

Office of Policy Development
Domestic Policy Council

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National College Week
POTUS New Markets Trip
Baby Boom Event
Charter Grant Event
NEC Panel
NBPTS Event
Class Size Event
Blue Ribbon Event
New Orleans Event
Nat. Ed. Summit

White House Initiative on Hispanics

White House Staff Memo
White House Initiative for Ed. Excellence for Hispanics

Hill Stuff

ESEA -Hill Side
Rangel
Hill Letters
S1891

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17351

MAA# 14589

2 boxes rec'd 8/24/2000
Z.L.

2 boxes filed 8/25/2000
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Migrant Ed.

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THE CHAIRMAN

EXECUTIVE OFFICE OF THE PRESIDENT
COUNCIL OF ECONOMIC ADVISERS
WASHINGTON, D.C. 20502

November 19, 1999

MEMORANDUM FOR THE HONORABLE BRUCE REED
ASSISTANT TO THE PRESIDENT FOR DOMESTIC POLICY

FROM: MARTIN N. BAILY

SUBJECT: 2000 Economic Report of the President

Attached are preliminary staff drafts of relevant chapters of the 2000 Economic Report of the President for your review. As you know, the Council of Economic Advisers is mandated by the Employment Act of 1946 to prepare and transmit to Congress an annual Economic Report of the President (the "Report"). The Report presents the Administration's interpretation of recent economic events and its assessment of the U.S. economy in both the short and long term.

CEA is working under a strict statutory deadline for publication of the Report. For this reason, **it is critical that we have your agency's comments on the enclosed material by 5:00 p.m. , Monday, November 29.** Your consolidated agency comments should be delivered to Audrey Choi, CEA Chief of Staff, Room 314, Old Executive Office Building. All comments will be very carefully considered as the next round of draft chapters of the Report are written.

Please note that this draft is for Official Use Only, should be held closely, and should not be made public in any way.

I want to thank you in advance for your help in ensuring that this year's Report of the Clinton Administration will be an important and useful economic source document in the years ahead.

Attachment

WORK AND LEARNING IN THE 21ST CENTURY

In almost every respect, the labor market in the year 2000 is different from that of 1900. At the turn of the last century, workers were much more likely to be male, employed on a farm or in a factory, and white. The typical female in 1900 was not working outside of the home and those who worked in the labor market were likely to be unmarried and in occupations that paid relatively low wages. African-Americans were also likely to be limited in their set of occupational choices. In the 100 years since that time, the labor market has witnessed tremendous change (see Box 4-1). First, the nature of work is different. Today, the majority of workers are no longer in agriculturally related jobs but are employed in a rapidly growing service sector; many are performing tasks and using tools that were unheard of 100 years ago. The economy has become much more technology- and information-driven, with workers who do not possess the appropriate skills likely to be left behind. Attitudes and laws have also changed, opening up opportunities for groups that were either denied access to, or treated unequally in, the labor market. While these changes have meant great advancements and greater opportunities, they also present a host of challenges for the American worker. This chapter looks at the opportunities and challenges that workers face in light of an increasingly global, competitive, information-driven economy in which education, technological skills, and other new talents have become increasingly necessary.

This chapter begins with a brief overview of the transformation of the U.S. labor market over the past century with an eye to identifying both the successes that have been achieved and the challenges that American workers continue to face as the country begins a new century. This

includes the sectoral shifts from agricultural to manufacturing, and more recently, to service jobs often requiring higher level skills. Next, the growth in opportunities in the labor market is considered, including the progress made in reducing occupational segregation and in narrowing the earnings gaps between men and women and between blacks and whites. Finally, the improvements in educational attainment that have occurred over the century are documented. These improvements have been substantial, both driven by and in response to the other changes in the labor market.

Box 4-1: The Changing Labor Market		
	1900	1997
Fraction of non-institutionalized population in the labor market	50.2	67.1
Fraction of workforce working a farm	41.9	2.5
Most likely place of work for women	home	Paid labor force
Probability of dying on the job (per 100,000 workers)	61	5
Fraction of the population that is literate	89.3	99
Probability of using a computer on the job	0	39 ^a
Educational Expenditure per student, 1970\$	148 ^b	5,911
Probability of being in school, ages 5-17	78.3	91.2
Average length of school term (days)	144.3	178.9 ^c
Average # of days attended, per enrolled pupil	99.0	161.7 ^c
Fraction of schools with computers	0	73.5
Notes: (a) 1989; (b) 1914; (c) 1970		

More recent developments include a widening gap in the last quarter of the century between the wages earned by workers with education beyond high school and those with less education. While the United States has made substantial strides in raising average educational attainment, the demand for skilled workers has continued to outpace the supply resulting in an education wage premium that continues to be large. As the demand for an educated workforce has become increasingly important in the last several decades, a primary challenge for today's worker is how to keep up with the rapidly changing pace of technology.

The remainder of the chapter documents these facts and addresses how individuals, firms, and government can help the worker prepare for and adapt to the new economic realities.

These findings naturally lead to a discussion of what public policy can do to prepare workers better for the changing labor market. First, this section considers the role of formal education in providing students with the skills and training they will need to be successful. This is followed by a review of the major policy initiatives in this area. Second is an examination of the training that takes place once people are out in the workplace, including not only formal training by employers but also public programs aimed at improving the flexibility of the labor market and helping workers adjust to change.

THE TRANSFORMATION OF THE LABOR MARKET

THE SHIFT TO KNOWLEDGE-BASED JOBS

Prior to the end of the 19th century, jobs were concentrated in the agricultural sector, and more people lived in rural communities than in cities. The Industrial Revolution brought about the urbanization of America, accompanied by a movement toward manufacturing. As we approach the 21st century, we are again poised on the frontier of a radical change in the landscape of job opportunity. The technological revolution in the latter half of the century has given rise to knowledge-based employment – jobs that require familiarity with the latest technological advances.

The Industrial Revolution changed the American economy from one that was based on agriculture to one centered on manufacturing. In 1840, for example, 63 percent of the labor force was employed in agriculture and 15 percent in manufacturing construction, or mining jobs. By

1900, the fraction in agriculture had dropped to 40 percent, while the fraction in manufacturing had risen to 28 percent. Services by this time had grown to 31 percent of jobs (see Chart 4-1). By 1998, 3 percent of the workforce was in agriculture, 23 percent were in manufacturing construction, or mining, and 31 percent were in service jobs. The boom in service jobs has been related to the technological revolution that has taken place in the latter half of the past century.

CHART 4-1: Share of Employment by Industry

Accompanying the change in industries has been a corresponding change in occupations. In 1900, 38 percent of the workforce was in farming, forestry, or fishing and 25 percent were operators, fabricators, or laborers. By 1998, these figures had dropped to 3 percent and 14 percent, respectively. Managers and professionals, by contrast, rose from 10 to 30 percent, and technical, sales, and administrative support occupations increased from 8 to 29 percent. Looking to the future, the Bureau of Labor Statistics projects that the top three fastest growing occupations between 1996 and 2006, are all related to computers. In 1996 the share of total employment in industries that are intensive users of information technology was 41 percent. This figure is projected to grow to 44 percent by 2006.

The changes in industry and occupations have resulted in positive developments for the American worker. One of the most stunning changes over the century has been in workplace health and safety. There is the obvious movement out of the fields and off the factory floor into the modern office, which has generally implied a safer and healthier work environment. The Bureau of Labor Statistics reported that in 1913 there were 61 deaths per 100,000 workers. By 1998 this number declined to 5 per 100,000 workers. All of the advancements in this area are not simply due to the sectoral shifts -- even within occupations the workplace is safer. Combined

with technological improvements and changes in government regulations (e.g. the Federal Coal Mine Health and Safety Act of 1969 and the Occupational Safety and Health Act of 1970), injury and death rates within traditionally high-risk occupations have plummeted. The Department of Labor reported that around the turn of the past century 2,000 miners were killed each year, implying a death rate of 314 per 100,000. In 1998 the death rate for miners, while still high, dropped to 24 per 100,000 (DoL – Future Work). It should be noted, however, that the modern workplace is not without hazards. There have been significant increases in musculoskeletal disorders (MSD), which are frequently caused by repetitive stress. The Department of Labor reports that there are currently 600,000 workers a year who are losing workdays because of these disorders. While there is ample room for advancement in the area of occupational safety and health, it is clear that most American workers are safer on the job now than their counterparts a century ago.

