4.2	5.6	2.8	5.6
For Profit	1.5	1.7	2.4	2.2	2.4	3.6	2.3	2.7	3.4
Third Sector	2.5	1.8	2.5	3.4	1.8	1.9	3.1	1.9	2.6
<u>Hispanic</u>									
Government	1.0	.5	1.4	2.3	1.3	2.1	2.8	1.7	3.2
For Profit	.7	.6	1.1	2.1	2.0	2.8	2.4	2.3	3.5
Third Sector	.3	.3	.8	1.7	1.0	1.0	1.5	1.3	1.8
<u>White</u>									
Government	72.5	40.0	69.0	54.9	34.4	45.9	44.4	30.4	45.1
For Profit	82.5	77.5	81.9	64.8	66.8	63.9	50.9	57.8	56.2
Third Sector	60.7	35.0	29.0	44.1	29.4	16.4	33.5	27.4	20.2
<u>Total (Both Sexes, All Races)</u>									
Government	6.6	32.8	2.3	10.2	29.6	3.9	12.6	31.6	4.1
For Profit	6.8	5.8	1.4	9.5	4.4	2.3	11.8	5.4	2.9
Third Sector	4.8	35.8	3.2	7.5	33.0	8.3	9.8	36.0	8.7

Table 5.5. Distribution of PTMs in Sectors by Race and Sex 1950-1970a

	1950		1960		1970	
	Prof/Tech	Manager	Prof/Tech	Manager	Prof/Tech	Manager
<b>FEMALES</b>						
<u>American Indian</u>						
Government	100.0	--	73.9	50.0	73.8	33.3
For-Profit	--	100.0	17.4	25.0	4.8	66.7
Third Sector	--	--	8.7	25.0	21.4	--
<u>Asian</u>						
Government	26.5	--	48.4	7.7	45.3	24.5
For-Profit	32.2	100.0	13.4	92.3	18.3	67.9
Third Sector	41.3	--	38.2	--	36.4	7.5
<u>Black</u>						
Government	74.0	16.5	75.0	29.9	67.1	41.6
For-Profit	4.2	71.9	2.7	62.2	9.3	44.1
Third Sector	21.9	11.6	22.3	7.9	23.6	14.2
<u>White</u>						
Government	52.4	16.4	53.9	19.1	52.1	21.1
For-Profit	11.1	77.8	10.9	73.3	16.2	67.2
Third Sector	36.4	5.7	35.2	7.6	31.7	11.7
<u>Other</u>						
Government	--	--	53.3	20.0	39.0	25.0
For-Profit	--	--	16.7	60.0	22.0	75.0
Third Sector	--	--	30.0	20.0	39.0	--
<b>MALES</b>						
<u>American Indian</u>						
Government	33.5	6.5	60.0	21.4	49.0	48.8
For-Profit	39.4	93.5	15.0	64.3	33.7	41.5
Third Sector	27.1	--	25.0	14.3	17.3	9.8



Table 5.5. Distribution of PTMs in Sectors by Race and Sex 1950-1970a (Cont'd)

	1950		1960		1970	
	Prof/Tech	Manager	Prof/Tech	Manager	Prof/Tech	Manager
<u>MALES (Cont'd)</u>						
<u>Asian</u>						
Government	19.8	11.1	41.2	16.2	38.3	23.9
For-Profit	33.6	84.5	43.3	81.9	47.3	72.0
Third Sector	46.6	4.4	15.5	1.9	14.3	4.1
<u>Black</u>						
Government	41.1	10.0	56.8	20.8	50.1	33.2
For-Profit	23.8	86.9	18.3	73.5	33.5	60.2
Third Sector	35.2	3.0	25.0	5.7	16.4	6.6
<u>White</u>						
Government	29.2	12.3	31.0	11.5	32.8	15.9
For-Profit	53.9	85.6	55.4	85.8	54.6	80.0
Third Sector	16.9	2.1	13.6	2.7	12.5	4.1
<u>Other</u>						
Government	--	--	46.9	42.9	37.6	20.8
For-Profit	64.4	100.0	34.7	57.1	37.6	66.7
Third Sector	35.6	--	18.4	--	24.7	12.5
<u>Total (Both Sexes, All Races)</u>						
Government	39.9	12.8	41.3	12.8	42.0	17.4
For-Profit	34.8	84.6	36.6	83.8	37.5	77.1
Third Sector	25.3	2.6	22.1	3.4	20.6	5.5

