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Then and Now: Sixty Years of Economic Change in New Jersey

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The ebullient economic headlines chronicling the “wonder years” of the late 1990s have now retreated deep into history. As the first decade of the new millennium unfolded, the “go-go” years succumbed to the “no-go” years. The resulting malaise still serves as our reference point even as the economy is now poised to advance once again. But overarching such short-term cyclical swings as the most recent recession and the subsequent hesitant recovery is the long-term fundamental structural transformation of the New Jersey economy. Much attention in recent years has focused on the new information-age economy, but that development is only the latest phase of a shift that began more than one-half century ago. This report documents the broad, long-term (since 1940) patterns of economic growth and change in New Jersey and examines—using a newly constituted industrial classification system—the shape of the state’s knowledge-based economy as it has emerged in recent years (1990–2002). This comprehensive overview provides a benchmark for the current state of New Jersey’s economy and constitutes a baseline from which to assess its economic future.

Executive Summary

The current New Jersey economy bears scant resemblance to that of the mid-twentieth century. It has been completely reinvented—in scale, in structure, and in geography.

- ❑ In 1940, the size of New Jersey’s economy was 1.3 million jobs. Today, it is three times as large (4.0 million jobs).
- ❑ In 1950, the state’s total employment base (1.7 million jobs) was less than half that of New York City (3.5 million jobs). In 2002, it was 12 percent larger (4.0 million versus 3.6 million). This reflects

a vast reshaping of the region’s economic geography.

- ❑ The business of New Jersey was once strictly “making things.” The now long-vacant, multifloored industrial parcels in the state’s cities, and the more recent redevelopment of early suburban manufacturing sites into big-box retailing, stand as the most visible evidence that this economic reality has long since passed.
- ❑ In 1943, New Jersey was blue-collar solid; manufacturing accounted for fully 55 percent of total state employment, compared to only 41 percent nationally.
- ❑ Manufacturing’s share fell to 33 percent by 1970, compared to 27 percent nationally. Blue-collar blues would define the balance of the century in New Jersey, with absolute employment levels plummeting in tandem with relative declines.
- ❑ By 1988, manufacturing employment’s share of total state employment (18 percent) fell below that of the nation for the first time. By 2000, its share had dropped to 11.6 percent. The share was reduced even further when the new North American Industrial Classification System (NAICS) was introduced in 2003.
- ❑ In just half a century, New Jersey shifted from a production state to a consumption state. While there were many severe casualties—involving both people and places—services soared as the replacement source of employment.
- ❑ An important part of this transformation was the vast wave of office construction in the post-1980 era. Offices are the factory floors for knowledge-based services, sheltering the new economic order.

- ❑ In 1980, New Jersey was a bit-player in the regional office market. By 1990, the 11-county north-central New Jersey office market ranked as the fifth largest metropolitan office market in the country, a position it maintains today. The state emerged as one of the epicenters of corporate America, of the burgeoning service economy, and of the new dispersed regional economy.
- ❑ A comprehensive look at this new information-based, knowledge-dependent service economy is now possible through newly reconstituted employment data (NAICS) for the post-1990 period. Overall, between 1990 and 2002, total employment as measured by NAICS grew by 9.9 percent.
- ❑ Strong growth was exhibited by sectors that encompass high-quality, knowledge-based employment. Such growth belies the notion that the service economy is providing only low-paying “hamburger-flipping” jobs. Employment in professional and business services increased by 33.4 percent between 1990 and 2002, more than triple the rate of growth of total employment, while employment in financial activities grew by 18.1 percent, nearly double the rate of growth of total employment.
- ❑ Of the total increase (468,400 jobs) in service-providing employment, more than 75 percent was accounted for by education and health services (166,300 jobs), professional and business services (146,400 jobs), and financial activities (42,300 jobs).
- ❑ As a result, New Jersey now has proportionally more jobs, relative to the nation, in educational and health services; professional and business services; trade, transportation, and utilities; financial activities; and information services.
- ❑ Thus, New Jersey has employment concentrations in the key sectors that contain many of the high-paying, knowledge-based, new-economy jobs. This is the corollary of the state’s position as the fifth largest office concentration in the nation. In addition, the sheer scale of wholesale trade and transportation and warehousing employment reflects New Jersey’s position as the third largest commercial-distribution market in the United States.
- ❑ In contrast, the state is significantly underrepresented in manufacturing, natural resources and mining, and construction. Even though construction employment is at near-record levels in New Jersey, the state’s relatively slowly growing population translates into below-national-average growth of housing and population-serving activities.
- ❑ The transformations that have taken place in New Jersey have produced a myriad of benefits and costs—winners and losers emerging from profound economic change. While no single measure can capture the “bottom line,” income is a useful barometer. In particular, per capita personal income measures individual economic capacity and the scale of personal spending power.
- ❑ The ratio of New Jersey’s per capita personal income to that of the nation gauges the relative economic performance of the state. Per capita income in New Jersey was 16 percent higher than that of the nation in 1980. In 2002, it was 28 percent higher. This implies that, for the most part, the new economy is certainly “delivering,” although measures of average income do not capture the dispersion of the gains across the income distribution. In particular, many people have been left behind by the skill and education requirements of the new economy.

The Big Picture

Before World War II (1940), New Jersey's economy comprised barely 1.3 million nonfarm payroll jobs (table 1). By the end of the century (2000) it approached 4 million jobs, more than three times the level of 1940. The road to the new century was rarely smooth and often quite bumpy. The 60-year trek spanned decades of varying levels of economic development and job growth.

The employment gains of the 1990s (359,400 jobs) were the smallest of any decade of the past half-century, barely surpassing the growth of the 1940–1950 period (342,800 jobs). In percentage terms, the 1990s' growth rate (9.9 percent) was by far the slowest of the six-decade period (tables 1 and 2).

The Early Post-War Decades

During the 1940s and 1950s—the first two periods of this 60-year journey—New Jersey gained approximately 350,000 jobs per decade (table 1). A mid-era upswing then followed: The “roaring '60s”—the 1960-to-1970 period—set new economic records that still have not been surpassed. Under the impetus of an accelerating service sector in conjunction with sustained growth in manufacturing, rapid suburbanization from New York City and Philadelphia, and a potent boost from Vietnam War spending, employment increased by 29.2 percent or 589,100 jobs, an increment nearly 70 percent larger than the average of the previous two decades. The New Jersey economic powerhouse of the time appeared unstoppable, but in retrospect it proved to be part of the end of the era of American postwar economic hegemony.

The boom of the 1960s ultimately succumbed to the “troubled '70s.” This was a decade (1970–1980) when America's economic superiority was beginning to be confronted by global challengers. It was also an era of energy shocks, of a surging Sunbelt that was capturing increased shares of America's economic and demographic growth, and of an unprecedented reversal in manufacturing. Manufacturing employment began to hemorrhage, a condition that

would persist to the present day. Consequently, New Jersey's employment gains in the 1970s slipped to 454,100 jobs, a level of change nearly 25 percent below that of the 1960s, while the decade's employment growth rate plummeted to 17.4 percent.

The Great Boom of the 1980s

A seemingly new economic era, however, dawned with the unfolding of the “roaring '80s.” The 1980–1990 period brought surging employment growth (574,800 jobs) that nearly matched the record (589,100 jobs) of the “roaring '60s,” even though the 1980–1990 growth rate (18.8 percent) increased only slightly from that of the 1970s (17.4 percent). Nonetheless, strong absolute job gains were achieved even as manufacturing employment losses intensified. *The state gained 677,100 service jobs, an increment far greater than the total employment increase of any decade in history. An unprecedented set of economic locomotives came together to produce extraordinary growth, powering the transformation of New Jersey to a service economy.* Some of the more important engines driving the 1980s economy follow:

- The phoenix-like Northeast region served as an accelerator for the New Jersey economy. This fertile growth context stood in marked contrast to the regional economic malaise of the 1970s. This was partially the result of the emergence of a bicoastal economy. The American perimeter became the dominant economic growth setting, driven by defense spending, finance, and services. A real estate development frenzy swept America's coastlines.
- The nation's trade and budget deficits surged during the 1980s. New Jersey was a beneficiary since the *financing, brokering, lawyering, and related business servicing* were basically done in the metropolitan region. The control and distribution of the goods behind the trade deficit made the state a locus of proliferating warehousing/distributorship functions and local headquarters of foreign firms.

