

## CONCLUSION

# A Century of Change: New Opportunities for the Future



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*In January 1901, Collier's Weekly Magazine published this vision of what the future might look like. The editors envisioned that by the year 2001, Broadway in New York City would offer modern inventions "carried to the highest point of development," such as 6-hour trans-Atlantic submarine rides, a "Manhattan Air Line" used much like buses for local transportation, compressed food tablets for fast-food lunches, and wireless telephones that could even phone Europe.*

The 20th century was one of dramatic growth, change, and new opportunity for America. Technological innovation, globalization, and demographic shifts have led to fundamental changes in our economy, creating new industries, transforming how businesses operate, altering the nature of work, reshaping the typical family, and changing the scope of environmental problems. The American economy today is more prosperous and more diverse and offers Americans more possibilities and choices than ever before. But new challenges have accompanied those changes, and policymakers must continue to seek ways to harness and maximize the benefits for all Americans.

Rising to these policy challenges is particularly appropriate as we seek to sustain the phenomenal economic performance America currently enjoys. We are on the brink of achieving the longest economic expansion on record. Perhaps even more important, this expansion has been not just long but broad and deep as well. Unlike in the last long expansion, all income classes have shared in the benefits, capturing real, across-the-board income gains. The unemployment rate is lower than it has been in 30 years, even as core inflation has fallen to its lowest point in 34 years. The poverty rate is the lowest since 1979. In the past 7 years we have moved from a Federal budget deficit of \$290 billion to a surplus of \$124 billion. That has helped keep interest rates low and freed up capital for investment, which, in turn, has helped productivity rise over the course of this expansion. We are now seeing the payoffs of a concerted policy strategy of exercising fiscal discipline, of investing in education, training, and technology, and of opening markets abroad. Indeed, this expansion so far has defied the odds: it has achieved low unemployment, low inflation, strong growth, strong investment, rising productivity, and across-the-board income growth—all simultaneously.

In this *Economic Report of the President* for the year 2000, we have outlined some of the key economic changes of the past century and analyzed some of the principal factors driving those changes. We have discussed the new opportunities and the new challenges that have emerged as the United States has moved from an agrarian and industrial economy, anchored in the production of goods, to an increasingly information-driven economy, fueled by the exchange of services and ideas.

## A Look Back

To appreciate how far we have come, it is instructive to look back on what American life was like in 1900. At the turn of the century, fewer than 10 percent of homes had electricity, and fewer than 2 percent of people had telephones. An automobile was a luxury that only the very wealthy could afford. Many women still sewed their own clothes and gave birth at home. Because chlorination had not yet been introduced and water filtration was rare, typhoid fever, spread by contaminated water, was a common affliction. One in 10 children died in infancy. Average life expectancy was a mere 47 years. Fewer than 14 percent of Americans graduated from high school.

The typical family was a two-parent family where the father was the breadwinner and the mother did not work for pay. Fully 80 percent of American children lived in this kind of family. Fewer than 10 percent lived in single-parent homes. Widowhood was far more common than divorce. The average household had close to five members, and a fifth of all households had seven or more.

More than 40 percent of the work force labored in agriculture. Average income per capita, in 1999 dollars, was about \$4,200. Options for women and minorities in the work force were limited. The overwhelming majority of women worked at home or on the farm. Only about 20 percent of women were in the labor force, and those who did work were likely to be unmarried and in low-paying occupations. Over 90 percent of African American women worked as either farm laborers or domestic servants. The typical workweek in manufacturing was about 50 hours, 20 percent longer than the average today.

In 1900 only 5 percent of factories used electricity as a power source. The rest still used steam or water power to drive their machines through intricate arrangements of wheels, belts, and shafts. By far the greater part of the productive economy was involved in making goods. Only about 30 percent of workers were employed in service industries, and services made up just 2 percent of U.S. exports. Although international trade equaled about 15 percent of GNP, there was relatively little integration of national economies through investment and production arrangements.

## The American Economy Today

The broad contrasts between America in 1900 and America today are striking. Some of the most dramatic improvements have been in the area of public health. Infant mortality dropped by more than 90 percent over the course of the century. Life expectancy has increased by about 30 years. Diseases such as typhoid, cholera, smallpox, and polio have been dramatically reduced or even eliminated through improved sanitation and the widespread use of vaccines.