GROWTH IN OPPORTUNITIES

The 20th Century has seen changes in job opportunities for all workers. Jobs that before were once closed to women, minorities, the disabled, and the aged are now open to workers regardless of these non-work characteristics. The winds of change began early in the century with the suffragists' movement and continued through the civil rights movement of the 1960s. Government has played a role in ensuring equal opportunity for all workers through the passage of the 19th Amendment and legislation such as the Civil Rights Act, the Americans with Disabilities Act, and the Age Discrimination in Employment Act. A good example of the change in opportunities has been the experience of women in the labor market. Women have

traditionally worked for pay in different occupations from men. At the turn of the century, 79.3 percent of men worked in manufacturing or, predominantly, agricultural occupations. The comparable figure for women was 46.7 percent. Whereas the majority of women worked in the service sector (35.5 percent) only 3 percent of men were in such occupations. The differences for black women are even more striking. It is estimated that over 90 percent of black women in 1900 who were in the labor market worked as domestic servants or farm laborers (update with current examples). While there are still disparities today, men and women are now much more likely to be in the same occupations. To illustrate this point it is useful to examine the percent female in more detailed occupations groups and how these have changed over recent years (see Chart 4-2). For instance, the percent of engineers that were female went from 1.7 to 11.1 between 1970 and 1998.. Similarly, the fraction of lawyers who are female increased fivefold during this time period (from 4.9 to 28.5 percent) (Blau et. al p. 128).

CHART 4-2: Percent Female in Selected Occupations 1970 and 1998

The opening of opportunities in the labor market has gone hand-in-hand with improvements in labor market outcomes for these groups. An extensive social science literature documents these gains and attempts to identify their source. One way of examining progress is to consider earnings of one group relative to another. Chart 4-3 shows the ratio of female to male earnings for all workers from 1947 to 1998 and the comparable ratio for full-time, full-year workers from 1960 to 1998. In 1947, for example, it can be seen that women earned 50 cents for every dollar earned by a man. By 1960, this figure dropped to about 40 cents. Controlling for differences in hours per week and weeks per year worked, the 1960 ratio for full-time, full-year workers was about 60 cents on the dollar. This latter earnings ratio was relatively stagnant and

remained virtually unchanged from 1960 until 1980. Since that time, however, the gap between men and women has narrowed. In 1998, women earned 74 percent of men. An important research and policy question is how much of this gap is due to labor market discrimination. Because it is difficult to measure discrimination directly, researchers have explored this issue by first controlling for other factors that may legitimately explain the gap. For instance, some have attributed the gap to differences in labor market attachment; however, even within the full-time, full-year category there are still differences between men and women in the number of hours worked. Other characteristics such the level of labor market experience, the type of occupations and industries, and education have all been shown to explain part of this gap.

CHART 4-3: Median Annual Earnings of Females Relative to Males

An even more impressive convergence in earnings occurred between the earnings of blacks and whites. The gap in earnings for both men and women narrowed substantially over the century. Unlike the female/male wage gap, the black/white gap in male earnings has been declining fairly steadily in the post WWII period. One study showed that in 1940 black male wages were 43.3 percent of white male wages (Smith and Welch). By 1980 this percentage had risen to 72.6 percent. They note that convergence in education, which is discussed below, has been central to these improvements. Other research has shown a near convergence of earnings of black and white females (Cunningham et. al.), although this trend has reversed in recent years. Chart 4-4 shows recent evidence from the Current Population Survey.

CHART 4-4: Median Annual Earnings of African-American Workers Relative to Whites

Box 4-2: The Role of Government Policy on the Economic Status of African-Americans

The Federal government has led the way in providing opportunities to all its citizens. Title VII of the 1964 Civil Rights Act outlawed discrimination against black and female workers

and established the Equal Employment Opportunity Commission (EEOC) in 1972 to monitor compliance with the law and enforce its statutes. These statutes covered employers with at least 100 employees beginning July 2, 1965 with the threshold lowered to 25 employees 3 years later. Executive Order 11246 prohibited discrimination by federal contractors. The Equal Employment Opportunity Act of 1972 extended civil rights coverage to employers with 15-24 employees and expanded the enforcement power of the EEOC.

Measurement of the effects of civil rights legislation has been difficult since the timing of the legislation coincided with many other significant changes in the US labor market. While there is general agreement that changes in employment and wages have occurred since the mid-1960s, it is sometimes difficult to identify a single cause for each change or to measure the extent to which Federal policy (as opposed to other factors such as economic conditions, local sentiment, etc.) played a role. A number of researchers have investigated the role of Federal policy in furthering opportunities for minorities and reducing discrimination.

In order to isolate the effects of Federal policy on economic progress one study focused on the case of workers in the textile industry in South Carolina. The effects of the legislation were likely to have been apparent in this industry because a) it was the major industry in South Carolina, comprising 80% of all manufacturing employment in 1940 and 40% in 1980, b) textiles sold about 5% of their output to the federal government and thus would have been affected by Executive Order 11246; c) the Southern textile industry was targeted in federal hearings on employment discrimination, with more than 140 charges of wage and employment discrimination filed against firms in North and South Carolina. While black employment was a stable fraction of total employment from 1940-1965, beginning in 1965, both the share of black employment and the wages of black workers relative to white workers increased.

Despite the apparent links, however, the authors are careful to consider other plausible explanations. First they rule out the possibility that firms misreported their levels of black employment by comparing the firm reports (from the SCDOL) to reports of employees (via the Census). Second they consider the argument that the gains were the result of an unusually tight labor market and demonstrate that the trends observed in South Carolina are typical of those in the South as a whole. In addition, they refute the argument that the increasing share of employment represented a shift in the supply of workers away from agriculture by documenting that few workers actually came from the agricultural sector and that the decline in agriculture occurred earlier than the increase in the manufacturing sector. Finally, they consider the educational attainment, noting that by 1960 over 25% of all blacks between 21 and 30 had sufficient education to be employed in textiles, yet less than 1% of employed black women and 5% of employed black men were in this sector. Thus, earlier gains in educational attainment and increased demand due to tight labor markets did not correspond to increases in the share of black employment prior to 1965. In addition, the authors find that blacks with similar education to whites were less likely to be employed in the textile industry prior to 1960. In fact, prior to 1960, black males are not underrepresented in any industry *except* textiles. Similarly black females are underrepresented in the textile industry, and also in the related apparel industry. By 1970, this underrepresentation disappears among the younger cohorts and diminishes considerably for the older cohorts. If educational improvement had led to the gains in textile employment, the results would have shown no underrepresentation once education had been controlled for in the analysis.

In addition, the improvements occurred uniformly across all counties, consistent with the hypothesis that a uniformly applied government policy was the cause.

There is also evidence that Executive Order 11246 reduced discrimination. Earlier researchers demonstrated that the presence of a government contract made it more likely for a firm to employ black workers.

One alternative argument that cannot be refuted is that the policy came about as a result of demand from employers. In a tight labor market, discrimination becomes costly, and it is possible that the passage of Title VII and subsequent legislation provided a justification for what would have occurred anyway. Nonetheless, it is clear that government policy played a role and achieved its intended effect of opening up the textile industry and increasing the share of black employment.

Despite gains due to Title VII, some have argued that rather than net economy-wide gains, the result of the law's passage was to shift black employment from small to large employers. A recent study compared the growth in employment share across large firms (the control group) with the growth across small firms (the treatment group) in order to isolate the effect of the legislation. The study finds that there were gains in the employment share and pay of blacks in the industries that were most affected by the 1972 legislation. The timing of these gains provides evidence that the Federal policy positively affected the labor market status of blacks.

Sources: "Determining the Impact of Federal Antidiscrimination Policy on the Economic Status of Blacks: A Study of South Carolina" *American Economic Review* 1989, vol. 79 no. 1 pp.138-177 by James J. Heckman and Brook S. Payner, and "The Impact of Federal Civil Rights Policy on Black Economic Progress: Evidence from the Equal Employment Opportunity Act of 1972" *Industrial and Labor Relations Review*, vol. 51, no. 4 (July 1998) pp. 608-632 by Kenneth Y. Chay.

While these trends are informative and suggest progress, it is important to note that barriers may remain. For example, only 4 CEOs in Fortune 500 companies are women (up from none two decades ago). A recent study notes that of the top 5 highest paid executives at 4,200 companies, only 2.5% are women and these women earn about 45% less than their male counterparts. Although some of these statistics can be explained by differences in managerial experience and size of company, a "glass ceiling" may still be stopping the advancement of women within management hierarchies.