Table 1
Nonfarm Payroll Employment by Major Industries
State of New Jersey: Decade Total and Change
(Numbers in thousands)

	Goods-Producing					Service-Producing					Public Sector
	TOTAL	Total	Mfg.	Mining	Constr.	Total	Trans. & Utilities	Trade	FIRE	Services	
Total Employment											
1940	1,314.3	673.6	619.8	4.0	49.8	509.2	109.7	212.6	59.9	127.0	131.5
1950	1,657.1	841.9	756.4	4.3	81.2	644.2	135.4	273.7	68.3	166.8	171.0
1960	2,017.1	910.2	808.6	3.5	98.1	864.7	149.5	374.6	88.6	252.0	242.2
1970	2,606.2	984.3	860.7	3.2	120.4	1,247.1	182.2	538.0	116.5	410.4	374.8
1980	3,060.3	894.6	781.0	2.4	111.2	1,636.0	194.5	680.3	158.1	603.1	529.7
1990	3,635.1	745.3	596.6	2.3	146.4	2,313.1	232.2	864.2	238.7	978.0	576.7
2000	3,994.5	620.2	464.0	1.7	154.5	2,785.5	272.5	931.8	264.9	1,316.3	588.9
Decade Change											
1940-50	342.8	168.3	136.6	0.3	31.4	135.0	25.7	61.1	8.4	39.8	39.5
1950-60	360.0	68.3	52.2	-0.8	16.9	220.5	14.1	100.9	20.3	85.2	71.2
1960-70	589.1	74.1	52.1	-0.3	22.3	382.4	32.7	163.4	27.9	158.4	132.6
1970-80	454.1	-89.7	-79.7	-0.8	-9.2	388.9	12.3	142.3	41.6	192.7	154.9
1980-90	574.8	-149.3	-184.4	-0.1	35.2	677.1	37.7	183.9	80.6	374.9	47.0
1990-00	359.4	-125.1	-132.6	-0.6	8.1	472.4	40.3	67.6	26.2	338.3	12.2
Annual Average Change											
1940-50	34.3	16.8	13.7	0.0	3.1	13.5	2.6	6.1	0.8	4.0	4.0
1950-60	36.0	6.8	5.2	-0.1	1.7	22.1	1.4	10.1	2.0	8.5	7.1
1960-70	58.9	7.4	5.2	0.0	2.2	38.2	3.3	16.3	2.8	15.8	13.3
1970-80	45.4	-9.0	-8.0	-0.1	-0.9	38.9	1.2	14.2	4.2	19.3	15.5
1980-90	57.5	-14.9	-18.4	0.0	3.5	67.7	3.8	18.4	8.1	37.5	4.7
1990-00	35.9	-12.5	-13.3	-0.1	0.8	44.2	4.0	6.8	2.6	33.8	1.2

Source: New Jersey Department of Labor

Table 2
Nonfarm Payroll Employment by Major Industries
State of New Jersey: Percent Distribution and Decade Growth Rates

	Goods-Producing					Service-Producing					Public Sector
	TOTAL	Total	Mfg.	Mining	Constr.	Total	Trans. & Utilities	Trade	FIRE	Services	
Percent Distribution											
1940	100.0%	51.3%	47.2%	0.3%	3.8%	38.7%	8.3%	16.2%	4.6%	9.7%	10.0%
1950	100.0	50.8	45.6	0.3	4.9	38.9	8.2	16.5	4.1	10.1	10.3
1960	100.0	45.1	40.1	0.2	4.9	42.9	7.4	18.6	4.4	12.5	12.0
1970	100.0	37.8	33.0	0.1	4.6	47.9	7.0	20.6	4.5	15.7	14.4
1980	100.0	29.2	25.5	0.1	3.6	53.5	6.4	22.2	5.2	19.7	17.3
1990	100.0	20.5	16.4	0.1	4.0	63.6	6.4	23.8	6.6	26.9	15.9
2000	100.0	15.5	11.6	0.0	3.9	69.7	6.8	23.3	6.6	33.0	14.7
Rate of Change											
1940–50	26.1%	25.0%	22.0%	7.5%	63.1%	26.5%	23.4%	28.7%	14.0%	31.3%	30.0%
1950–60	21.7	8.1	6.9	-18.6	20.8	34.2	10.4	36.9	29.7	51.1	41.6
1960–70	29.2	8.1	6.4	-8.6	22.7	44.2	21.9	43.6	31.5	62.9	54.7
1970–80	17.4	-9.1	-9.3	-25.0	-7.6	31.2	6.8	26.4	35.7	47.0	41.3
1980–90	18.8	-16.7	-23.6	-4.2	31.7	41.4	19.4	27.0	51.0	62.2	8.9
1990–00	9.9	-16.8	-22.2	-26.1	5.5	20.4	17.4	7.8	11.0	34.6	2.1

Source: New Jersey Department of Labor

- ❑ Large federal income tax reductions in the early 1980s disproportionately benefited high-income New Jersey, injecting significant disposable income into the state.
- ❑ Despite the state's increasing economic independence, strong linkages to New York City remained. These linkages, which were a negative influence in the 1970s due to the City's fiscal morass, turned positive in the 1980s. New York was bolstered by a soaring stock market and the takeover/investment banking game; Wall Street physically spilled over into New Jersey.
- ❑ A freeway-oriented suburban growth corridor dynamic emerged, driven by office construction

and rapid service-job gains. Services dominated national growth in the 1980s, and services are metropolitan-based industries. As a result, New Jersey, the first all-metropolitan state (with every county located in a metropolitan statistical area), benefited enormously. Laced with suburban growth corridors—the new location of preference—the state was swept by construction wave after construction wave. New Jersey became Corporate America country.

- ❑ The emerging economic order is housed mainly in office buildings; offices have become the factory floor of the new economy, where an increasing share of value added is produced. Much of the state's current office inventory came from this era.

- ❑ Formerly a non-player in the regional office market as late as 1980, the 11-county north and central New Jersey office market emerged in 1990 as the fifth largest metropolitan office market in the country. The pulling power of this locomotive—the dynamic defined by the construction and occupancy of this new economic infrastructure, with its residential and retailing offshoots—was unprecedented.
- ❑ Not to be overlooked was the success of the Atlantic City gamble. Since the beginning of the “great experiment” in 1978, the casino industry in Atlantic City evolved into a unique contributor to the state’s economy *and* to the state’s fiscal posture. In essence, the 1970s gamble paid off for the New Jersey economy in the 1980s.
- ❑ As a result of all of the above forces, the state became one of the premier income nodes in America. Housing buying power soared, home prices surged, a “wealth effect” took hold, and the “stored” equity in housing exploded. A locomotive of unfettered personal consumption was the final addition to the economic train.

But these growth locomotives ultimately began to lose steam as the decade matured and the broader economic world shifted. A dramatic sea change took place in the economic contours of the nation and region as the decade came to a close.

- ❑ The “Tale of Two Coastlines”—one of the leading stories of this era—continued. But the best of times was transformed into the worst of times: Bicoastal economic ebullience yielded to bicoastal economic malaise. The Northeast region and New York City were transformed into economic inhibitors.
- ❑ What was belatedly recognized as undisciplined corporate expansion in the 1980s produced severe overstaffing excesses, ultimately introducing a new term to the economic lexicon: *Downsizing*. This was given additional impetus by the economics of

globalization, deregulation, and intensified competition. New Jersey, as the newly emergent Corporate America country, was particularly vulnerable.

- ❑ Moreover, the 1980s ultimately proved to be the decade of excesses. The development frenzy overshot the mark, and what turned out to be a real estate bubble was punctured, ultimately producing a development overhang of unprecedented proportions in New Jersey.
- ❑ In addition, Wall Street and financial activities confronted a major retrenchment, the delayed aftereffect of the 1987 stock market crash. As a result, the state’s office markets were further weakened, with full recuperation many years away. Moreover, speculative housing price gains ultimately evaporated, creating a negative wealth effect. The economic train “New Jersey” was soon stuck on the siding.

Consequently, New Jersey’s great boom was supplanted by the longest and deepest economic retreat since the Great Depression. This continued into, and then dominated, the first years of the 1990s.

The 1990s: Recovery and Acceleration

Ultimately, the full decade of the 1990s was one of very moderate growth when measured from beginning to end. This was the result of a tortoise-like beginning and a jackrabbit-like ending that ultimately yielded the great transmillennial expansion. This decade and its own transformation reflected the continued change in the forces driving the global and American economies:

- ❑ Bicoastal economic malaise originally lingered in the form of bicoastal economic lag. Only by mid-decade did the coastlines narrow the growth-rate gap with the rest of the nation.
- ❑ The great real estate development overhang acted as a drag on the full recovery of the state and

region. It took until 1996 for the excess office inventory to be fully worked down.