Table 5.6. Distribution of PTMs in Sectors by Race and Sex 1970b-1990

	1970b			1980			1990		
	Exec/Man	Prof Spec	Tech	Exec/Man	Prof Spec	Tech	Exec/Man	Prof Spec	Tech
<b>FEMALES</b>									
<u>American Indian</u>									
Government	33.3	72.5	100.0	41.4	70.1	31.3	34.3	53.1	26.7
For Profit	66.7	3.8	--	52.1	8.6	25.4	56.0	12.9	27.3
Third Sector	--	23.8	--	6.4	21.3	43.3	9.7	34.0	45.9
<u>Asian</u>									
Government	24.5	49.0	21.5	23.6	39.7	24.4	16.7	34.2	16.6
For Profit	67.9	18.4	20.3	68.7	15.6	31.3	71.9	21.4	44.9
Third Sector	7.5	32.6	58.2	7.8	44.7	44.3	11.4	44.4	38.5
<u>Black</u>									
Government	41.6	69.7	29.4	42.1	70.3	36.9	34.6	55.7	26.9
For Profit	43.3	6.8	17.1	44.6	6.7	19.2	49.7	10.5	25.6
Third Sector	15.1	23.5	53.5	13.4	23.0	43.9	15.8	33.9	47.4
<u>Hispanic</u>									
Government	18.2	53.6	16.7	24.5	58.8	24.4	20.6	50.2	17.9
For Profit	72.7	16.0	33.3	65.1	12.6	35.6	68.0	17.5	43.1
Third Sector	9.1	30.4	50.0	10.4	28.6	40.0	11.4	32.3	39.0
<u>White</u>									
Government	21.1	54.1	23.5	20.1	51.6	21.6	16.1	42.0	14.5
For Profit	66.9	14.8	36.5	68.8	14.2	34.5	69.8	17.5	41.1
Third Sector	12.0	31.1	40.0	11.2	34.2	43.9	14.1	40.5	44.4
<b>MALES</b>									
<u>American Indian</u>									
Government	48.8	52.8	26.7	39.5	53.1	38.0	38.9	44.8	27.5
For Profit	41.5	31.5	46.7	57.8	31.4	53.5	54.7	29.1	63.6
Third Sector	9.8	15.7	26.7	2.7	15.5	8.5	6.4	26.1	8.6

Table 5.6. Distribution of PTMs in Sectors by Race and Sex 1970b-1990 (con't)

	1970b			1980			1990		
	Exec/Man	Prof Spec	Tech	Exec/Man	Prof Spec	Tech	Exec/Man	Prof Spec	Tech
<u>MALES (Cont'd)</u>									
<u>Asian</u>									
Government	23.9	39.3	32.5	19.3	29.3	22.5	14.6	27.9	20.6
For Profit	71.6	44.8	54.4	74.9	52.0	59.2	77.2	49.6	58.5
Third Sector	4.6	15.9	13.2	5.8	18.6	18.3	8.1	22.5	20.9
<u>Black</u>									
Government	33.2	52.9	34.3	35.5	55.5	28.8	33.6	44.1	27.6
For Profit	59.2	27.2	52.1	55.7	25.5	57.6	55.8	30.6	51.7
Third Sector	7.6	19.9	13.6	8.8	18.9	13.6	10.6	25.3	20.6
<u>Hispanic</u>									
Government	24.7	43.2	29.3	21.4	42.0	22.2	20.6	37.9	18.9
For Profit	73.3	43.2	60.7	72.6	39.4	66.9	73.0	38.3	64.0
Third Sector	2.0	13.5	10.0	6.0	18.6	10.9	6.4	23.8	17.0
<u>White</u>									
Government	15.9	34.5	23.2	17.8	38.2	21.9	16.5	31.5	18.0
For Profit	79.7	50.4	70.6	77.0	43.6	69.9	76.3	44.3	69.3
Third Sector	4.4	15.1	6.1	5.2	18.2	8.3	7.2	24.2	12.7
<u>Total (Both Sexes, All Races)</u>									
Government	17.4	44.4	23.8	19.8	46.6	23.0	17.8	38.6	17.7
For Profit	76.8	33.5	61.2	72.9	27.4	52.7	71.9	28.5	54.5
Third Sector	5.8	22.1	15.0	7.3	26.0	24.3	10.4	32.9	27.8