THE GROWTH IN EDUCATIONAL ATTAINMENT

The 20th century marked a dramatic increase in the levels of education of the working-age population. More men and women graduated from high school and college, and even those who did not obtain a degree had more years of schooling than earlier generations. The median number of years in school rose from 8.6 in 1940 to 12.7 in 1990 (any 1900 numbers? update). In addition, the disparity between men and women in high school and college completion rates disappeared. In the last decade, women completed both at slightly higher rates than men.

The gap in median years of schooling between whites and nonwhites has narrowed over the century, to the point where it is almost nonexistent today. In 1900, median years of schooling was 6 years for nonwhites and 9 years for whites; today it is close to 13 years for both. But with more than half of today's teenagers graduating from high school, median years of schooling do not tell the whole story. Although the white/nonwhite absolute gap in graduation rates decreased at the high school level (see Chart 4-5), it increased at the college level (see Chart 4-6) over the century. While in 1940 the fraction of whites who had completed high school was more than triple that of blacks (41.2 versus 12.3 percent), by 1998 this gap had virtually disappeared, with both groups enjoying about an 88 percent completion rate. Hispanics have not shared the same gains, however, with a 1998 high school graduation rate of only 62.8 percent.. Because the high-school completion rate of Hispanics is unacceptably low, President Clinton's FY99 budget included the first-ever Hispanic Education Action Plan. As part of this plan, the President proposed significant increases in funding to enhance educational opportunities for Hispanic Americans.

CHART 4-5: Percent of 25-29 Year Olds who Completed High School by Race

Like high school graduation, college completion rates also increased over the century. In 1940, 6.4 percent of whites completed college; by 1998, 28.4 percent did. While blacks and Hispanics have improved over this time, they still lag far behind whites in this dimension. In 1998, only 15.8 percent of blacks and 10.4 percent of Hispanics received a bachelor's degree.

CHART 4-6: Percent of Aged 25-29 Year Olds who Completed College by Race

There is evidence that the existing gaps in educational attainment are related to the gap in income; while the dropout rates for the middle- and high-income groups of blacks and whites are comparable, the dropout rate of low-income blacks is substantially higher than that of low-income whites. These discrepancies have contributed to the widening skill gap between the races.

THE RISING IMPORTANCE OF EDUCATION

A dramatic change in the structure of wages took place in the U.S. labor market in the 1980s. It became increasingly important for access to high wage jobs to have a college degree. Chart 4-7 shows the ratio of median between college graduates and high school drop-outs and between college graduates and high school graduates (check wage series). The income of college graduates was 39 percent higher than high school graduates and 96 percent more than high school dropouts in 1979. By 1990, the percentages grew to 89 percent and 188 percent for high school graduates and high school dropouts, respectively. It is important to note that since the mid-1990s this trend slowed, as returns to high school increased. These changes are all the more dramatic as they imply that the premium associated with a college education has gone up, even as the supply of college graduates has increased.

CHART 4-7: Relative Median Income by Education Group for Male Workers

To the extent that higher education is indicative of higher skill, one common explanation for the premium associated with education is referred to as "skilled-biased technological change" -- that because of technological change the demand for high skilled workers increased faster than that for low-skilled workers. In addition, when new technologies are introduced, high skilled workers are better able to use them. In addition, demand for lesser-skilled workers has decreased as some lesser-skilled jobs have been replaced by more automated production processes. Other explanations for the increase in the college premium are decreased demand for low-skilled workers, due to increased international trade, which has allowed importation of the goods they typically produce, increased competition and lower wages for unskilled jobs due to significant increases in immigration, particularly of low-skilled workers, and the decline in earnings of these workers due to declines in the real minimum wage and lost collective bargaining power to negotiate wage increases as unionization declined over this period.

In addition to the widening gap between the wages earned by different education groups there is other evidence that a new set of skills are becoming more important in the labor market. One such piece of evidence is the gap in the wages between workers in information technology producing industries and those in other industries. Stories in the popular press document the vigorous and lucrative labor market for technology-trained employees and there is some strong evidence to back-up these claims. According to the Department of Commerce, workers in information technology producing industries had average earnings that were almost 78 percent more than all other industries in 1997, up from 56 percent in 1989 (Digital Economy II, p. 39).

PREPARING THE WORKFORCE FOR THE 21ST CENTURY

The challenge for schools, to give students the skills they need to succeed in today's economy and to fully participate in American life as citizens, has never been more important. While measuring progress is difficult, one way is to consider test scores. On this dimension, there are positive signs. Since the early 1980s, scores on the National Assessment of Educational Progress (NAEP) show modest improvements in mathematics and science proficiency, though little change in reading and writing proficiency. Differences in NAEP scores by gender are now small, with females scoring higher in writing and reading achievement and males scoring higher in science and mathematics (a gap that is shrinking). Scores on the Scholastic Assessment Test (SAT) are about 20 points higher today than in 1980, but students scored higher in the early 1970s (see Chart 4-8). Students today are also taking more courses in core academic subjects compared with students in the early 1980s and the difficulty of these courses has increased. For example, a higher percentage of high school graduates are completing Algebra I and higher-level mathematics courses and courses in biology, chemistry, and physics than ever before. The proportion of students taking the Advanced Placement exams has also increased. [Condition of Education, 24-25]

CHART 4-8: SAT Scores By Sex and Race

Results by race show significant improvements. The end of legal segregation followed by efforts to equalize spending since 1970 have made a substantial difference in student achievement. On every major national test, including the NAEP, the gap in minority and white students' test scores narrowed substantially between 1970 and 1990 [update]. On the Scholastic Assessment Test (SAT), the scores of African Americans climbed 54 points between 1976 and

1994, [update] while those of white students remained stable [Hammond p. 72]. Nonetheless, too many schools in predominantly minority communities continue to fail, with high dropout rates and students who do not gain the necessary skills to get jobs.

Another area of importance to a student's education is access to a computer. There have been some significant successes. In 1984 there was a 13.5 percentage point difference in the proportion blacks and whites that used computers in schools. By 1997, the gap had nearly closed. Some of the progress that has been made may be due to Administration efforts to increase availability of computers and technology to all students. One program that has sought to close the "digital divide" is the E-rate, which allows eligible schools and libraries to qualify for discounts for commercially provided telecommunications services, internet access, and internal connections. The level of discount is determined by the fraction of children eligible for participation in the federal school lunch program. In this way, the E-rate program ensures that funds are targeted to the schools and libraries that serve the most disadvantaged students. In fact, fifty-three percent of the total funds are being requested by the nation's poorest schools and libraries.

There is still work to be done. With the implementation of E-rate, more than half of our nation's classrooms will be connected, including almost every classroom in the nation's fifty largest urban school districts, which means there is still a long way to go before every classroom enjoys the benefits of access to technology (update with new E-rate numbers). While the gap in classroom access to computers between blacks and whites has closed, the gap between Hispanics and whites has remained constant at 10 percentage points (Condition of Education, p. 64). In

addition, there is still a large gap, in home ownership of computers, so that a gap remains when students leave the school environment.

The modest gains that have occurred within the U.S. education system in the past few decades are important, but they cannot eclipse a larger issue: while schools have been changing, the economy has been changing faster. The result, as discussed in the section above, is that a high school education is no longer a ticket to the middle class. Even within educational levels, there may be a "mismatch" between the skills acquired in school and the skill requirements of jobs. [EXAMPLE?].

The Administration has made improving education its highest priority. In his 1999 State of the Union Address, the President explained that "[t]he Information Age is, first and foremost, an education age, in which education must start at birth and continue throughout a lifetime." To meet the challenges of the information-based, skills intensive economy, the President has set ambitious goals for the Nation's education system:

- All students will read independently and well by the end of 3rd grade.
- All students will master challenging mathematics, including the foundations of algebra and geometry, by the end of 8th grade.
- By 18 years of age, all students will be prepared for and able to afford college.
- There will be a talented, dedicated and well-prepared teacher in every classroom
- Every classroom will be connected to the Internet and all students will be technologically literate.
- Every school will be strong, safe, drug-free and disciplined.

To achieve these goals, the President has proposed and implemented a broad agenda of education policies that extend from pre-school to college. Some of these are outlined below.

GREATER ACCESS TO PRE-SCHOOL EDUCATION – HEAD START

Many have argued that some of the gap in education attainment is established even before a child enters kindergarten, making it difficult to overcome early disadvantage and emphasizing the importance of programs aimed at helping the very young. One such program is Head Start, a national program which provides comprehensive developmental services for America's low-income, pre-school children ages 3 to 5 and social services for their families. Specific services for children focus on education, socio-emotional development, physical and mental health, and nutrition. The program began in 1965 in the Office of Economic Opportunity as an innovative way in which to serve children of low-income families and is now administered by the Administration for Children and Families. Under the Clinton Administration funding for Head Start has more than doubled, increasing from \$2.2 billion in 1992 to \$4.7 billion in 1999. These additional funds have enabled Head Start to increase enrollment by over 200,000 children, enhance the quality of Head Start services, improve program research, and launch a new initiative to serve infants and toddlers – Early Head Start.