- ❑ The dynamics of economic globalization, deregulation, and increased competition continued to impose cost discipline on corporate America even as the recovery matured. Areas with high business costs—such as New Jersey and its surrounding region—were placed at a severe competitive disadvantage.
- ❑ Manufacturing employment, reflecting this stark reality, continued its long-term decline, both in absolute numbers and in its share of total employment.
- ❑ The growth of casino gaming peaked as its monopoly status eroded; new competitors emerged throughout the decade. While certainly not a drag on the economy, the casino industry did not add any new pulling power.
- ❑ Federal personal income tax increases in the early 1990s had disproportionate negative effects on high-income New Jersey, reversing the positive purchasing power gains that resulted from income tax decreases of the early 1980s.
- ❑ The New Jersey economy had to move up-market—to postindustrial, information-based, knowledge-dependent activities—in order to survive. While this adaptation was successful, it resulted in lower overall job-growth rates through mid-decade.
- ❑ Corporate downsizing proceeded at a sustained pace through the first half of the decade. This was facilitated by the increasing evolution and diffusion of information technology, increasing the productivity of the New Jersey economy. Jobless economic growth emerged as the new sound bite!
- ❑ The full impact of information technology and the Internet—which was not anticipated as the decade opened—was felt in the post-1996 years. Surging

high-technology capital investment, particularly in telecommunications, became a powerful new growth engine. Only in retrospect did this reveal itself to be an economic bubble.

- ❑ Paralleling the high-technology spending spree was a record surge in the stock markets—which ultimately turned out to be another bubble—that provided much of the capital. Mergers, acquisitions, and dot.com financing added to the stock market frenzy, boosting regional employment and income. Wall Street made deeper physical inroads into New Jersey’s Hudson River “gold coast,” where new office development proliferated. In terms of trans-Hudson Manhattan and the booming stock market, it was a repeat play of the 1980s.

It was the economic surge at the end of the 1990s that enabled the overall job growth of the decade to achieve respectable levels. During the 1998–2000 period, the state’s job-growth rate eclipsed that of the nation, and labor shortages became a common lament. *Thus, the century ended with strong momentum, and the memories of the decade gravitated to its later years of extraordinary economic vigor.* However, the overall job growth (359,400) of the 1990s badly lagged that of the three previous decades, while the growth rate (9.9 percent) was only one-third that (29.2 percent) of the 1960s, the peak post-World War II growth rate.

The Business Cycle Perspective

The business cycle does not respect decade boundaries. Partitioning economic performance by decade benchmarks can obscure key underlying patterns. Thus, placing New Jersey’s employment shifts in the context of national and state business cycles provides an alternative perspective on economic change. The cyclical profile revealed by

dividing the postwar period into recessionary and expansionary phases of the business cycle yields direct historical “comparables” to evaluate the current economic situation.

Starting with the 1948–1949 slump (the first postwar recession), there have been 10 recessions and 10 expansions in the post-World War II era, with the tenth expansion currently, if haltingly, in progress. Tables 3 and 4 define the month-to-month boundaries for these cycles, along with the employment change for each. The lengths of the recession and expansion periods for the United States are defined by the National Bureau of Economic Research and are determined by a number of comprehensive economic measures.¹ Because there is less-comprehensive data available at the state level, the phases of the business cycle for New Jersey can generally be defined by employment peaks and troughs. However, given the considerable month-to-month variations of the new employment data, this report assumes that the end of the most recent recession in New Jersey was the same as that for the nation.²

Recession Length

The average length of the national postwar recessions has been 10.4 months (table 3). The shortest was only six months (1980), while the longest lasted 16 months, the length of both the 1973–1975 and 1981–1982 downturns. The last national recession—March 2001 to November 2001—was below average in duration, but it was the fourth worst in terms of absolute job loss. *In contrast, New Jersey’s average downturn (12.5 months) was longer than that of the nation.* However, the 38-month-long recession from 1989 to 1992—unique in its severity—skews the statistical average. In the absence of that setback, the average length of the state’s postwar downturns

would drop to 9.7 months, somewhat below that of the nation.

There was little variation between New Jersey and the United States for the first seven postwar recessions; their corresponding lengths were reasonably consistent. However, the next two recessions showed substantial divergence. The length of the state’s eighth downturn (7 months; 1981–1982) was less than half that (16 months) of the nation. New Jersey’s relatively mild setback contrasted sharply with a nation experiencing its worst recession since the Great Depression. The reverse happened during the next (ninth) cyclical downturn. The state’s 38-month-long decline (1989–1992) was *its* worst since the Great Depression, while the eight-month duration of the national recession was below average. Despite earlier fears to the contrary, the tenth recession (2001) reverted to the 1981–1982 pattern, with New Jersey faring much better in the face of national and global economic adversity.

Expansion Length

The average length of the nine economic expansions in the United States (59.1 months) was less than one month shy of five years (table 4). New Jersey’s average length (57.2 months) was only slightly shorter. In all of the expansions, the national–state differential was minor, with the last state upswing (1992–2001) representing the largest variation. This was due to the extraordinary length of New Jersey’s 1989–1992 recession, which delayed the state’s economic recovery into the early 1990s.

The Great Growth Cycles

Three great growth cycles dominated the past sixty years. In each, the employment gains were nearly double the 341,000-job gain of the “average”

¹ The Web site of the National Bureau of Economic Research (nber.org) provides extensive information on the definition of a recession and how beginning and end points are determined.

² As discussed fully later, a new industrial classification system—NAICS—was put in place in 2003. The new state data have much more monthly fluctuation than was the case previously, making it more difficult to pinpoint peaks and troughs. Thus, the end of the last national recession has been assumed to apply for New Jersey. This is a conservative assumption because New Jersey’s employment performance surpassed that of the nation in the past five years.

Table 3
Length of New Jersey Employment Downturns vs. National Recessions
Since World War II
(Numbers in thousands)

NEW JERSEY DOWNTURN			NATIONAL RECESSION		
Month-to-Month Period	Duration	Actual Employment Change	Month-to-Month Period	Duration	Actual Employment Change
July 1948–July 1949	12 months	–91	November 1948–October 1949	11 months	–2,264
August 1953–August 1954	12 months	–49	July 1953–May 1954	10 months	–1,530
March 1957–May 1958	14 months	–88	August 1957–April 1958	8 months	–2,106
May 1960–February 1961	9 months	–25	April 1960–February 1961	10 months	–1,254
April 1970–April 1971	12 months	–26	December 1969–November 1970	11 months	–831
May 1974–May 1975	12 months	–134	November 1973–March 1975	16 months	–1,414
March 1980–July 1980	4 months	–22	January 1980–July 1980	6 months	–1,053
September 1981–April 1982	7 months	–25	July 1981–November 1982	16 months	–2,761
March 1989–May 1992	38 months	–259	July 1990–March 1991	8 months	–1,377
June 2001–November 2001	5 months	–15	March 2001–November 2001	8 months	–1,627
Average:	12.5 months	–73	Average:	10.4 months	–1,622

Table 4
Length of New Jersey Employment Upturns vs. National Expansions
Since World War II
(Numbers in thousands)

NEW JERSEY UPTURN			NATIONAL EXPANSION		
Month-to-Month Period	Duration	Actual Employment Change	Month-to-Month Period	Duration	Actual Employment Change
July 1949–August 1953	49 months	285	October 1949–July 1953	45 months	7,577
August 1954–March 1957	31 months	173	May 1954–August 1957	39 months	4,061
May 1958–May 1960	24 months	129	April 1958–April 1960	24 months	3,827
February 1961–April 1970	110 months	615	February 1961–December 1969	106 months	17,747
April 1971–May 1974	37 months	217	November 1970–November 1973	36 months	7,537
May 1975–March 1980	58 months	398	March 1975–January 1980	58 months	14,310
July 1980–September 1981	14 months	61	July 1980–July 1981	12 months	1,734
April 1982–March 1989	83 months	622	November 1982–July 1990	92 months	21,058
May 1992–June 2001	109 months	567	March 1991–March 2001	120 months	23,985
November 2001–?			November 2001–?		
Average:	57.2 months	341	Average:	59.1 months	11,315

Note: Periods are from end of month to end of month.
New Jersey periods are determined from seasonally adjusted employment data. National periods are based on economic output data.

Source: *New Jersey:* New Jersey Department of Labor and U.S. Bureau of Labor Statistics, New York Office
United States: National Bureau of Economic Research and U.S. Bureau of Labor Statistics

expansion (table 4). *The 1961–1970 employment surge (615,000 jobs) in New Jersey took place during the longest expansion in the state’s history (110 months), a record length that still stands.* The corresponding 106-month-long national expansion (1961–1969) also set a record that would last until the 1991–2001 expansion. Both the national and state upswings reflected record absolute employment gains at that time.

The employment gains (622,000 jobs) of the second great growth cycle (1982–1989) in New Jersey set a new record in the state, one which remains to the present.