Average income per capita is now \$33,740, more than eight times what it was at the beginning of the 20th century. Just 3 percent of the labor force now work on farms. More than 40 percent of total employment is in industries that are intensive users of information technology. And studies project that the five fastest growing occupations between now and 2008 will be related to computers. The service sector accounts for 50 percent of the 20 million new jobs created over the last 7 years, and services are now about 29 percent of exports. More than 80 percent of Americans aged 25 and over have graduated from high school, and almost a quarter have graduated from college.

The long-standing gender gap in education has disappeared—women are in fact graduating from high school and college at slightly higher rates than men. Over 75 percent of women aged 25-44 are in the work force. Women and minorities are now employed in a broad range of industries and occupations that had previously been closed to them. And although the pay gaps

between men and women, and between whites and minorities, have not yet disappeared, they have shrunk significantly.

The “typical” family today is much more diverse. Some 28 percent of children now live in single-parent families, and another 44 percent live in families where both parents are in the paid labor force. Only 24 percent of children now live in what used to be the typical model of a breadwinner-father and homemaker-mother. Meanwhile many other types of family arrangements, including unmarried-partner households and same-sex-partner households, have become more commonplace.

Today, the vast majority of households have electricity, telephones, and automobiles. A number of appliances that did not exist 100 years ago are now considered common, if not essential, household fixtures: televisions, videocassette recorders, refrigerators, washing machines, wireless phones, and personal computers, to name a few.

America’s international trade (exports plus imports) now amounts to nearly 25 percent of GNP. Both trade and cross-border investment have been spurred by a range of new technologies and products that have cut transport costs and allowed producers and investors continents apart to coordinate their activities with ever greater ease. A U.S. computer manufacturer can import components from foreign suppliers or its own overseas facilities. International mutual funds allow American families to diversify their savings across both industrial and emerging markets abroad. And with the advent of e-commerce, consumers around the world can order a wealth of goods that they might never find at their local shopping centers.

## The Drivers of Change and the Challenges Ahead

These dramatic changes have been driven by a number of factors. As this Report has outlined, among the most important are technology, demographic change, and globalization. America now faces a number of unique challenges as we try to maximize the benefits to all Americans of the internationally integrated, technologically advanced economy in which we now live.

### *Technology*

From electricity to mass production to telecommunications and e-commerce, technological innovation has been a constant in the American economy, and its effects have been far-reaching. Entire industries that only a few decades ago did not even exist, such as the computer industry, are now leading engines of growth. Between 1995 and 1998, information technology-producing industries contributed, on average, 35 percent of the Nation’s real economic growth. Computers are cited as a principal factor in the recent increase in productivity

growth and are credited with helping keep inflation low. The computer industry itself has achieved dramatic productivity increases: prices of computers have fallen nearly 30 percent per year on average since 1995. And as companies integrate computers, information, communications technology, and, most recently, the Internet and e-commerce into their business practices, there is evidence that technological innovation is changing the very fabric and structure of industries. Many economists now posit that we are entering a new, digital economy that could inaugurate an unprecedented period of sustainable, rapid growth.

Among the challenges posed by the evolving digital economy is maintaining the economic conditions that will sustain the virtuous cycle of low interest rates, high investment, increasing productivity, low inflation, and strong growth that we currently enjoy. As this Report has noted, fiscal discipline is a key underpinning of these trends. In addition, government policies must foster the competitive dynamic that encourages firms both new and old to introduce innovative products and services, to lower prices through gains in productivity, and to expand customer choice and improve customer service. The greater competition promoted by the Telecommunications Act of 1996, among other developments, has led to explosive investment in communications infrastructure in recent years. This, in turn, has led to a proliferation of new and increasingly affordable information and data services. As both consumers and businesses make increasing use of the Internet and e-commerce, these new tools are beginning to have pervasive effects on how business is conducted—much as the advent of electricity or mass production did earlier in the century.

The American job market is adapting to change with much the same vigor. Workers who are well educated and technologically skilled command a substantial wage premium in today's information-driven economy. Information technology-producing industries have experienced faster than average job growth in recent years. In 1997 they added 350,000 jobs—a 7.7 percent increase from 1996—compared with average employment growth in the broader economy of about 3 percent. Those jobs, moreover, pay a significant premium: salaries average \$53,000, compared with an economy-wide average of \$30,000.

Now is the time to make the right strategic investments in education and training, so that the American work force will be well prepared to take advantage of these new opportunities. Government policies that address this task encompass initiatives to improve the quality and standards of schools, to encourage students to stay in school, and to help schools afford the technology necessary to teach students the skills needed in the 21st century job market. Programs such as the E-rate, together with other initiatives in education technology, play a valuable role in closing the digital divide by ensuring that all students, whatever their family's income and wherever they live, have access to computers, Internet connections, and teachers trained in the new technologies.