Research has shown the effectiveness of Head Start. Children who participate in Head Start are less likely to be held back a grade during their elementary school years and also less likely to end up in special education classes. These effects appear to last as long as these studies were able to follow the children – usually through grade school. A 1995 study uses a nationally representative data set to compare children who participated in the program with their siblings who did not. This study shows significant and lasting effects of Head Start in test scores and school attainment for both whites and Hispanics, and more transitory effects for African-Americans.

IMPROVING ELEMENTARY AND SECONDARY EDUCATION

Beyond pre-school, it is also necessary to ensure that all students have access to quality resources once they enter school. The President has created a three-part agenda to build a world-class elementary and secondary school system: high standards; accountability for results; and investment in proven strategies; each of these is discussed in turn. Together, these will help to prepare students for the changing workforce and the demands of a technology-driven labor market.

High Standards.

A national consensus has emerged on the key role of standards in school improvement: 48 of the 50 states have developed statewide standards and have embraced standards-based reform as an effective strategy. However, only 19 states currently use public rating systems to identify low-performing schools, and only 16 apply sanctions to failing schools. The President has urged states to take the next step in standards reform by adopting measures to hold schools accountable for results and to turn around failing schools.

Accountability.

Another way to encourage local cooperation in improving schools for all children is to increase accountability of those responsible for educating America's youth. The Administration has proposed the Education Accountability Act which requires states and school districts to comply with the accountability measures in order to receive federal funds, including identify

failing schools and make critical investments to turn them around, or reconstitute or close chronically under-performing schools; employing qualified teachers assigned in their field of expertise; instituting discipline codes; issue school report cards, and ending social promotion by making sure students get the help they need to succeed.

Investment in Proven Strategies.

The President has also emphasized the importance of investing in proven strategies which raise student achievement. These include reducing class size in the early grades; improving teacher quality; providing opportunities for extended learning in after-school and summer school programs; and offering options for public school choice.

Class Size Reduction Program

In his 1999 State of the Union Speech, the President proposed the first ever national effort to reduce class size in the early grades. The Class-Size Reduction Program is designed to help schools improve student learning by hiring additional, qualified teachers so that children — especially those in the early elementary grades — can attend smaller classes. School districts are currently receiving funds — a total of \$1.2 billion — that will enable them to recruit, hire, and train new teachers for the 1999-2000 school year. This is just the first installment of an initiative that is anticipated to provide \$12.4 billion over 7 years to help schools hire 100,000 new teachers and reduce class size in the early grades to a nationwide average of 18. A recent report by the U.S. Department of Education shows that, with funds from the program, 20 states are now undertaking efforts to reduce class sizes in the early grades with funds from the. Among its key

findings, the report shows that 1.7 million children have benefited from the program; 29,000 teachers have been hired under the program; the class size for grades 1-3 in schools receiving funding has been reduced by an average of 5 students; and the program's flexibility complements state and local efforts.

Improving teacher quality

While many of the President's proposals in this area were not funded in 1998, the President did succeed in securing \$75 million toward the Teacher Recruitment and Preparation proposal, which will help recruit and prepare thousands of teachers to teach in high-poverty urban and rural communities and will strengthen teacher preparation programs across the country. An additional \$75 million was appropriated to train new teachers in how to use technology to improve student achievement. As part of the Hispanic Education Action Plan, an increase of \$50 million was allocated to Bilingual Education Professional Development, to begin to provide 20,000 teachers over five years with the training they need to teach students with limited proficiency in English.

Opportunities for extended learning in after school and summer school programs

The President has expanded the 21st Century Community Learning Centers program to keep public schools open longer and provide safe and educational after-school opportunities for nearly 400,000 school-age children in rural and urban communities each year. In addition, the Administration prevailed in its request for \$871 million in funding to continue the successful Summer Jobs program, financing up to 530,000 summer jobs for disadvantaged youth.

Options for Public School Choice

Along these lines, the President has proposed expanding choice and increasing accountability in public schools. He has supported the increase of public charter schools; this goal has been accomplished as the number of public charter schools in the nation has risen from one in 1993 to more than 1000 charter schools in 1998, on track toward a goal of 3000 quality charter schools that will educate more than half a million students by early next century.

GREATER ACCESS TO POST-SECONDARY EDUCATION

The President has long understood that our changing economy demands that people have opportunities to enhance their skills throughout their working lives. To this end, there have been a number of policies designed to help individuals gain knowledge beyond the secondary school level.

HOPE Scholarships

The Taxpayer Relief Act of 1997 enacted the President's proposals to provide for HOPE Scholarship and Lifetime Learning Credit (mentioned below), representing the largest investment in higher education since the GI Bill 50 years ago. When fully phased in, 13.1 million students – 5.9 claiming the HOPE Scholarship and 7.2 million claiming the Lifetime Learning Credit – are expected to benefit each year. The HOPE Scholarship provides for a \$1500 tax credit on the first two years of college for any individual enrolled on at least a half-time basis for any portion of the

year. By reducing financial barriers to continued education, the President hopes to make the first two years of college as universal as high school.

School-to-Work Programs

Many of America's young people leave school unequipped with skills they need to perform the jobs of a modern, competitive world economy. In order to address this, the Administration has attempted to ease the transition from school to the workforce with the School-to-Work Opportunities Act of 1994, that provided seed money to States and partners to create a system to prepare youth for the high wage, high skill careers of today's and tomorrow's global economy. It is important to emphasize that there is no single school-to-work model. This program provides federal support for state-administered programs. While each system is different, they have core common elements 1) education relevant to the working environment, 2) skills necessary for a particular career, 3) connecting activities, matching students with participating employers to build bridges between school and work. This initiative makes the workplace an active learning environment.

THE CONTINUING CHALLENGE: RE-EDUCATING AND RETRAINING

Continued progress in strengthening formal education is one key ingredient in preparing today's children and young people for tomorrow's labor market. But as the experiences of the last decade or so have already taught us, taking advantage of the opportunities offered in an increasingly global, competitive, and information-driven economy requires ongoing, lifetime learning. In large measure, it will be the responsibility of individuals and firms to develop the

methods and practices that are most appropriate for promoting the lifetime learning and training that will be required. Fortunately, a healthy, dynamic, competitive economy provides strong incentives to promote this process. But government has a role to play as well, especially in providing appropriate training programs for those who have slipped through the cracks of the formal education system and in facilitating the retraining and re-employment of workers who lose their jobs and find that they are not equipped with the necessary skills for the new jobs that are being created. Well-designed training programs improve the efficiency of the economy while at the same time helping those who have suffered temporary setbacks to bounce back. This section discusses the main training programs in place and examines what we have learned from evaluations of these and past training programs. It then describes this Administration's policies to improve workforce development and promote lifetime learning.

Firm-based Training

Employers have a clear interest in providing their employees with the specialized training needed to perform company-specific tasks. But employers may be more reluctant to provide general skills that are readily transferable to other employers. Nevertheless, investment in such general skills is a critical component of developing human capital. Such skills contribute not only to workers' current productivity but also to their ability to learn new skills and adapt to new tasks and jobs more quickly.

Employers are likely to underinvest in general training due to a free-rider problem. Once an employee receives general training, that employee will be of greater value not only to the firm that provided the training but to other firms, creating the threat that the original firm will not reap

the benefits. Workers, in turn, may not want to bear the costs of employer-provided training by accepting lower wages during the training period if they are not sure they will be rewarded by higher wages after being trained. These incentives to underinvest in employer-provided general training may be particularly strong in the United States, where labor turnover is high and there is no national, standardized credential system for this type of training. While U.S. companies invest roughly \$60 billion per year on education, training, and upgrading skills, such expenditure is modest relative to expenditures in other developed countries like Japan and Germany, and the magnitude of the challenge presented by rapidly-changing workplace demands ("Blueprint", p. 1).

Nevertheless, privately-provided training by firms is the primary form of worker training in the U.S. (Heckman in Handbook, p. 8) and there is evidence that firm-based training is growing. As one might expect, firm-based training is more prevalent as firms experience rapid technological progress, though it is unclear to what extent training produces technological advance. In addition, firm-based training is more common among more educated workers, implying that schooling and training interact positively. Although large relative to government-sponsored training programs, the level of employer-provided training may, for the reasons discussed above, may fall short of the socially-optimal level.