This was accomplished despite lasting only 83 months and in the face of a continuing loss of manufacturing employment. Similarly, the national expansion (1982–1990) was considerably shorter (92 months) than the 1960s growth cycle (106 months), but total employment growth in the nation still set a new record.

The great transmillennial period encompassed the third major growth cycle and set new records in both New Jersey and the United States. *The 109-month-long upswing in New Jersey (1992–2001), only one-month shy of the 1960s record, was the longest peacetime expansion in the state’s history.* Still, the employment gains of this cycle (567,000 jobs) ranked last among the three great growth cycles. In contrast, the 1991–2001 national expansion set new records both in length (120 months, or a full ten years) and in absolute employment growth (23.9 million jobs). In both cases, the length of these expansions was approximately double the long-term averages for the state and nation.

The Big Busts

The “mother” of all recessions in New Jersey was the 1989–1992 downturn: 259,000 jobs were lost over 38 months, or 6,800 per month (table 3). This loss represented 41.6 percent of the employment gains (622,000 jobs) of the preceding expansion (1982–1989). *It would take fully five years into the 1992–2001 expansion before the state emerged from this deep economic “trough”—i.e., it took until 1997 before all of this job loss was recovered.* The magnitude of this bust is revealed by the fact that the second largest

postwar setback (1974–1975) was barely half as large (–134,000 jobs), while the “average” downturn had an employment loss of 73,000 jobs. These figures also put into perspective the small scale of the 2001 recession in New Jersey, when only 15,000 jobs were lost.

The Long-Term Transformation

The reinvention of the state’s economy during the second half of the twentieth century was total and complete. A goods-producing society was transformed into a service-providing society, with the trends accelerating as the century came to a close.

The Decade of Services

The decade of services is the most accurate and succinct descriptor of the 1980s, the high point of a five-decade-long reshaping of the state’s economy. In the 1940s, 135,000 service-producing jobs were added to New Jersey’s employment base, followed by 220,500 more in the 1950s (table 1). The next 20 years saw another ratcheting up of service-sector growth, to about 385,000 jobs per decade. But even the strong service advances of the 1960s and 1970s pale in significance to the explosion of the 1980s. *The massive 677,100 service-jobs gain of the 1980s represented an average increase of almost 68,000 service jobs per year for ten years, accompanying the great suburban office-building boom described earlier.* Subsequently, while the growth increment (472,400 jobs) of the 1990s failed to replicate that of the 1980s, the strong service advance accelerated as the century came to a close.

In 2000, service-producing employment (2.8 million jobs) in New Jersey accounted for 69.7 percent of the state’s total employment of 4.0 million jobs (tables 1 and 2). In 1940, the service-producing sector (509,200 jobs) accounted for only 38.7 percent of total employment (1.3 million). Service-producing employment in 2000 was more

than double the size of the entire New Jersey economy of 1940.

The Manufacturing Roller Coaster

In contrast, manufacturing employment in 2000 (464,000 jobs), after a 60-year roller coaster ride, has retreated to about 75 percent of its 1940 size (619,800 jobs). While modest growth was evident in the 1940-to-1970 period, manufacturing employment sagged badly in the post-1970 decades.

There are a number of benchmarks that mark this aspect of the state's transformation.³ At the start of World War II, the business of New Jersey was strictly "making things." In 1943, the peak year of war-related industrial production, New Jersey was Blue-Collar America; *961,000 manufacturing jobs accounted for fully 55 percent of total state employment, compared to only 41 percent nationwide.* Thus, the state's "lunch-bucket" image was firmly anchored in statistical reality. While this manufacturing "edge" relative to the nation would steadily weaken, it would be maintained for the next 45 years.

In the immediate postwar years, manufacturing employment in New Jersey declined steadily. In absolute terms, manufacturing employment fell to 721,800 jobs by 1949. *In relative terms, its share of total employment dropped to 45 percent; nonetheless, it was still far higher than the national manufacturing share, which fell to 33 percent.* But there would be two subsequent rebounds in manufacturing over the next 30 years, both linked—as was the 1943 peak—to wartime production needs.

Korean War-related industrial production in the state resulted in a manufacturing employment recovery, leading to the first post-World War II peak in 1953 (856,200 jobs). But this was short-lived. By 1958, manufacturing employment had fallen back to 775,400 jobs. *Vietnam War production needs then spurred a final manufacturing peak, with employment rising to 892,500 jobs in 1969, the highest absolute level since World War II. However, manufacturing's share*

of total state employment had declined to less than 35 percent (compared to 29 percent nationwide). A sustained 33-year-long pattern of absolute and relative decline was about to commence. Even the two great boom periods to come would fail to staunch the unrelenting hemorrhage of manufacturing jobs.

By 1988, manufacturing employment declined to 662,100 jobs, the lowest level since before World War II. *But what really makes 1988 a watershed year is the fact that manufacturing's share (18.1 percent) of total state employment fell below that (18.3 percent) of the nation as a whole.* For the first time since the advent of the modern industrial era, New Jersey's economy was underrepresented in manufacturing relative to the nation. The state's blue-collar image was not supported by economic reality, although historical perceptions would change ever slowly.

Moreover, the retreat continued. Just two years later, in 1990, manufacturing employment in the state slipped below the 600,000-job level; it then took only five additional years (to 1995) to fall below the 500,000-job level. *By 2000, only 464,000 manufacturing jobs remained in the state, accounting for just 11.6 percent of the state's total employment versus a 14.0 percent share nationwide.*

Several other key statistics emphasize the long-term transformation. In 1940, New Jersey accounted for 4.1 percent of the nation's total employment but fully 5.6 percent of the nation's total manufacturing employment; thus, the state was significantly overrepresented in manufacturing. By 2000, New Jersey's share of the nation's total employment had dropped to 3.0 percent; at the same time, its manufacturing share had plummeted to 2.5 percent. New Jersey is now a state that is significantly underrepresented in manufacturing. This is one of the reasons why the last recession—when unprecedented manufacturing job losses occurred across the nation—was relatively mild in New Jersey.

³ Due to space constraints, we have not provided the tables associated with these annual benchmarks in this report.

The Emergence of the New Economy

The new “information-age economy” became a media buzzword as the decade of the 1990s advanced. However, an insightful statistical profile was difficult to obtain because employment was recorded by an industrial classification system pegged to the old manufacturing economy.

A New Measurement System

The key to understanding economic phenomena and to formulating effective policy to achieve both private and public goals begins with accurate

measurement. Any analysis of the economy is only as good as the data that purport to measure the economic activity under examination. For more than sixty years, the Bureau of Economic Analysis (BEA) and its predecessors measured America’s industries—their output, employment, income, and other indicators of performance—using a taxonomy of business sectors known as the Standard Industrial Classification (SIC) system. From the inception of the SIC system in the 1930s and through the 1960s, manufacturing remained a dominant force in the American economy, as detailed earlier. The SIC system provided careful and appropriate measurements for the level and rates of change in the industrial components of a manufacturing-dominated

Table 5
Groupings of NAICS 20 Industry Sectors

NAICS Sector Groupings		NAICS Individual Industry Sectors
Natural resources and mining	11 21	Agriculture, forestry, fishing, and hunting Mining
Construction	23	Construction
Durable goods manufacturing	31–33	Manufacturing
Nondurable goods manufacturing	31–33	Manufacturing
Trade	42 44–45	Wholesale trade Retail trade
Transportation and utilities	22 48–49	Utilities Transportation and warehousing
Information	51	Information
Financial activities	52 53	Finance and insurance Real estate and rental and leasing
Professional and business services	54 55 56	Professional and technical services Management of companies and enterprises Administrative and waste services
Educational and health services	61 62	Educational services Health care and social assistance
Leisure and hospitality	71 72	Arts, entertainment, and recreation Accommodation and food services
Other services	81	Other services
Government	–	Not applicable

Source: G. Andrew Bernat, Jr., Robert L. Brown, and John R. Kort, “State Personal Income: First Quarter 2003 and Revised 2002,” *Survey of Current Business*, August 2003.

economy. However, as noted in the previous section's discussion, the nation's economy fundamentally changed over the ensuing decades to a service-oriented, information/knowledge-based, computer technology-driven economy. As a result, the SIC system became increasingly disconnected from the reality of the underlying, and drastically changed, economy that it measured.

Entirely new industries developed and grew, both in manufacturing and in services (e.g., computer production and Internet service providers, respectively). Significant activities within the manufacturing sector actually consisted of service and knowledge-discovery processes (e.g., management and research). New service industries emerged based on major advances in information technology. As a result of these profound shifts in the American economy, there was an acknowledged need to revise the system of business classifications to embody these structural changes and to document more fully the detail of the service industries.