Table 5.7. Growth Rates for PTMs 1950-1960

	Numerical Growth	Rate of Growth	Share of Occup Growth	Share of Group Growth
<b>FEMALES</b>				
<u>Am. Indian</u>				
Government	643	51.2	.1	50.3
For-profit	335	203.0	*	26.2
Third Sector	300	--	.1	23.5
<u>Asian</u>				
Government	7136	1265.3	.7	83.4
For-profit	2301	230.3	.2	26.9
Third Sector	-880	-100.0	-.3	-10.3
<u>Black</u>				
Government	51198	61.7	5.1	76.1
For-profit	1520	13.7	.1	2.3
Third Sector	14559	57.9	4.2	21.6
<u>White</u>				
Government	390303	38.9	38.9	51.9
For-profit	153891	33.7	9.9	20.5
Third Sector	207687	30.6	59.5	27.6
<u>Other</u>				
Government	1700	--	.2	24.8
For-profit	800	--	.1	62.4
Third Sector	1000	--	.3	12.7
<b>MALES</b>				
<u>Am. Indian</u>				
Government	2298	571.6	.2	65.4
For-profit	295	24.5	*	8.4
Third Sector	919	327.1	.3	26.2
<u>Asian</u>				
Government	13812	1162.6	1.4	38.7
For-profit	18944	518.2	1.2	53.1
Third Sector	2945	130.6	.8	8.3
<u>Black</u>				
Government	34096	110.3	3.4	97.4
For-profit	-1854	-4.5	-.1	-5.3
Third Sector	2752	11.1	.8	7.9
<u>White</u>				
Government	499425	50.7	49.8	25.1
For-profit	1369404	43.1	88.5	68.9
Third Sector	118992	25.7	34.1	6.0
<u>Other</u>				
Government	2600	--	.3	49.0
For-profit	817	.7	.1	35.6
Third Sector	1885	.3	.2	15.7

\* less than .1 percent

Table 5.8. Growth Rates for PTMs 1960-1970

	Numerical Growth	Rate of Growth	Share of Occup Growth	Share of Group Growth
<u>FEMALES</u>				
<u>Am. Indian</u>				
Government	4600	242.1	.2	69.7
For-profit	500	100.0	*	7.6
Third Sector	1500	500.0	.2	22.7
<u>Asian</u>				
Government	19800	257.1	.9	42.9
For-profit	10900	330.3	.5	23.6
Third Sector	15500	258.3	1.8	33.6
<u>Black</u>				
Government	127500	95.0	6.0	58.7
For-profit	37800	300.0	1.6	17.4
Third Sector	52000	131.0	6.0	23.9
<u>White</u>				
Government	870800	62.5	41.2	45.5
For-profit	559600	91.0	23.8	29.2
Third Sector	483200	54.5	55.9	25.3
<u>Other</u>				
Government	0	*	*	*
For-profit	400	50.0	*	40.0
Third Sector	600	60.0	.1	60.0
<u>MALES</u>				
<u>Am. Indian</u>				
Government	4400	163.0	.2	48.4
For-profit	3700	246.7	.2	40.7
Third Sector	1000	83.3	.1	11.0
<u>Asian</u>				
Government	20400	136.0	1.0	35.3
For-profit	30400	134.5	1.3	52.6
Third Sector	7000	134.6	.8	12.1
<u>Black</u>				
Government	77700	119.5	3.7	42.5
For-profit	90200	226.6	3.8	49.3
Third Sector	15100	54.7	1.8	8.3
<u>White</u>				
Government	989100	66.6	46.8	34.3
For-profit	1610900	35.4	68.6	55.8
Third Sector	286700	49.3	33.2	9.9
<u>Other</u>				
Government	1100	42.3	-.1	20.8
For-profit	2700	128.6	.2	50.9
Third Sector	1500	166.7	.1	28.3