Formal schooling has been recognized as the main mechanism through which workers acquire general skills. Post-secondary schooling is much more widespread and the rate of return is higher (Heckman, p. 190) in the United States than it is in many other industrialized countries. It appears that, on average, a year of post-secondary schooling in the United States raises wages by the same amount as a year of formal, on-the-job training in the United States and in other

countries. Moreover, post-secondary schooling may be an acceptable substitute for employer-provided training. Policies that promote post-secondary schooling can therefore play an important role in maintaining and improving the skill-level of the U.S. workforce. For example, the lifetime learning tax credit, enacted in 1997, targets adults who want to go back to school, change careers, or take courses to upgrade their skills, as well as college juniors, seniors, graduate, and professional degree students. The 20 percent credit applies to the first \$5,000 of a family's qualified education expenses through 2002, and to the first \$10,000 thereafter.

There are also policies aimed at compensating employers for the externality that they may bear when they provide education and training opportunities to their employees, such as a favorable tax treatment of expenses related to such opportunities. **[Expand – anytime-anywhere-learning].**

Government Training Programs

Government training programs are aimed primarily at workers who have lost their jobs and are having difficulty finding new jobs, or at disadvantaged groups that lack the skills that make them attractive to employers. Mandatory training programs are directed at public assistance recipients and are designed to encourage welfare recipients to seek work.

Modern U.S. training programs trace back to the mid-1960s. The 1964 Economic Opportunity Act created the Job Corps, which still operates today, providing training for disadvantaged youth at 110 urban and rural residential centers throughout the United States. Since its inception, the Job Corps has served more than 1.7 million youth. The Manpower Development and Training Act (MDTA) was enacted in 1962 to retrain technologically

dislocated workers, but its emphasis was shifted toward disadvantaged workers by the Economic Opportunity Act of 1964. The first major mandatory training program for welfare recipients was the Work Incentive Program (WIN) of 1967. In 1988 the WIN program was replaced by the Job Opportunities and Basic Skills Training (JOBS) program. [add details]

In 1973, MDTA was replaced by the Comprehensive Employment and Training Act (CETA), which gave states and local governments authority to operate training programs with Federal grants and which had a public service job creation component that grew quite large in the late 1970s. In an effort to shift more responsibility to the private sector, CETA was replaced by the Job Training Partnership Act (JTPA) in 1982. JTPA eliminated the public service employment component of training and enhanced its decentralized administrative structure. The program currently serves close to a million economically disadvantaged persons annually and remains the principal training program for the disadvantaged.

Altogether, government expenditures on training total approximately \$4 billions per year, a level which implies relatively limited training opportunities for U.S. workers relative to those available in other countries. In 1994-95, the United States spent .2% of GDP on employment and training programs, markedly lower than many other OECD countries, including the United Kingdom (.5% of GDP) and Sweden (3% of GDP).

Evaluation Evidence

Are government employment and training programs effective in improving labor market prospects for the disadvantaged? A recent review of the evidence provides grounds for cautious

optimism, although these programs appear to have been much more successful for adults than for disadvantaged youth.

Disadvantaged youth are the most difficult population to help, and success has been limited, except for a few highly intensive or particularly well-run programs. The main program that has shown some success is the San Jose Center for Employment Training, which was the only one of 13 similar programs that was effective in increasing youth earnings. The Job Corps has also been shown to produce significant gains in earnings and educational attainment. Both of these programs are substantially more intensive than most other efforts. The Department of Education is evaluating some programs through its Dropout Prevention Demonstration Program. Some programs have produced short-run gains in employment and educational attainment of teenage parents, and there is some evidence that these gains are larger for in-school than for out-of-school youth. However, it has been difficult to sustain gains once the program is terminated.

There is much more consistent evidence that job training programs increase the earnings of disadvantaged adults, particularly economically-disadvantaged women (Heckman, p. 191). The JTPA Title II program, which offers short-term training and job search assistance to disadvantaged adults, appears to have increased women's earnings by 15 percent and men's earnings by 10 percent. More intensive programs that offer subsidized employment and supportive services to long-term welfare participants have yielded larger earnings gains. Mandatory welfare-to-work programs, which tend to offer job search assistance rather than training, have increased earnings by somewhat less than the JTPA program. All of these programs tend to produce high benefit-cost ratios. Given the very low initial earnings of most disadvantaged adults served by training programs, even the gains made by most programs have

not been enough to pull many of those served out of poverty. However, most studies documenting this finding were completed prior to the recent expansion in the Earned Income Tax Credit. It is possible that the EITC boosts starting incomes enough that the additional earnings generated by job search and training programs could move noticeable numbers of participants out of poverty:

Research on the effects of employment and training programs for dislocated workers, though much more limited, suggests that some programs can be effective. Carefully targeted job search assistance programs can decrease the duration of unemployment and the receipt of unemployment insurance among displaced workers. These programs are cost-effective for the government.

Taken together, these results suggest that at least some types of employment and training programs can achieve moderate earnings gains for disadvantaged youth, adults, and dislocated workers. While these earnings gains have resulted in gains, for the most part they have not been large enough to move participants out of poverty. This is not surprising given that most programs have been short-term interventions focused on highly disadvantaged populations. It is possible that more-extensive interventions, or interventions targeted at higher-skilled populations (such as dislocated workers) would yield larger earnings gains.

Training For the 21st Century

The macroeconomic environment for American workers has changed dramatically since 1993. With the Nation's labor market performing at record levels, the unemployment rate is at a 30-year low and the employment and earnings possibilities of traditionally disadvantaged groups

have improved dramatically. But even in today's high-pressure economy, the rapid pace of change and the premium put on technology and skills may cause some workers to lose their jobs and have trouble finding new jobs with their existing skills. And those workers who have failed to acquire the necessary skills may have trouble securing employment that provides the middle class standard of living they are striving for. This Administration has made it a priority to pursue education and training policies that will help ensure all those who work hard and play by the rules that they will have an opportunity to prosper.

Strengthening America's work force development system and promoting lifelong learning have been priorities of this Administration. In August 1998, the President signed the Workforce Investment Act (WIA) to give workers greater control over their training, streamline public employment and training services, and make all training providers more accountable for their services. In addition, WIA strives to meet needs of both the nation's businesses and job seekers and make access to employment services universal.

The President has also committed \$368 million to the Universal Reemployment program. In a period of rapidly changing job demands, the Universal Reemployment program aims to provide all dislocated workers who want and need training and reemployment services. To this end, reemployment services will be targeted to all unemployment insurance claimants who lose their jobs through no fault of their own and funding for One-Stop Career Centers will also be increased. A Skills Shortages initiative will fund grants to identify skill shortages and target resources to industries struggling to fill jobs.

Leadership Group on Workforce Learning

Recognizing the critical, ongoing challenges of educating and training the workforce for the 21st Century, Vice President Gore convened a group of key leaders from business, organized labor,

and educators to synthesize current thinking and promising practices on workforce learning. The comprehensive findings of this Leadership Group stress cooperation at local, state, and national levels to meet these challenges and equip workers with the skills to excel in the dynamic, global marketplace. The Leadership group detailed four key Recommendations:

Recommendation 1: Deliver education, training, and learning that are tied to high standards, to useful credentials, and meet labor market needs.

Recommendation 2: Improve access to financial resources for lifetime learning for all Americans, including those in low-wage jobs.

Recommendation 3: Promote learning at a time and place and in a manner that meets workers' needs and interests.

Recommendation 4. Increase awareness and motivation to participate in education, training, and learning.