After extensive analysis, the BEA implemented a new taxonomy of business classifications called the North American Industry Classification System (NAICS). It is based on the principle that "economic units that use similar production processes are classified in the same industry."⁴ The result was a new system of classification based on 20 sectors compared with the 11 divisions of the SIC system. Table 5 lists the 13 new NAICS sector groupings and the 20 individual industry sectors within these groupings. A key highlight of the changes was an emphasis on the service components of the economy with the elevation of several areas to the status of sector, including the creation of a new service sector of "information." Other new service groupings are "education and health," "leisure and hospitality," and "financial activities." The changes also moved employment in certain manufacturing activities into another new service sector, "management of companies and enterprises," and more closely aligned

the United States business classification system with international practice, particularly with respect to Canada and Mexico, the nation's major trading partners.

The following section examines the employment changes that have occurred in the New Jersey economy between 1990 and 2002 using the NAICS classifications. This analysis provides a comprehensive retrospective of New Jersey's economic transformation using data designed to measure an economy increasingly based on knowledge and service.

Overview

Table 6 provides employment data for 1990 and 2002 by NAICS industry sector. Data for the industry sector groupings from table 6 are listed in table 7 from highest to lowest in terms of the absolute change in employment. Total employment by sector in 2002 and the sector's growth rate are also provided. Over the period, total employment grew by 358,700 jobs (9.9 percent). This number is the net result of dramatically changing underlying economic conditions in New Jersey and the nation over the twelve years. The period encompassed most of the deep 1989–1992 state recession, the weak national recovery years of 1992 to 1995, the "go-go, dot.com, everyone's-a-financial-genius" Wall Street frenzy of 1996 to 2000, and the recent recession and current "job-loss" national recovery of 2001 and 2002.

The NAICS data convincingly document the growing dominance of the service sector in the ongoing transformation of the New Jersey economy. The largest employment increase between 1990 and 2002 occurred in educational and health services (166,300 jobs, or 45.9 percent). By 2002, this sector accounted for 13.2 percent of the state's total employment base. Professional and business services ranked second, adding 146,400 jobs (33.4 percent); its share of total state employment stood at 14.6 percent in 2002. *Thus, these two sectors alone—*

⁴ See John R. Kort, "The North American Industrial Classification System in BEA's Economic Accounts," *Survey of Current Business*, May 2001.

Table 6
New Jersey Nonfarm Payroll Employment
Annual Averages, 1990 and 2002
(Numbers in thousands)

	1990	2002	Change: 1990–2002	
			Number	Percent
Total Nonfarm	3,635.1	3,993.8	358.7	9.9%
Total Private Sector	3,058.4	3,379.1	320.7	10.5
Goods-Producing	680.3	532.6	-147.7	-21.7
Natural Resources and Mining	3.0	1.5	-1.5	-48.9
Construction	147.7	162.3	14.6	9.9
Manufacturing	529.5	368.8	-160.7	-30.3
Durable Goods	244.7	163.1	-81.6	-33.3
Non-Durable Goods	284.9	205.7	-79.2	-27.8
Private Service-Providing	2,378.1	2,846.5	468.4	19.7
Trade, Transportation, & Utilities	833.3	883.3	50.0	6.0
Wholesale Trade	228.8	237.6	8.8	3.8
Retail Trade	438.5	466.8	28.3	6.5
Transportation, Warehousing, and Utilities	166.0	178.9	12.9	7.8
Utilities	19.2	15.9	-3.3	-17.1
Transportation and Warehousing	146.9	163.0	16.1	11.0
Information	120.5	115.6	-4.9	-4.1
Financial Activities	234.3	276.6	42.3	18.1
Finance and Insurance	184.7	221.6	36.9	20.0
Real Estate and Rental and Leasing	49.6	55.0	5.4	10.8
Professional and Business Services	438.2	584.6	146.4	33.4
Professional, Scientific, & Technical Services	213.3	266.6	53.3	25.0
Management of Companies and Enterprises	53.6	62.2	8.6	16.0
Adm/Support, Waste Mgt/ Remediation Services	171.4	255.8	84.4	49.3
Educational and Health Services	362.1	528.4	166.3	45.9
Educational Services	58.3	81.9	23.6	40.5
Health Care and Social Assistance	303.8	446.5	142.7	47.0
Leisure and Hospitality	269.9	309.3	39.4	14.6
Arts, Entertainment, and Recreation	36.7	45.6	8.9	24.2
Accommodation and Food Services	233.2	263.8	30.6	13.1
Other Services	119.8	148.6	28.8	24.1
Government	576.7	614.7	38.0	6.6

Source: New Jersey Department of Labor

Table 7
New Jersey Nonfarm Payroll Employment Sector Changes: 1990–2002
(Numbers in thousands)

	Absolute Change 1990–2002	Total Employment 2002	Growth Rate
Total	358.7	3,993.8	9.9%
Educational and Health Services	166.3	528.4	45.9
Professional and Business Services	146.4	584.6	33.4
Trade, Transportation, & Utilities	50.0	883.3	6.0
Financial Activities	42.3	276.6	18.1
Leisure and Hospitality	39.4	309.3	14.6
Government	38.0	614.7	6.6
Other Services	28.8	148.6	24.1
Construction	14.6	162.3	9.9
Natural Resources and Mining	–1.5	1.5	–48.9
Information	–4.9	115.6	–4.1
Manufacturing	–160.7	368.8	–30.3
Goods-Producing	–147.7	532.6	–21.7
Private Service-Providing	468.4	2,846.5	19.7
Government	38.0	614.7	6.6

Source: New Jersey Department of Labor

educational and health services and professional and business services—now contain more than one-quarter of all the jobs in New Jersey. Employment gains in financial activities (42,300 jobs), leisure and hospitality (39,400 jobs), government (38,000 jobs), and wholesale and retail trade (37,100 jobs) all contributed significantly to overall economic growth. In contrast, the long-term decline in manufacturing employment continued in both good times and bad. New Jersey lost manufacturing jobs in every year of the 1990–2002 period, with a total decline of 160,700 jobs. By 2002, manufacturing represented only 9.2 percent of the state's total employment.

Trade, transportation, and utilities continues to be a large component of the state's economy, reflecting the important regional distribution role of New Jersey and the high-income, high-population density of consumers in the state. This sector added 50,000 jobs during the period (6.0 percent). With a total of 883,300 jobs in 2002, it now has the largest share (22.1 percent) of state employment. The government sector also grew

significantly, adding 38,000 jobs (6.6 percent). Construction employment, buoyed by a strong residential market in the last half of the period, together with robust commercial construction during the boom years of 1996 to 2000, added 14,600 jobs.

Overall, the private service-providing sectors were responsible for almost all the employment growth in the state over the 12-year period. These sectors added 468,400 jobs in total, with only one service sector, information, exhibiting employment declines (–4,900 jobs). This loss was largely attributable to the fundamental changes that occurred in the telecommunications industry, where deregulation, new entrants, and new technologies caused market share losses for AT&T and its affiliates. Manufacturing lost 160,700 jobs, and employment fell by 1,500 jobs in natural resources and mining. Construction gained 14,600 jobs, yielding a net loss of 147,000 for the goods-producing sector.

Finally, table 8 provides a comparison of the share of employment by major sector grouping for New

Table 8
Sector Employment 2002, Percent Distribution and NJ Share of US

	<u>Employment Distribution</u>		NJ Share of US
	NJ	US	
Total	100.0%	100.0%	3.1%
Educational and Health Services	13.2	12.4	3.3
Professional and Business Services	14.6	12.3	3.7
Trade, Transportation, & Utilities	22.1	19.6	3.5
Financial Activities	6.9	6.0	3.5
Leisure and Hospitality	7.7	9.2	2.6
Government	15.4	16.5	2.9
Other Services	3.7	4.1	2.8
Construction	4.1	5.2	2.4
Natural Resources and Mining	0.0	0.4	0.3
Information	2.9	2.6	3.4
Manufacturing	9.2	11.7	2.4

Source: New Jersey Department of Labor

Jersey and the nation. *New Jersey has greater shares of its economy in educational and health services; professional and business services; trade, transportation, and utilities; financial activities; and information services, compared with the United States.* Underrepresented sectors in the state include leisure and hospitality, government services (due to lower relative federal employment in New Jersey), “other” services, and manufacturing. *This is consistent with the state’s high-ranking national office market (fifth largest) and commercial/industrial/distribution market (third largest).*

Individual Sector Changes

A series of ten tables provides a comprehensive analysis of the changes for individual industries using the new NAICS classifications within each of the broad sector groupings discussed above. The order of the tables follows the same pattern as table 7, i.e., from highest to lowest sector group according to the change in employment for the period.⁵

Education and Health Services (Table 9)

Educational services account for only a relatively small part (81,900 jobs) of the 528,400 jobs in this sector in 2002, but it is important to note that this category measures only private education. Public education employment is included in the government services sector. Over the period, private education services gained 23,600 jobs (40.5 percent) as a rising school-aged population and strong personal income gains during the mid-1990s spurred the demand for private education.