\* less than .1 percent

Table 5.9. Growth Rates for PTMs 1970-1980

	Numerical Growth	Rate of Growth	Share of Occup Growth	Share of Group Growth
<u>FEMALES</u>				
<u>Am. Indian</u>				
Government	20200	310.8	1.0	52.9
For-profit	10400	1155.6	.3	27.2
Third Sector	7600	400.0	.5	19.9
<u>Asian</u>				
Government	45000	163.6	2.1	29.3
For-profit	51500	357.6	1.6	33.6
Third Sector	56900	267.1	3.6	37.1
<u>Black</u>				
Government	275000	105.1	13.1	52.5
For-profit	123000	284.7	3.8	23.5
Third Sector	125400	127.3	7.9	24.0
<u>White</u>				
Government	887700	39.5	42.1	26.4
For-profit	1514400	130.2	47.0	45.0
Third Sector	966200	71.1	60.6	28.7
<u>Hispanic</u>				
Government	108100	587.5	5.1	42.8
For-profit	83800	692.6	2.6	33.2
Third Sector	60900	538.9	3.8	24.1
<u>MALES</u>				
<u>Am. Indian</u>				
Government	14700	207.0	.7	42.9
For-profit	17600	338.5	.6	51.3
Third Sector	2000	90.9	.1	5.8
<u>Asian</u>				
Government	42300	119.5	2.0	20.0
For-profit	136900	263.3	4.3	64.8
Third Sector	32200	243.9	2.0	15.2
<u>Black</u>				
Government	122100	85.7	5.8	41.3
For-profit	137500	111.4	4.3	46.5
Third Sector	36200	73.4	2.3	12.2
<u>White</u>				
Government	507000	20.8	24.1	29.1
For-profit	963700	16.0	29.9	55.4
Third Sector	270100	28.8	16.9	15.5
<u>Hispanic</u>				
Government	84400	265.4	4.0	27.9
For-profit	180800	341.8	5.6	59.7
Third Sector	37600	464.2	2.4	12.4

\* less than .1 percent

Table 5.10. Growth Rates for PTMs 1980-1990

	Numerical Growth	Rate of Growth	Share of Occup Growth	Share of Group Growth
<u>FEMALES</u>				
<u>Am. Indian</u>				
Government	8829	33.1	.6	24.4
For-profit	14612	129.3	.3	40.4
Third Sector	12745	134.2	.4	35.2
<u>Asian</u>				
Government	52719	72.7	3.7	19.2
For-profit	139404	211.5	2.8	50.6
Third Sector	83191	106.4	2.5	30.2
<u>Black</u>				
Government	122093	22.8	8.6	22.1
For-profit	210896	126.9	4.2	38.1
Third Sector	220675	98.6	6.7	39.9
<u>White</u>				
Government	775152	24.7	54.6	15.1
For-profit	2520266	94.1	50.0	49.1
Third Sector	1842038	79.2	56.1	35.9
<u>Hispanic</u>				
Government	115960	91.7	8.2	28.1
For-profit	192197	200.4	3.8	46.6
Third Sector	104190	144.3	3.2	25.3
<u>MALES</u>				
<u>Am. Indian</u>				
Government	5253	24.1	.4	25.7
For-profit	9347	41.0	.2	45.7
Third Sector	5847	139.2	.2	28.6
<u>Asian</u>				
Government	61186	78.8	4.3	19.4
For-profit	190523	100.9	3.8	60.3
Third Sector	64267	141.6	2.0	20.3
<u>Black</u>				
Government	68373	25.8	4.8	23.5
For-profit	143619	55.1	2.9	49.3
Third Sector	79286	92.7	2.4	27.2
<u>White</u>				
Government	140762	4.8	9.9	5.1
For-profit	1443742	20.6	28.7	60.2
Third Sector	812977	67.3	24.8	33.9
<u>Hispanic</u>				
Government	68887	59.3	4.9	23.1
For-profit	171857	73.5	3.4	57.7
Third Sector	56971	124.7	1.7	19.1

\* less than .1 percent

## VI. EARNINGS

The previous chapters have shown tremendous gains made by some women and minority men in professional, technical, and managerial positions, across all sectors. The question remains as to what kind of jobs these are. The analysis has worked with very broad occupational categories, but other studies have found that within broad occupational categories women and minorities are in positions of lower rank and occupational status than white males (Sokoloff, 1992). An examination of detailed occupations is out of the scope of this analysis, but earnings are a good proxy for one's standing within a given occupational category.

Table 6.1 gives mean earnings of employed PTMs by sector, race and sex. Mean earnings are given for all employed and for those employed full-time and year-round.<sup>10</sup> Mean full-time salaries ranged from a little less than \$17,000 for American Indian female technicians working in the for-profit sector or for Hispanic female technicians in the third sector to \$49,000 for white male executives working in the third sector. As might be expected, technicians had the lowest full-time salaries, ranging from \$17,000 to almost \$34,000; professional salaries ranged from \$19,000 to \$43,000; executive and managerial salaries ranged from \$20,000 to

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<sup>10</sup>. Full-time and year-round is defined as 35 hours or more a week and 50 weeks or more a year. A less stringent definition of full-time work was also examined, 35 hours or more a week and 40 weeks or more a year (to allow for teachers working 9 months a year), but the salaries varied very little using either definition.



almost \$50,000. The range of possible salaries is widest in the executive and managerial field, suggesting a fairly wide range of within-occupation rankings.