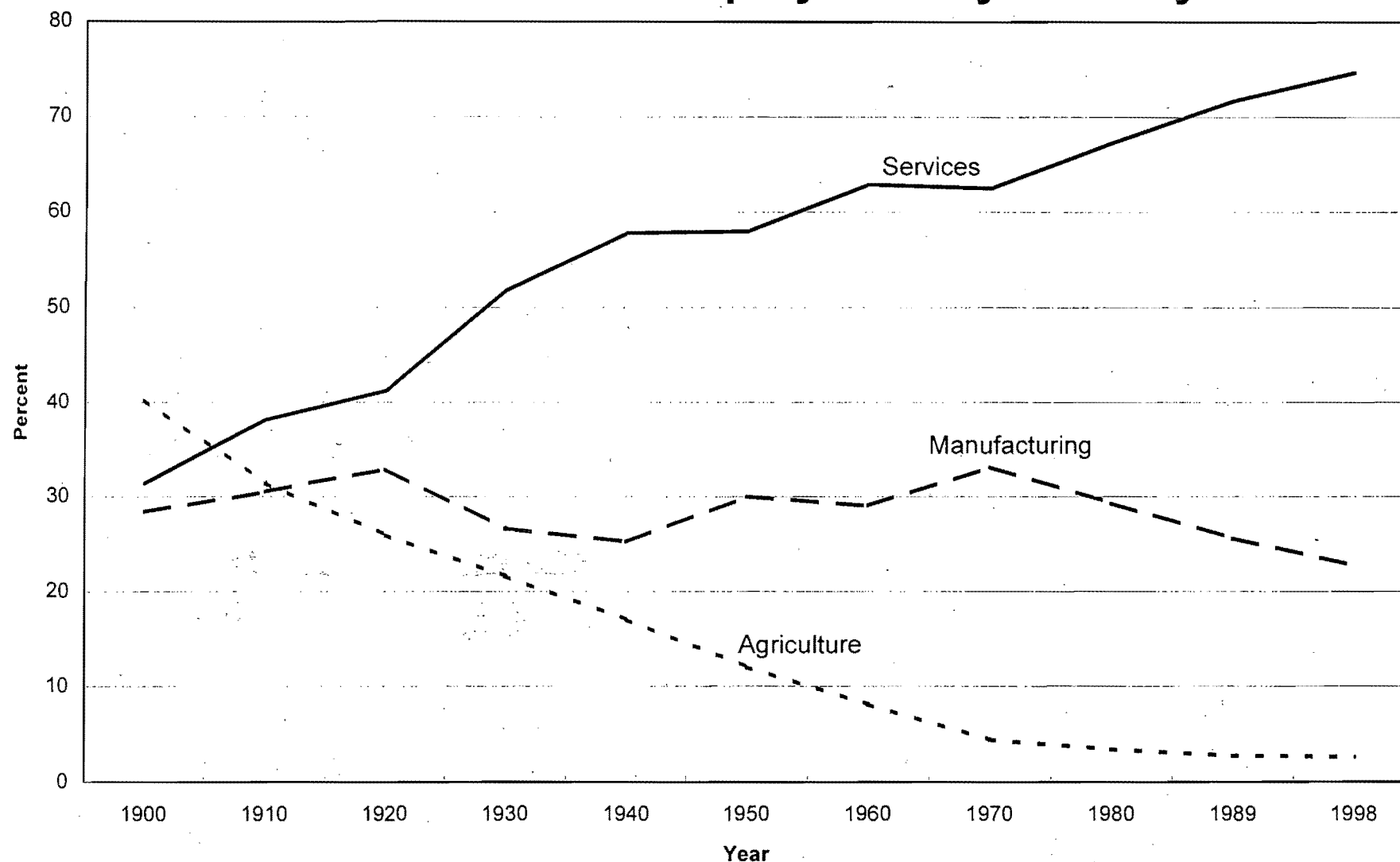
HELPING AREAS LEFT BEHIND

Another implication of the transforming labor market is a change in where the jobs are located. The movement from agriculture to manufacturing that was taking place over the beginning of the 20th century implied a movement of jobs, and people, from rural to urban areas. The subsequent growth in service occupations allowed jobs to arise outside of the central cities and resulted in a growth in suburban employment. Accompanying this change has been a broader movement of jobs out of the Northeast and Midwest, traditional manufacturing centers, to the South and West. In all geographic regions, however, the largest employment growth between 1980 and 1990 has taken place in suburban counties (Kassdra). The movement of jobs out of central cities, as well as rural centers, has led to the further decay of these areas and given rise to a spatial mismatch between the location of workers and the availability of jobs.

To help revitalize areas that have been left behind because of sectoral shifts or urban flight, the Administration has implemented and proposed a number of important policies. A

prime example is the creation of Empowerment Zones (EZ) and Enterprise Communities (EC) in struggling areas, provided for in the Omnibus Budget Reconciliation Act of 1993. Businesses in these areas are eligible for tax incentives to facilitate employment, financing, and investment. In 1994 the first 9 Empowerment Zones were designated, along with 95 smaller Enterprise Communities. These programs have leveraged over \$10 billion in additional public and private revitalization efforts and a recent survey of businesses operating in the 31 Empowerment Zones now in existence finds that these tax incentives have been an important factor in employment decisions. More recently, the Administration has proposed a new set of tax credits to spur investment in low-income areas. These initiatives include a New Markets Tax Credit to spur equity capital, creation of America's Private Investment Companies (APICSs), patterned after overseas investment institutions to leverage investment in untapped domestic markets, and several programs designed to assist small businesses in low-income areas.

Chart 4-1: Share of Employment by Industry



Source: 1991 Economic Report of the President for 1900-1989 data; January 1999 Employment and Earnings for 1998 data

Chart 4-2: Percent Female in Selected Occupations in 1970 and 1998

<i>Occupations</i>	<i>1970</i>	<i>1998</i>
Architects	4.0	17.5
Biological and life scientists	37.8	38.8
Chemists, except biochemists	11.7	32.9
Clergy	2.9	12.0
Computer systems analysts and scientists	13.6	26.9
Dentists	3.5	19.8
Dieticians	92.0	86.0
Economists	15.9	46.3
Editors and reporters	41.6	51.0
Engineers	1.7	11.1
Lawyers	4.9	28.5
Librarians	82.1	75.5
Operations and systems researchers and analysts	11.1	41.9
Pharmacists	12.1	44.0
Physicians	9.7	26.6
Psychologists	38.8	62.1
Public relations specialists	26.6	66.3
Registered nurses	97.3	92.5
Social workers	63.3	68.4
Teachers		
Prekindergarten and kindergarten	97.9	97.8
Elementary school	83.9	84.0
Secondary school	49.6	56.9
Teachers, college and university	29.1	42.3

Source: *Employment and Earnings* (January 1999). Bureau of the Census,
*Detailed Occupation of the Experienced Civilian Labor Force by Sex for the United
States and Regions: 1980 and 1970*, Supplementary Report PC80-S1-15 (March 1984)