The enormous increase in the demand for health care and social assistance services is readily apparent from the 47 percent employment gain between 1990 and 2002 (446,500 jobs). Large increases occurred in hospitals, ambulatory health care, nursing and residential care, and social assistance. The aging of the state’s population, significant gains in income, a modestly but still growing population, improved access to health care, and continual

⁵ The new NAICS taxonomy defines a very large number of industries within each major sector-grouping category. For space reasons, not all the component industries are listed for each major grouping. Accordingly, for some sector groupings, the sum of the employment of the individual industries does not equal the total for subgroups within each table.

Table 9
New Jersey Educational and Health Services Employment
Annual Averages, 1990 and 2002
(Numbers in thousands)

	1990	2002	Change: 1990–2002	
			Number	Percent
Educational and Health Services	362.1	528.4	166.3	45.9%
Educational Services	58.3	81.9	23.6	40.5
Elementary and Secondary Schools	21.8	34.0	12.2	56.1
Colleges, Universities, and Professional Schools	21.4	25.4	4.0	18.8
Health Care and Social Assistance	303.8	446.5	142.7	47.0
Ambulatory Health Care Services	94.6	151.7	57.1	60.4
Offices of Physicians	39.5	61.5	22.0	55.6
Offices of Dentists	18.7	25.7	7.0	37.3
Outpatient Care Centers	4.5	11.7	7.2	160.2
Home Health Care Services	11.4	22.0	10.6	92.8
Hospitals	128.6	153.5	24.9	19.4
General Medical and Surgical Hospitals	124.3	146.2	21.9	17.6
Nursing and Residential Care Facilities	48.0	74.2	26.2	54.5
Nursing Care Facilities	32.9	44.0	11.1	33.8
Residential Mental Retardation, Mental Health & Substance Abuse Facilities	7.0	11.2	4.2	59.5
Social Assistance	32.5	67.0	34.5	106.2
Child Day Care Services	14.2	33.3	19.1	134.5

Source: New Jersey Department of Labor

health-care innovations all contributed to this large increase.

Professional and Business Services (Table 10)

Total employment in this sector—which incorporates many of the new high-paying knowledge-based jobs—increased by 146,400 jobs to a total of more than one-half million (584,600 jobs) in 2002. *The sector's rate of growth (33.4 percent) over the 12-year period was more than triple the growth rate (9.9 percent) of overall employment (table 6), belying the notion that the service economy produces only "hamburger-flipping" jobs.* Employment grew in nearly every category, with particularly significant increases in administrative and support services (85,100 jobs), computer systems design (25,400 jobs), and architectural and engineering services (10,200 jobs). Employment in the management of companies and enterprises—a new sector that also includes management employees formerly classified in

manufacturing—increased by 8,600 jobs (16.0 percent).

Trade, Transportation, and Utilities (Table 11)

This sector, although slow-growing, still has the largest share of employment in New Jersey. Together, wholesale and retail trade gained 37,100 jobs over the period, with most of that increase (28,300 jobs) occurring in retail trade. Significant gains were evident in food and beverage employment (13,200 jobs), health and personal care (9,900 jobs), and building materials and garden equipment (7,200 jobs). Employment decreases occurred in general merchandise stores (–7,700 jobs) and in clothing and accessories stores (–7,500 jobs). Transportation, warehousing, and utilities grew by 7.8 percent. However, as a consequence of deregulation, employment in utilities fell by 17.1 percent. In contrast, transportation and warehousing grew by 11 percent.

Table 10
New Jersey Professional and Business Services Employment
Annual Averages, 1990 and 2002
(Numbers in thousands)

	1990	2002	Change: 1990–2002	
			Number	Percent
Professional and Business Services	438.2	584.6	146.4	33.4%
Professional, Scientific, & Technical Services	213.3	266.6	53.3	25.0
Legal Services	36.3	39.5	3.2	8.8
Accounting/Tax Prep/Bookkeeping/Payroll Services	31.5	35.5	4.0	12.6
Architectural, Engineering & Related Services	33.7	43.9	10.2	30.3
Computer Systems Design & Related Services	26.4	51.8	25.4	96.4
Management, Sci & Tech Consulting Services	16.4	28.3	11.9	72.5
Scientific Research & Development Services	32.8	30.8	-2.0	-6.0
Advertising and Related Services	15.4	16.3	0.9	5.7
Management of Companies and Enterprises	53.6	62.2	8.6	16.0
Adm/Support, Waste Mgt/Remediation Services	171.4	255.8	84.4	49.3
Administrative and Support Services	159.9	245.0	85.1	53.2
Employment Services	46.7	105.2	58.5	125.2
Business Support Services	16.4	22.1	5.7	34.7
Investigation and Security Services	21.5	25.0	3.5	16.1
Services to Buildings and Dwellings	46.9	58.3	11.4	24.2
Waste Management & Remediation Services	11.4	10.8	-0.6	-5.0

Source: New Jersey Department of Labor

Financial Activities (Table 12)

Strong overall growth (42,300 jobs, or 18.1 percent) in financial activities represents another significant advance in high-quality, high-wage, knowledge-based employment in New Jersey. However, this aggregate performance masks the substantial variations within the sector. Depository credit intermediation (traditional banking) suffered a sizeable contraction (-16,400 jobs, or -26 percent), as deregulation in the banking field resulted in numerous bank mergers and new competition from other financial institutions. In contrast, significant employment gains (37,300 jobs) occurred in securities, commodities contracts, and other related financial investment businesses. This sector's rate of increase (189.5 percent) was nearly 20 times the growth rate (9.9 percent) of overall employment (table 6) and was attributable to the stock market boom, the entry of securities firms into traditional banking activities, and the shift of some Wall Street activities to New Jersey from New York.

Leisure and Hospitality (Table 13)

The leisure and hospitality category is dominated by accommodation and food services, which accounts for 85 percent of the sector's total employment. Within that category, strong employment growth occurred in food services (37,900 jobs, or 24.5 percent), while accommodation employment (which includes casino hotels) fell by 7,400 jobs (-9.4 percent). Employment in arts, entertainment, and recreation, although small in absolute size, grew by 24.2 percent (8,900 jobs), a function of New Jersey's high-income profile and resulting strong demand for leisure pursuits, complemented by the wealth of natural amenities and commercial attractions that the state has as a locus for tourism and vacation. The casino industry, already substantial and well developed at the start of the period, remained a significant source of employment, although it lost its 1980s role as a growth locomotive.

Table 11
New Jersey Trade, Transportation, and Utilities Employment Annual Averages,
1990 and 2002
(Numbers in thousands)

	1990	2002	Change: 1990-2002	
			Number	Percent
Trade, Transportation, & Utilities	833.3	883.3	50.0	6.0%
Wholesale Trade	228.8	237.6	8.8	3.8
Merchant Wholesalers, Durable Goods	110.9	116.6	5.7	5.1
Merchant Wholesalers, Nondurable Goods	68.2	87.8	19.6	28.8
Retail Trade	438.5	466.8	28.3	6.5
Motor Vehicle and Parts Dealers	41.6	46.9	5.3	12.7
Building Mat. & Garden Equip. & Supp. Dirs.	26.3	33.5	7.2	27.5
Food and Beverage Stores	87.0	100.2	13.2	15.1
Health and Personal Care Stores	28.3	38.2	9.9	34.9
Gasoline Stations	18.6	14.2	-4.4	-23.7
Clothing and Clothing Accessories Stores	63.8	56.3	-7.5	-11.7
Sporting Goods, Hobby, Book, & Music Stores	18.1	25.5	7.4	41.1
General Merchandise Stores	83.1	75.4	-7.7	-9.2
Nonstore Retailers	14.6	12.2	-2.5	-16.8
Transportation, Warehousing, and Utilities	166.0	178.9	12.9	7.8
Utilities	19.2	15.9	-3.3	-17.1
Transportation and Warehousing	146.9	163.0	16.1	11.0
Transportation	117.7	136.0	18.3	15.5
Warehousing and Storage	28.3	26.2	-2.1	-7.4

Table 12
New Jersey Financial Activities Employment
Annual Averages, 1990 and 2002
(Numbers in thousands)