Table 6.2 examines various ways of assessing relative salaries. The first panel provides female-to-male earnings ratios. Some argue, however, that the most appropriate comparison is to the most advantaged group, white males. Thus, the second panel provide the ratio of mean earnings for all race-sex groups relative to white males. The third panel provides data to assess whether certain sectors pay better than others. The ratio of government and third sector salaries, relative to for-profit salaries, are computed in the third panel.

Across the board, and with no exceptions, the mean earnings of women are less than the mean earnings of men. Even black female PTMs who have made employment gains relative to black male PTMs earn less than black males in professional, technical and managerial positions, with the widest difference between black men and women in professional fields within the for-profit sector (69 percent female-to-male ratio) and in managerial fields in the for-profit sector (74 percent female-to-male ratio). The lowest ratios for white male and female PTMs are in the for-profit sector, with mean earnings for white women 50 to 63 percent of that of their male counterparts, depending on the occupational category.

The second panel, presenting ratios relative to white male mean earnings, shows that most males do better relative to white males, than women do relative to white males. In only one

instance, however, do nonwhite males have higher mean earnings-- American Indian males in technical jobs in the for-profit sector-- although in a few cases the salaries of Asian males approach those of white males.

In examining salaries in the government sector or third sector relative to for-profit salaries, some interesting patterns emerge. Most women in the government and third sector do as well as or slightly better than their colleagues in the for-profit sector. For males the picture is more diffuse, in some cases men in government or the third sector do less well than their for-profit counterparts, and in other cases they do better than their counterparts in the for-profit sector.

Finally, it should be noted that underlying this entire discussion is the assumption that professional, technical, and managerial jobs represent the better jobs in the labor market. It is perhaps advisable to question that assumption at this juncture. The mean salary of a full-time precision production worker is \$26,000 which is more than most women make in professional, technical, and managerial positions (although the same cannot be said for most male professional and managerial workers). Thus one should be careful in making normative judgements about the relative status of these jobs, if that status is not being translated into higher salaries.

Table 6.1. Mean Earnings of Employed PTMs (Wage and Salary Workers)  
in Sectors by Race and Sex, 1989

	Exec/Admin		Professional		Technicians	
	Females	Males	Females	Males	Females	Males
<u>Total</u>						
<u>Government</u>						
Am Indian	24,576	32,767	19,243	26,560	17,761	19,984
Asian	25,468	33,751	28,328	34,720	20,111	26,838
Black	26,438	33,435	24,554	29,874	21,283	25,594
Hispanic	24,877	34,788	20,910	29,610	18,275	26,324
White	25,649	38,334	23,593	36,020	20,026	25,594
<u>For Profit</u>						
Am Indian	20,277	31,026	20,729	28,540	16,703	27,947
Asian	26,194	44,132	30,358	43,598	27,768	32,259
Black	23,399	31,686	24,676	35,795	22,656	28,846
Hispanic	22,234	32,285	21,236	35,429	18,086	26,711
White	24,899	49,668	24,294	43,700	21,087	33,665
<u>Third Sector</u>						
Am Indian	20,498	38,246	20,872	23,318	18,255	33,676
Asian	23,702	38,366	30,803	38,353	22,035	23,605
Black	23,382	28,395	22,633	25,518	18,816	20,505
Hispanic	22,755	32,751	20,109	32,613	17,001	21,643
White	23,936	44,679	21,610	39,459	18,979	26,611
<u>Full-Time</u>						
<u>Government</u>						
Am Indian	24,670	32,767	19,382	26,656	17,761	19,901
Asian	25,413	33,774	28,314	34,842	20,760	26,980
Black	26,538	33,486	24,624	29,900	21,316	24,614
Hispanic	25,012	34,743	20,931	29,679	18,148	26,155
White	25,677	38,350	23,656	36,099	20,045	28,787
<u>For Profit</u>						
Am Indian	20,483	31,178	20,729	28,540	16,759	27,947
Asian	26,242	44,226	30,538	43,705	27,936	32,374
Black	23,468	31,629	24,852	36,054	22,696	28,965
Hispanic	22,359	32,278	21,334	35,543	18,165	26,664
White	24,913	49,710	24,314	43,753	21,122	33,597
<u>Third Sector</u>						
Am Indian	20,344	36,859	20,688	22,449	18,447	33,676
Asian	23,985	38,351	30,959	38,267	21,950	23,635
Black	23,387	28,500	22,649	25,638	18,910	20,413
Hispanic	22,894	32,940	20,089	32,724	17,129	21,898
White	23,969	44,711	21,669	39,509	19,012	26,768