Chart 4-3: Median Annual Earnings of Females Relative to Males

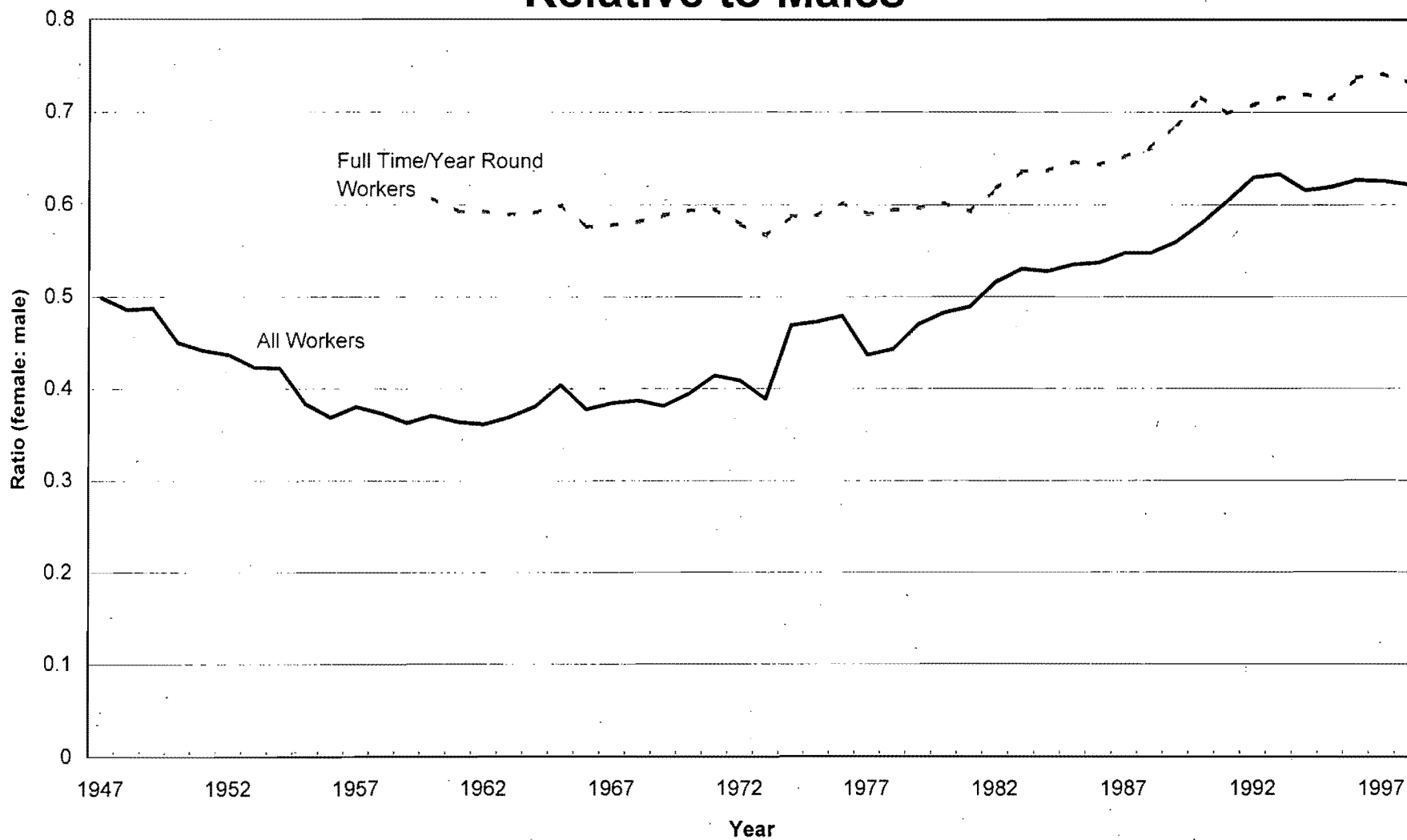
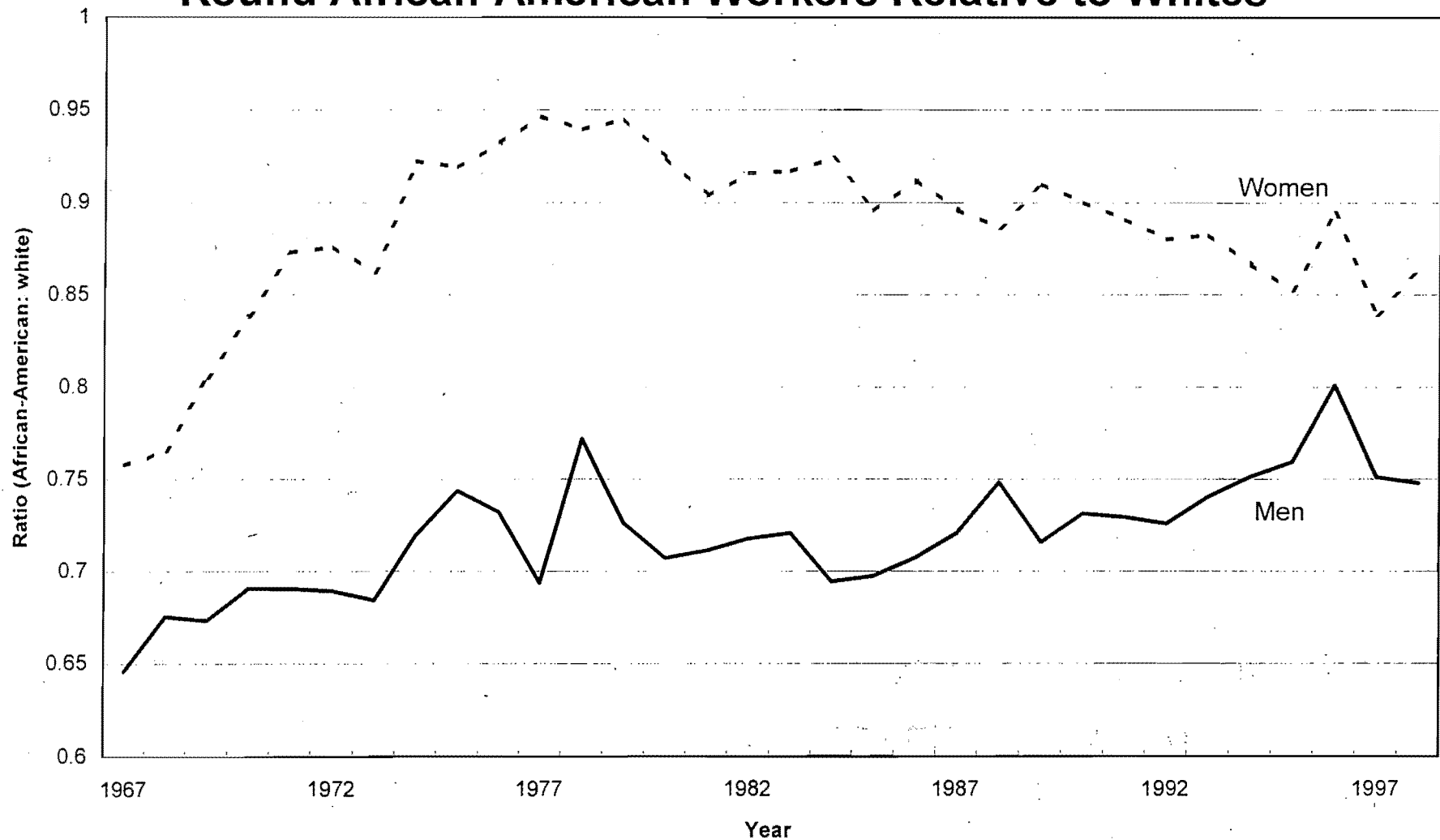
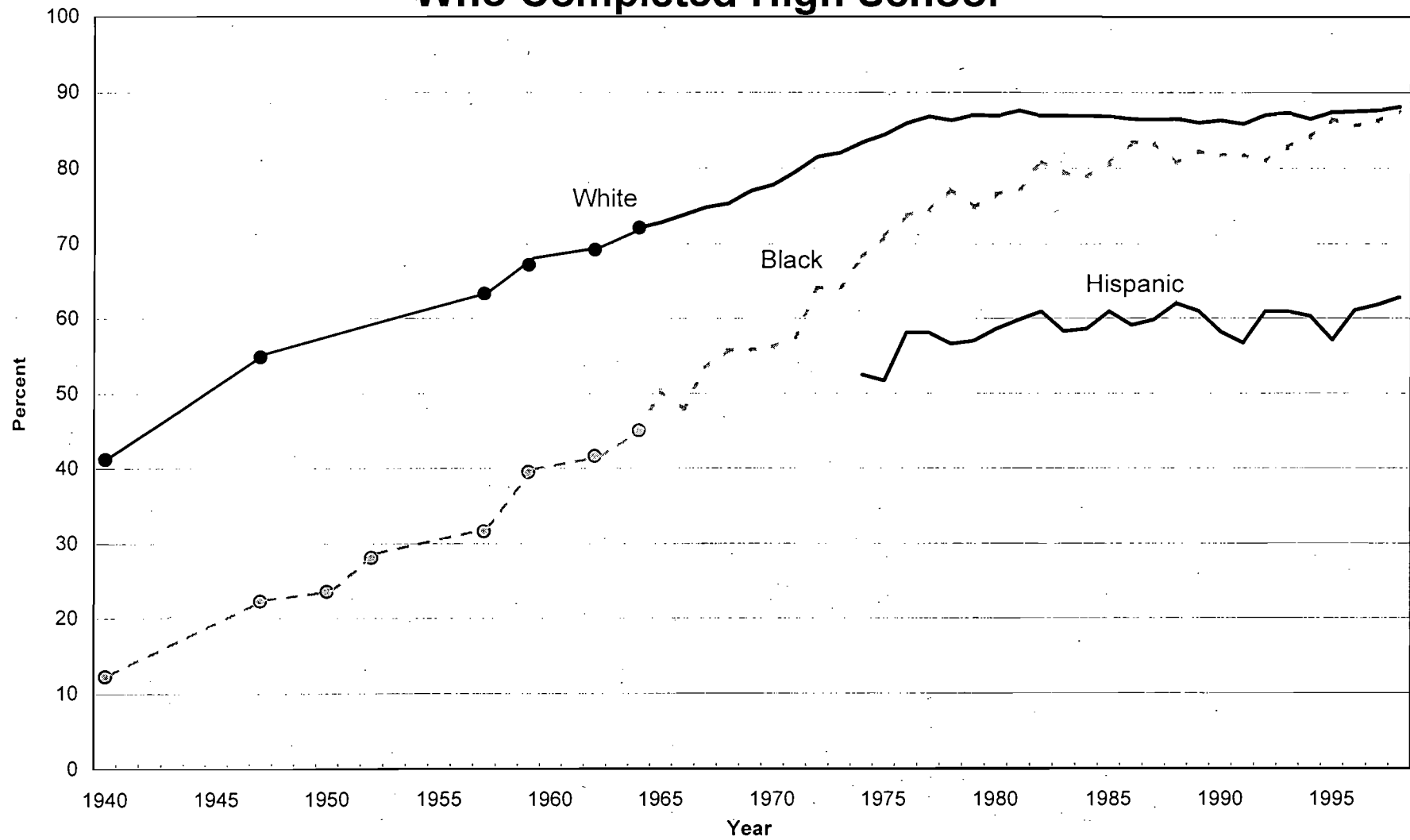