	1990	2002	Change: 1990-2002	
			Number	Percent
Financial Activities	234.3	276.6	42.3	18.1%
Finance and Insurance	184.7	221.6	36.9	20.0
Credit Intermediation & Related Activities	79.3	75.2	-4.1	-5.2
Depository Credit Intermediation	63.2	46.8	-16.4	-26.0
Securities, Commodity Contracts & Other Financial				
Invests. & Related Activities	19.7	57.0	37.3	189.5
Scrt'y & Comdty Contracts Intermed & Brkrage	14.0	44.7	30.7	219.0
Insurance Carriers and Related Activities	81.2	86.8	5.6	6.9
Insurance Carriers	57.0	59.0	2.0	3.5
Agencies, Brkrages, & Other Ins. Rel. Activities	24.2	27.8	3.6	14.9
Real Estate and Rental and Leasing	49.6	55.0	5.4	10.8
Real Estate	31.6	36.4	4.8	15.2
Rental and Leasing Services	17.1	16.6	-0.5	-2.7

Source: New Jersey Department of Labor

Table 13
New Jersey Leisure and Hospitality Employment
Annual Averages, 1990 and 2002

(Numbers in thousands)

	1990	2002	Change: 1990–2002	
			Number	Percent
Leisure and Hospitality	269.9	309.3	39.4	14.6%
Arts, Entertainment, and Recreation	36.7	45.6	8.9	24.2
Amusement, Gambling & Recreation Industries	23.0	36.4	13.4	58.3
Other Amusement and Recreation Industries	19.3	32.5	13.2	68.4
Accommodation and Food Services	233.2	263.8	30.6	13.1
Accommodation	78.2	70.8	-7.4	-9.4
Traveler Accommodation	76.7	69.1	-7.6	-10.0
Casino Hotels	46.7	43.6	-3.1	-6.6
Food Services and Drinking Places	155.0	192.9	37.9	24.5
Full-Service Restaurants	68.7	91.0	22.3	32.4
Limited-Service Eating Places	55.2	63.9	8.7	15.8
Special Food Services	18.4	26.4	8.0	43.7
Drinking Places (Alcoholic Beverages)	12.8	11.6	-1.2	-9.2

Table 14
New Jersey Government Employment Annual Averages, 1990 and 2002

(Numbers in thousands)

	1990	2002	Change: 1990–2002	
			Number	Percent
Government	576.7	614.7	38.0	6.6%
Federal Government	80.9	63.9	-17.0	-21.0
Department of Defense	26.7	14.0	-12.7	-47.6
U.S. Postal Service	34.7	33.0	-1.7	-4.8
Other Federal Government	n/a	16.9		
State Government	130.9	140.7	9.8	7.5
State Government Education	34.8	42.7	7.9	22.6
State Government Hospitals	9.6	10.5	0.9	9.3
Other State Government	n/a	87.5		
Local Government	365.0	410.1	45.1	12.4
Local Government Education	197.8	243.2	45.4	23.0
Other Local Government	n/a	166.9		

Note: n/a = not available

Source: New Jersey Department of Labor

Table 15
New Jersey Trade Construction Employment
Annual Averages, 1990 and 2002
(Numbers in thousands)

	1990	2002	Change: 1990–2002	
			Number	Percent
Construction	147.7	162.3	14.6	9.9%
Construction of Buildings	35.1	36.6	1.5	4.2
Heavy and Civil Engineering	20.2	19.1	-1.1	-5.4
Specialty Trade Contractors	92.5	106.6	14.1	15.2
Building Equipment Contractors	43.2	52.9	9.7	22.5

Table 16
New Jersey Transportation, Warehousing, and Utilities Employment
Annual Averages, 1990 and 2002
(Numbers in thousands)

	1990	2002	Change: 1990–2002	
			Number	Percent
Transportation, Warehousing, and Utilities	166.0	178.9	12.9	7.8%
Utilities	19.2	15.9	-3.3	-17.1
Elec. Pwr. Gen., Transmission & Distribution	13.8	9.5	-4.3	-30.9
Natural Gas Distribution	3.7	4.4	0.7	17.8
Transportation and Warehousing	146.9	163.0	16.1	11.0
Air Transportation	10.2	16.3	6.1	59.7
Rail Transportation	2.9	2.8	-0.1	-3.4
Water Transportation	5.7	2.1	-3.6	-63.7
Truck Transportation	41.4	41.1	-0.3	-0.7
General Freight Trucking	30.5	30.7	0.2	0.8
Transit and Ground Passenger Transportation	23.7	30.2	6.5	27.5
Support Activities for Transportation	16.1	21.1	5.0	30.8
Couriers and Messengers	17.7	22.5	4.8	26.8
Warehousing and Storage	28.3	26.2	-2.1	-7.4

Source: New Jersey Department of Labor

Table 17
New Jersey Information Employment
Annual Averages, 1990 and 2002
(Numbers in thousands)

Information	1990	2002	Change: 1990–2002	
			Number	Percent
	120.5	115.6	-4.9	-4.1%
Publishing Industries (except Internet)	34.9	31.8	-3.1	-9.0
Newspaper, Period., Book, & Directory Publishers	32.4	27.6	-4.8	-14.8
Telecommunications	57.8	49.0	-8.8	-15.2
Wired Telecommunications Carriers	52.0	34.9	-17.1	-32.9
Internet Serv. Prvdrs., Web Srch. Portals & D.P.S.	15.6	18.0	2.4	15.7
Data Processing, Hosting, & Related Services	13.5	14.0	0.5	3.6

Source: New Jersey Department of Labor

Government (Table 14)

Government employment, in both absolute scale and growth, was dominated by local government education, reflecting the impact of a maturing baby-boom echo—the children of the fabled baby-boom generation—that have flooded the state’s school systems. Between 1990 and 2002, local government education grew by 45,400 jobs (23.0 percent) to 243,200 jobs. State government added 9,800 jobs, with almost all of that increase also due to education (7,900 jobs). Federal employment in New Jersey contracted significantly (-17,000 jobs, or -21 percent), with 12,700 of those losses accounted for by defense-related employment.

Construction (Table 15)

Construction employment grew by 14,600 jobs (9.9 percent), reflecting both strong commercial and booming residential markets. *Total employment in construction is close to record highs, and the last recession had virtually no effect on the job totals of this sector.*

Transportation, Warehousing, and Utilities (Table 16)

This complex category added a total of 12,900 jobs between 1990 and 2002. Within this sector, the largest increase was in transportation and warehousing (16,100 jobs), reflecting the extraordinarily important role of New Jersey in logistics and goods distribution. In contrast, the

aftereffects of electrical deregulation are revealed by the 30.9 percent decline in employment in electric power generation, transmission, and distribution.

Information Services (Table 17)

The information services sector, by its very title, would appear to be central to the new information-age economy—but this was the only service sector to lose jobs (-4,900) between 1990 and 2002. However, this was a result of the decline (-17,100 jobs, or 32.9 percent) that occurred in what can be called “old telecommunications” (i.e., wired telecommunications carriers). This “landlines” decline was due to the effects of deregulation and intensified competition from new market entrants—cellular technology and the Internet.

Manufacturing (Table 18)

Manufacturing losses are an omnipresent part of the New Jersey economic scene, and the new NAICS classifications reveal that manufacturing job losses have been even more substantial than previous analyses have shown. Between 1990 and 2002, total manufacturing employment in New Jersey declined by nearly one-third (-30.3 percent), representing a loss of 160,700 jobs in this 12-year period. This compares to a national decline of 13.3 percent. The sector’s share of total employment in the state fell from 14.6 percent to 9.2 percent in just twelve years. Thus, severe absolute and relative decline has been

the fate of this once-storied economic sector in New Jersey. Moreover, these declines occurred throughout the longest national economic expansion in history (120 months) and the second longest expansion in the state's history (109 months). *Every single manufacturing sector in New Jersey showed double-digit rates of decline, with the exception of pharmaceuticals and medicine (-4.8 percent).* While the growth in headquarters jobs in pharmaceuticals previously obscured the employment losses accruing in the actual production area, this is no longer the case.