Table 6.2. Earnings Ratios for PTMs, 1989

	<u>Female to Male Ratio</u>			<u>Ratio to White Males</u>			<u>Ratio to For-Profit</u>		
	<u>Man</u>	<u>Prof</u>	<u>Tech</u>	<u>Man</u>	<u>Prof</u>	<u>Tech</u>	<u>Man</u>	<u>Prof</u>	<u>Tech</u>
<b>FEMALES</b>									
<u>Government</u>									
Am Indian	.75	.73	.89	.64	.54	.62	1.20	.94	1.06
Asian	.75	.81	.77	.66	.79	.72	.97	.93	.74
Black	.79	.82	.87	.69	.68	.74	1.13	.99	.94
Hispanic	.72	.71	.69	.65	.58	.63	1.12	.98	1.00
White	.67	.66	.70	.67	.66	.70	1.03	.97	.95
<u>For-Profit</u>									
Am Indian	.66	.73	.60	.41	.47	.50	--	--	--
Asian	.59	.70	.86	.53	.70	.83	--	--	--
Black	.74	.69	.78	.47	.57	.68	--	--	--
Hispanic	.69	.60	.68	.45	.49	.54	--	--	--
White	.50	.56	.63	.50	.56	.63	--	--	--
<u>Third Sector</u>									
Am Indian	.55	.92	.55	.46	.52	.69	.99	1.00	1.10
Asian	.63	.81	.93	.54	.78	.82	.91	1.01	.79
Black	.82	.88	.93	.52	.57	.71	1.00	.91	.83
Hispanic	.70	.61	.78	.51	.51	.64	1.02	.94	.94
White	.54	.55	.71	.54	.55	.71	.96	.89	.90
<b>MALES</b>									
<u>Government</u>									
Am Indian	--	--	--	.85	.74	.69	1.05	.93	.71
Asian	--	--	--	.88	.97	.94	.76	.80	.83
Black	--	--	--	.87	.83	.86	1.06	.83	.85
Hispanic	--	--	--	.91	.82	.91	1.08	.84	.98
White	--	--	--	1.00	1.00	1.00	.77	.83	.86

Table 6.2. Earnings Ratios for PTMs, 1989 (Cont'd)

	<u>Female to Male Ratio</u>			<u>Ratio to White Males</u>			<u>Ratio to For-Profit</u>		
	<u>Man</u>	<u>Prof</u>	<u>Tech</u>	<u>Man</u>	<u>Prof</u>	<u>Tech</u>	<u>Man</u>	<u>Prof</u>	<u>Tech</u>
<u>MALES (Cont'd)</u>									
<u>For-Profit</u>									
Am Indian	--	--	--	.63	.65	.83	--	--	--
Asian	--	--	--	.89	1.00	.96	--	--	--
Black	--	--	--	.64	.82	.86	--	--	--
Hispanic	--	--	--	.65	.81	.79	--	--	--
White	--	--	--	1.00	1.00	1.00	--	--	--
<u>Third Sector</u>									
Am Indian	--	--	--	.82	.57	1.26	1.18	.79	1.20
Asian	--	--	--	.86	.97	.88	.87	.88	.73
Black	--	--	--	.64	.65	.76	.90	.71	.70
Hispanic	--	--	--	.74	.83	.82	1.02	.92	.82
White	--	--	--	1.00	1.00	1.00	.90	.90	.80

## VII. CONCLUSIONS, RECOMMENDATIONS FOR FURTHER RESEARCH, AND IMPLICATIONS FOR PUBLIC POLICY<sup>11</sup>

### Conclusions

The above analysis was founded on a three-sector model of the economy. Any final conclusions one makes depends on the validity of this construct. There is a very large literature which suggests that the third sector operates very differently than the for-profit sector: in terms of its resource base, management, and the products that it offers. There also appears to be clear evidence that employment patterns vary considerably. If one major conclusion can be drawn from this analysis, is that female PTMs--across racial and ethnic categories--have benefitted greatly from the expansion of the third sector, which has drawn heavily on educated women entering the labor market in the past 40 years.