## *Demographic Change*

Over the course of the century, a number of demographic changes altered the profile of the typical American family. The massive entry of women into the work force reflects new opportunities for women but also places new demands on families. More and more families today are dual-earner or single-parent families. Without a parent available full-time to care for the home and children, these families often face both a time crunch and a money crunch as they seek to balance the needs of work and family life. To enable families to reap the maximum benefit from the economic expansion while still meeting all their members' needs, the Administration has proposed a number of policies tailored to today's diverse families. These include increases in the minimum wage; expansions of the Earned Income Tax Credit and the child care tax credit; enactment of the Family Medical Leave Act; measures that promote more flexible working arrangements; and the New Market initiative to extend the benefits to areas that have been left behind. All these are playing critical roles in helping working families get or stay in the job market, raise their standards of living, continue to reduce poverty, and provide for their children.

At the same time, the combination of longer life spans and the aging of the baby boom has given new urgency to the issues surrounding care for older generations. The graying of the population poses a clear challenge to policymakers to strengthen Social Security and Medicare so that they continue to meet the changing needs of older Americans, including helping them afford the prescription drugs that are becoming increasingly important in medical care.

## *Globalization*

America's increasing openness to the world, through trade, investment, and the integration of cross-border business operations, has been yet another driver of change that has made our economy more prosperous. The freedom of firms to choose from a wider range of inputs, and of consumers to choose from a wider range of products, improves efficiency, promotes innovation in technology and management, encourages the transfer of technology, and otherwise enhances productivity growth. These benefits in turn lead to higher real incomes and wages. Quite in contrast to the commonly expressed fear that globalization hurts American workers, our experience in the 20th century has shown that as we have grown more open to globalization, we have grown more prosperous, and both workers and consumers in the aggregate have realized the benefits. Only a small share of worker dislocation has been attributed to trade. Policies that help ease the transition and offer retraining to those workers play an important role in their adjustment. But we as a Nation

have much to gain from continuing to work for trade liberalization through the World Trade Organization. We should work, however, to bring more transparency to the WTO, to make sure that developing countries benefit from globalization, and to encourage greater consideration of labor and environmental concerns.

Finally, as our society has become increasingly global in its outlook, and increasingly scientific in its approach to problems, we have developed a greater understanding of the environmental challenges facing the planet. At the beginning of the 20th century, those environmental problems that were recognized tended to be local in nature, from the horse manure that fouled city streets to the contamination of drinking water. As the economy grew and changed, some existing environmental problems got worse while others appeared for the first time, but that same economic dynamism provided the resources and the innovation needed to address these problems. We realize now the need for local attention to certain environmental problems and for coordinated global attention to global environmental challenges.

We also have a better understanding of how to remedy environmental problems through market-based approaches to regulation. The experience with emissions permit trading and emissions charges illustrates how providing economic incentives can promote greater flexibility in how industries and other sources reduce their emissions. Such approaches have resulted in more cost-effective achievement of environmental goals. Market-based approaches can also stimulate the development and adoption of new, “cleaner” technologies. Based on our experience and the lessons we have learned in employing these market-based approaches, we are well positioned to explore how these approaches can provide the right incentives for countries around the world to address environmental problems, especially global ones such as climate change. The whole world can benefit from the exchange of experiences and ideas, just as it benefits from the exchange of goods and services through wider international trade.

## Conclusion

America stands at a unique juncture in its history. We are more prosperous, more technologically sophisticated, and more integrated into the global economy than ever before. The policy framework that has been in place over the last 7 years has allowed the growth potential of the private sector to be realized, and we as a Nation have flourished. Yet great challenges still lie ahead to ensure that the benefits of this golden age are sustained and shared as broadly as possible, and that the right investments are made in the future.

Fiscal discipline, to keep interest rates low and fuel continued investment, will remain fundamental to our policy strategy. Investing in education, health care, science, and technology will prepare our families and our firms for the

challenges ahead. Opening foreign markets and continuing to lower barriers to trade will help deepen the global integration that has served us well thus far. Harnessing market forces for the betterment of the environment will help sustain the economy's robust growth. The 20th century ended on a note of great achievement for America, but the century just beginning promises to be brighter still, provided we undertake prudent policies and make strategic investments for the future.