Chart 4-4: Median Annual Earnings of Full-Time, Year-Round African-American Workers Relative to Whites



**Chart 4-5: Percent of 25-29 Year Olds
Who Completed High School**



**Chart 4-6: Percent of 25-29 Year Olds
Who Completed College**

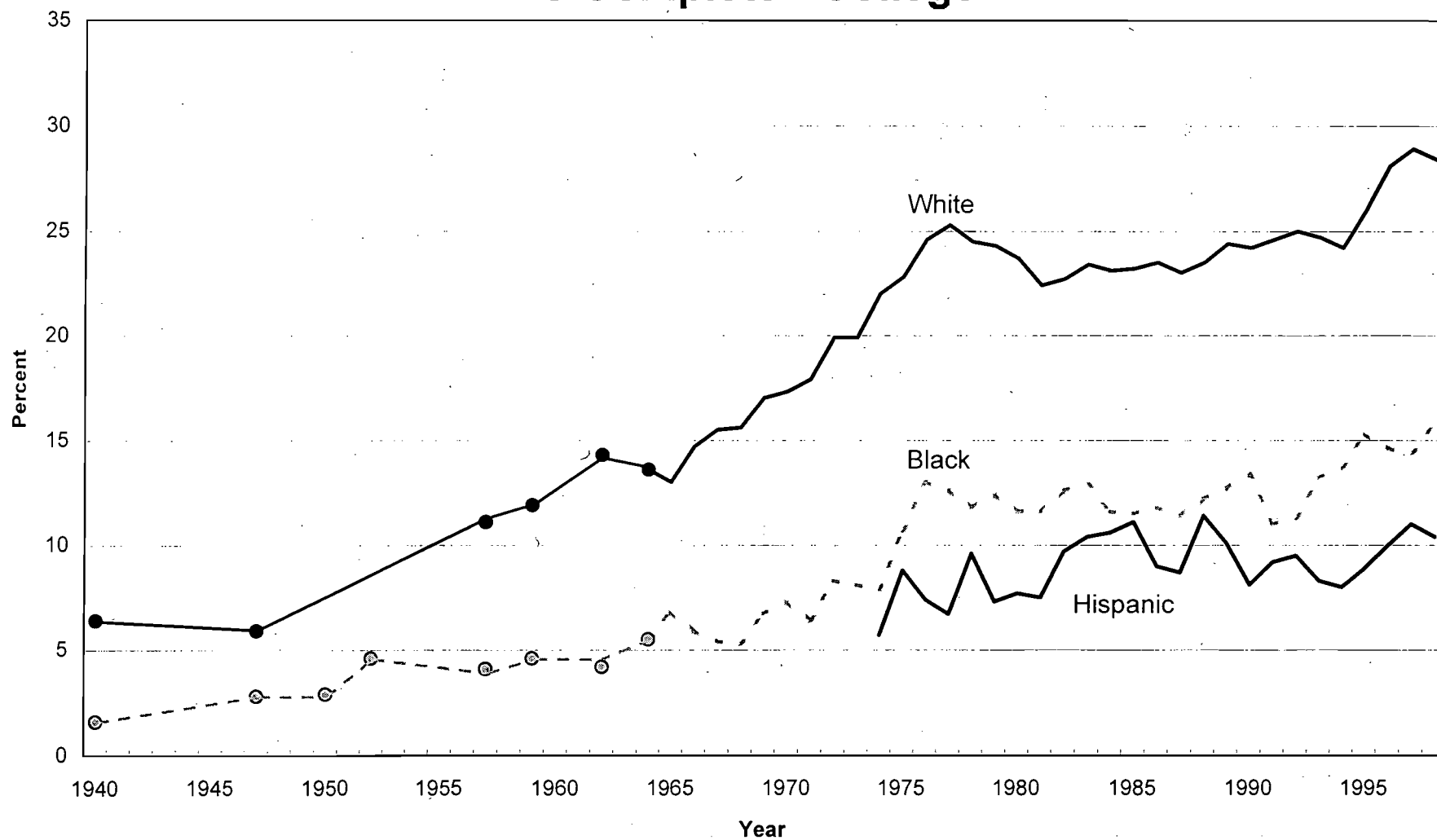


Chart 4-7: Relative Median Income by Education Group for Male Workers

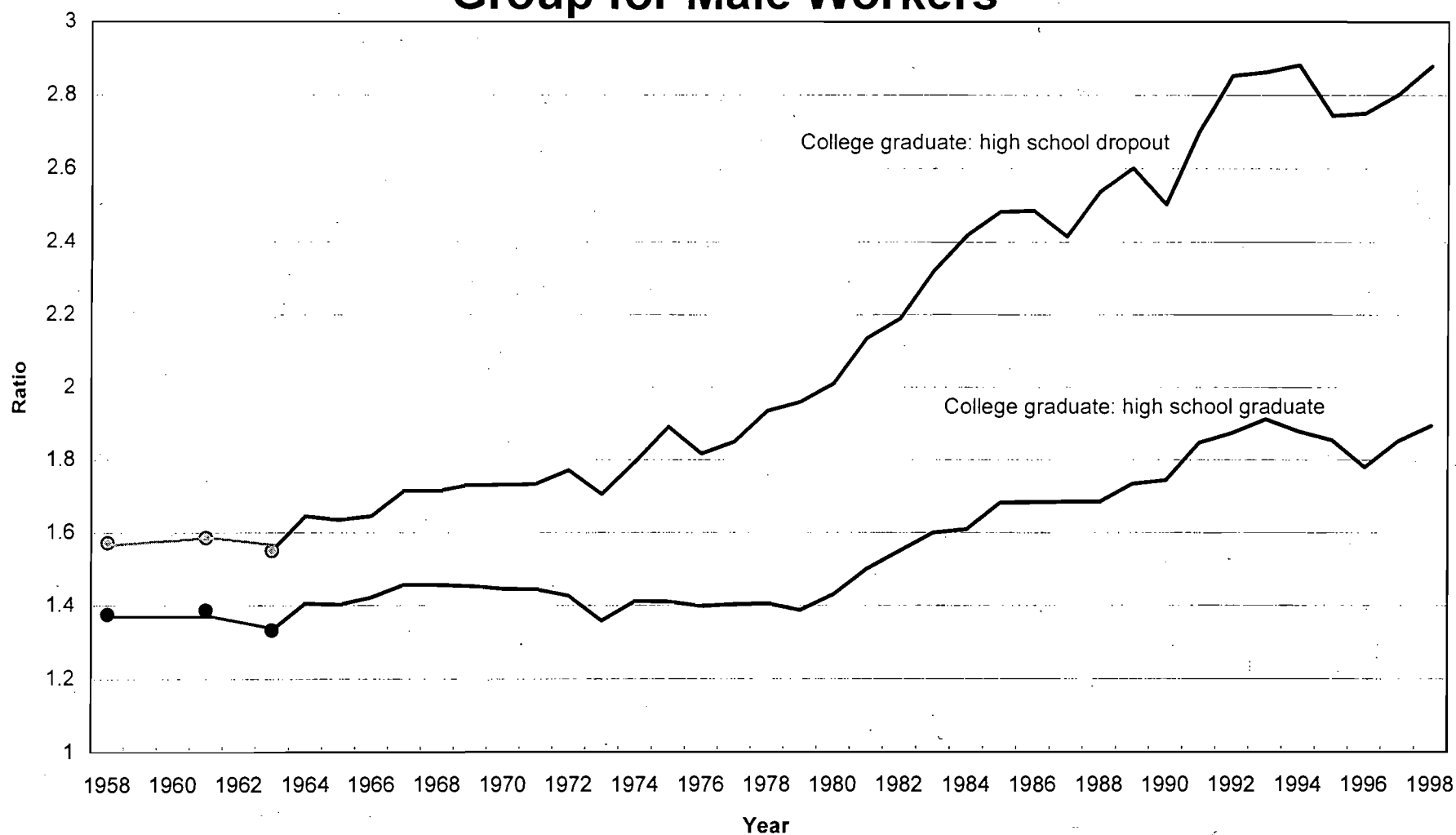


Chart 4-8: Average SAT Scores by Race