Minorities also appear to be more reliant on this sector than on the for-profit sector, particularly minority women, particularly black and American Indian women. There are many possible reasons for this that have been discussed: the heavy reliance of this sector (and the government sector) on female-intensive occupations, the possibility that there is less discrimination towards women and minorities in this sector, a greater preference for public service on the part of minorities and women, and the skills of those in these groups. Insofar as agencies in these sectors provide more

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<sup>11</sup>. A summary of the findings is presented in the executive summary at the beginning of this paper.

direct services to the general public, they may feel a greater impetus to hire a more representative professional staff.

Also implicit in this discussion is the issue of timing: at the time that the pool of educated women and minorities expanded, there was a tremendous expansion in jobs for them in government and the third sector. Nevertheless, the for-profit sector still employs many more people and, conceivably, could have taken in as many PTMs from excluded groups as did government and the third sector.

What does seem to be clear is that a reliance on a third sector model may produce different results than what one might expect. The best possible way to illustrate this is by contrasting these results with those recently presented in a Wall St. Journal article (Gaither, 1994). According to this article, an analysis by the Wall Street Journal of EEOC data found that black female managers were doing significantly better than black men in the "corporate" sector. The Wall Street Journal article suggests that there is a greater preference for black women than for black men on the part of many white employers.<sup>12</sup>

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<sup>12</sup>. The data used for the Wall Street Journal article were very different than the data used for this paper, which may explain some of the differences in results. The EEOC data used by the Wall Street Journal covers a third of all firms, larger firms that are required to file reports with the EEOC. This study is based on census data which includes the entire country. It is also based on individuals' own reports on their occupation and industry, while the EEOC data are filed by companies. It is difficult to determine what effect these differences had on the different outcomes reported.

The study presented here suggests that while black women have done extremely well in government and the third sector, they are not doing better than black men in what is designated here as the "for-profit" sector. One possible explanation for this difference with the Wall Street Journal, is that the analysis presented here separates out those non-governmental workers who are in human-services-oriented industries and classifies them as belonging to an entirely different sector, the third sector. This analysis suggests that while educated black women have done well, as have all women, in human services, these gains have little to do with good treatment in the for-profit sector. Only 10 percent of professional black women and only half of black female managers work in the for-profit sector. This analysis also suggests that those educated black women who work in the for-profit sector are poorly paid, relative to their male counterparts, and make an average salary commensurate with one made by a skilled blue collar worker. (It should be emphasized, however, that this true across sectors.)

Ironically, if the percentage of black females PTMs is measured relative to the total supply of black female PTMs, they are not doing as well as black male PTMs. In Table 7.1 this calculation is made. The index of representation calculated here is the percentage of PTMs in a particular race-sex group and in a given occupation and sector, divided by the percentage of PTMs of that race-sex group in the labor market. If the index equals one, that race-sex group is represented in the occupation and sector to



the same extent they are represented in the labor market. If the index is less than one they are under-represented in comparison to their percentage in the labor market; if the index is more than one they are over-represented in that occupation and sector.

According to the table, black female PTMs are highly under-represented in the for-profit sector relative to their representation in the labor force. American Indian women is the only group that is as under-represented than black women. Like black women, black men are over-represented in government and the third sector, and under-represented in the for-profit sector, but to a lesser extent. No group of males does as poorly as black males in the for-profit sector, however, including American Indian males.

This is not to suggest that black men are doing well. The real story is the small number of black male PTMs, regardless of sector. This is an issue of grave concern and it should not be minimized. What is in question, however, are the reasons for this phenomenon. The data do not support the contention that black women are somehow treated better than black men in the for-profit sector. They have made significant gains in those sectors that rely heavily on female labor and that have employed educated women of all races in significant numbers. The value of using a three-sector model presented here assists us in seeing these issues more clearly.

### Recommendations for Further Research

Obviously, there are many avenues for further research on this and many other subjects. The limitations of exploring major occupational categories has been discussed. And although others have already explored detailed categories more intensively (e.g. Sokoloff, 1992), an analysis of detailed occupations using the three-sector model of the economy presented here is needed. Other studies and anecdotal evidence suggests that many of the gains made by women have been in lower-level professional and managerial jobs, but whether there are differences across sectors is unknown.

More rigorous statistical tests of some of the issues explored in this paper are also needed. It would be very useful to examine earnings differences while statistically controlling for a variety of personal and labor market characteristics, for example. While there have been many analyses of earnings differences between women and men, and between whites and nonwhites, they have not been conducted in the context of a three-sector model, such as the one presented here.

Finally, there is more work that needs to be done on the nature and characteristics of the three sectors. The above analysis is based on the premise that a three-sector model makes sense; that the three sectors are fundamentally different. While there has been a tremendous expansion in the literature in the past fifteen years, our understanding of this area is still young and in need of further development.

### Implications for Public Policy

Earlier, various reasons for different employment patterns across sectors were discussed. Only one of the possible reasons would not require a public policy response. If minority and female PTMs have been flocking into government and third sector employment because they have a greater "preference" for public service, there is no clear need for a public policy response. This preference would only be to the credit of the groups involved.

If any of the other reasons apply, and given the size of the differences found it is likely that some of them do, other responses are necessary. If discrimination is an issue, then affirmative action policies need to encourage firms in the for-profit sector, in particular, to do more. Unfortunately, the analysis in this paper is insufficient to be specific on targeting. Different industries within sectors may do better than others and there can be a variety of reasons, other than discrimination, why some industries may have more minorities and women than others (e.g. geography, availability of trained people in specific areas and so on). What is needed first, perhaps, is to look for possible patterns of discrimination within the private sector at a more disaggregated level than in presented here.

Second, even within the other sectors women and minorities have had difficulty in obtaining top jobs (Burbridge, 1994b; Rodgers and Smith, 1993). Again, more detailed analyses are needed to assess the extent to which minorities and women are missing out

on higher level management positions, in spite of their numbers. More affirmative action efforts may be needed here.

It would also be useful to determine whether different levers for encouraging change could be used in different sectors. For example, all three sectors have professional and membership organizations that can be called on to push for more openness. Affirmative action administrators in the government can look for opportunities to work with these organizations.

Others have argued that a greater supply of skilled people from excluded groups is needed to have an impact on the glass ceiling. For example, the Wall Street Journal article discussed earlier (Gaither, 1994) suggested that the gains made by black women relative to black men has, in part, been due to the greater educational achievements of the former. Policies to improve college enrollment and retention, particularly those aimed at minorities, need to be supported and enhanced. An increase in the supply of capable people will put added pressure on companies and agencies to be more inclusive.

Finally, economic growth, particularly that in the third sector, has been given as a reason for the gains made by women in minorities in this area. Thus, larger forces may be at work, that are out of the control of individual people. Nevertheless, there most probably will be federal efforts to encourage economic growth in certain industries in order to improve U.S. international competitiveness. It is extremely important to find ways to insure

that the benefits of those efforts accrue to all Americans regardless of sex, race or ethnicity.

In addition, it is important to keep in mind that many major public policy changes may have a disproportionate impact on minorities and women, since they are disproportionately employed in government or in third sector industries that are reliant on government for support and regulatory guidance. For example, 70 percent of those employed in the health care industry are women, so women will have a major responsibility for making a national health care plan workable.

While this is not necessarily a negative outcome, it does suggest that minority and female PTMs may have a different set of expectations and experiences as a result of their greater exposure to government and government-related work. The impact of these differences requires further exploration.

Table 7.1. Index of Representation for PTMs in 1990

	Exec/ Admin	Females Profes- sionals	Techni- cians	Exec/ Admin	Males Profes- sionals	Techni- cians
<u>American Indian</u>						
Government	1.96	1.36	1.53	2.17	1.17	1.55
For Profit	.79	.45	.51	.75	1.03	1.16
Third Sector	.95	1.02	1.67	.61	.80	.32
<u>Asian</u>						
Government	.94	.89	.94	.82	.72	1.17
For Profit	1.00	.75	.83	1.07	1.74	1.07
Third Sector	1.10	1.35	1.39	.78	.68	.75
<u>Black</u>						
Government	1.95	1.44	1.52	1.89	1.14	1.56
For Profit	.69	.37	.47	.78	1.07	.95
Third Sector	1.52	1.03	1.70	1.02	.77	.74
<u>Hispanic</u>						
Government	1.16	1.30	1.01	1.16	.98	1.07
For Profit	.94	.61	.79	1.02	1.34	1.17
Third Sector	1.10	.98	1.40	.62	.72	.61
<u>White</u>						
Government	.91	1.09	.82	.93	.82	1.02
For Profit	.97	.61	.75	1.06	1.55	1.27
Third Sector	1.36	1.23	1.60	.70	.74	.46
<u>Total</u>						
Government	1.01	1.12	.92	.99	.84	1.07
For Profit	.95	.59	.73	1.04	1.52	1.23
Third Sector	1.35	1.21	1.59	.71	.74	.50

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