The production losses have been extraordinarily severe in a number of other sectors. Communications

equipment (-71.8 percent), apparel manufacturing (-60.4 percent), electrical equipment, appliance and components (-48.5 percent), machinery (-46.7 percent) computer and electronics products (-43.6 percent), and basic chemical manufacturing (-42.2 percent) all experienced traumatic employment contractions. While the gleaming headquarters and research operations linked to manufacturing operations—particularly in pharmaceuticals—may actually be expanding or at least holding their own, the number of jobs in the actual production of goods has been in virtual freefall. *The downside of the fundamental transformation of the state's economy could*

Table 18
New Jersey Manufacturing Employment
Annual Averages, 1990 and 2002
(Numbers in thousands)

	1990	2002	Change: 1990–2002	
			Number	Percent
Manufacturing	529.5	368.8	-160.7	-30.3%
Durable Goods	244.7	163.1	-81.6	-33.3
Nonmetallic Mineral Product	20.2	15.0	-5.2	-25.9
Fabricated Metal Product	40.5	30.2	-10.3	-25.5
Machinery Manufacturing	37.5	20.0	-17.5	-46.7
Computer and Electronic Products	61.1	34.5	-26.6	-43.6
Communications Equipment	13.9	3.9	-10.0	-71.8
Navig., Meas., Electromedical & Control Inst.	26.1	16.7	-9.4	-36.1
Electrical Equip., Appliance & Components	16.3	8.4	-7.9	-48.5
Transportation Equip. Mfg.	13.1	9.7	-3.4	-26.0
Miscellaneous Mfg.	27.9	23.5	-4.4	-15.7
Non-Durable Goods	284.9	205.7	-79.2	-27.8
Food Manufacturing	39.2	32.1	-7.1	-18.2
Apparel Manufacturing	24.2	9.6	-14.6	-60.4
Paper Manufacturing	27.5	17.8	-9.7	-35.2
Converted Paper Product	25.0	15.9	-9.1	-36.4
Printing and Related Support	33.4	26.9	-6.5	-19.5
Chemical Manufacturing	98.7	76.4	-22.4	-22.6
Basic Chemical Mfg.	19.1	11.0	-8.1	-42.2
Pharmaceutical and Medicine	41.9	39.9	-2.0	-4.8
Soap, Cleaning Comp., & Toilet Prep.	20.6	13.9	-6.7	-32.3
Plastics and Rubber Products	28.5	23.7	-4.8	-16.8
Plastics Product Mfg.	26.1	21.7	-4.4	-16.9

Source: New Jersey Department of Labor

Table 19
Total Employment: New Jersey and New York City
1950–2002
(Numbers in thousands)

Year	New Jersey	New York City	Ratio: NJ/NYC
1950	1,657.1	3,468.2	0.48
1960	2,017.1	3,538.4	0.57
1969	2,569.6	3,797.7	0.68
1970	2,606.2	3,745.5	0.70
1980	3,060.4	3,301.7	0.93
1988	3,651.0	3,605.8	1.01
1990	3,635.1	3,566.2	1.02
1992	3,457.9	3,281.7	1.05
2000	3,994.5	3,723.1	1.07
2002	3,993.8	3,574.5	1.12

Source: U.S. Department of Labor, Bureau of Labor Statistics

not be more dramatically revealed. Huge gains in productivity, excess capacity worldwide, cost disadvantages in New Jersey, and continued pressure to reduce labor costs in order to remain competitive all combined to drive manufacturing employment relentlessly lower.

Regional Reshaping

The changing structure of the state's economy is linked to a fundamental reconfiguration of the economic geography of the broader region. In the past half-century, as a consequence of relentless metropolitan expansion, New Jersey's economy has really "grown up." In 1950, the state's total employment base was 1.7 million jobs (table 19). This was only 48 percent of the size of New York City's job base, which then totaled about 3.5 million jobs. However, the economic world was to change dramatically.

Postwar prosperity defined the two decades following 1950. New Jersey's total payroll employment grew by nearly 950,000 jobs between 1950 and 1970, while New York City added only

277,000 jobs. However, New York City's employment had reached its all-time peak in 1969 and was beginning to trend down by 1970. In that year, New Jersey's 2.6 million jobs had climbed to 70 percent of New York City's 3.7 million jobs.

The 1970s—the "troubled" decade—witnessed advances by New Jersey and retreats by New York City. By 1980, total employment in New Jersey grew to 3.1 million jobs, an increase of 454,000 over 1970. In contrast, New York City lost nearly 444,000 jobs during this time, with its employment total falling to 3.3 million jobs. Consequently, by 1980 New Jersey's total employment had increased to 93 percent of the size of New York City's workforce.

The bicoastal economic surge of the 1980s then bolstered growth significantly in the region. Between 1980 and 1988, New York City halted its employment decline, gaining just over 300,000 jobs. However, New Jersey added nearly double that amount (591,000 jobs). As a result, by 1988, New Jersey's employment base (3.7 million jobs) had finally surpassed that of New York City (3.6 million jobs).

The 1989–1992 regional recession represented a major economic setback, with New York City most adversely affected. As a result, even though it suffered absolute declines, New Jersey's employment

Table 20
Total Personal Income
New Jersey and the United States: 1970 to 2002

	New Jersey Share of Total National Personal Income	Ratio: NJ Per Capita Income to Nation
1970	4.2%	1.18
1980	3.8	1.16
1990	3.9	1.26
2000	3.8	1.27
2002	3.8	1.28

Source: U.S. Department of Commerce, Bureau of Economic Analysis

base in 1992 surpassed New York City’s by 5 percent. Economic growth resumed immediately thereafter with New Jersey again the leader. By 2000, the state’s total employment (4 million jobs) was 7 percent higher than that of New York City (3.7 million jobs). New York City was then hit hard by the aftereffects of 9/11 and recession. By 2002, while New Jersey’s employment was little changed (4 million jobs), New York City’s had again fallen below 3.6 million jobs. *As a result, New Jersey had 12 percent more jobs than New York City as 2003 unfolded.*

A vast regional transformation has taken place since 1950. *New Jersey’s economy—benchmarked by employment—has moved from half the size of New York City to 12 percent larger.* This represents the sustained geographical expansion of the region’s economy and employment base. Moreover, particularly in the most recent decades, it involved the full range of “advanced” economic activities. This was documented by the major growth sectors presented in the preceding NAICS analyses.

Better or Worse Off?

Transformations of the scale that have taken place in New Jersey inevitably produced a myriad of benefits and costs, winners and losers,

from the profound economic changes that have occurred. While no single measure can capture the “bottom line,” income serves as a useful barometer. Total personal income gauges broad economic market strength, while per capita personal income measures individual economic capacity and the scale of personal spending power.

The ratio of New Jersey’s per capita personal income to that of the nation captures the relative economic performance of the state during the post-1970 transition. Between 1970 and 1980, when manufacturing began its long-term hemorrhage, the state’s per capita income fell from 18 percent higher than that of the nation to 16 percent higher (from 1.18 to 1.16, as shown in table 20), suggesting a real decline in relative economic position. Services failed to expand fast enough to fully compensate for manufacturing income losses. But as services soared during the 1980s and 1990s, the income ratio improved dramatically, to 1.26 in 1990 to 1.27 in 2000 and to 1.28 in 2002. *Thus, per capita income in New Jersey moved from 16 percent higher than that of the nation in 1980 to 28 percent higher by 2002.* These measures imply that, for the most part, the new economy is certainly “delivering,” although not everybody is sharing in the economic “bounty”—particularly if individuals do not have the skills and education to keep pace with the labor force requirements of the new economy.

Moreover, this positive relative per capita income performance has enabled the state to maintain an approximate 3.8 percent share of total national personal income since 1980.⁶ Since New Jersey now has only 3.1 percent of the nation's population, maintaining this income share over the past two decades is a remarkable achievement.

The Future

The future surely has not yet been invented—and the growth locomotives that will propel New Jersey as the decade advances remain unknown. Despite this uncertainty, the following factors will shape the New Jersey economy to come.

- The fundamental strengths of the state's economy—workforce quality, employment concentrations in key knowledge-based industries, sophisticated research and technology activities, market location, and quality of life—will support future growth as they have in the past. New Jersey is poised to continue as a full partner in the benefits of further national economic growth.
- However, the increasing worldwide capacity to produce both goods and services, together with the accelerating global dispersion of skills, knowledge, and technology, means that New Jersey's businesses and labor force will continue to face intensifying competition. The growing trend toward exporting service-sector jobs of considerable skill is the latest distressing expression of the penetration of global competition into all aspects of the economy, an omnipresent national and state challenge.
- Thus, New Jersey must strive to remain on top of the global technology food chain. This requires a sustained public policy focus on the industrial–technological–educational ecosystem of the state.
- The misery around manufacturing will, unfortunately, continue. Nationally, concerns about the “hollowing out” of manufacturing, and about the “demanufacturing” and “deindustrialization” of America, will abound. Alarmists will continue to speak of the “giant sucking sound” of American factories vanishing into China. It is difficult to envision effective and productive public policy emanating from such hysteria.
- The manufacturing that will survive in New Jersey must be innovative, productive, and efficient. These characteristics imply a need for more technology and capital investment.
- Not only will the “rationalization of the ‘old’ economy” continue, but so too will the “rationalization of the ‘new’ economy.” The most visible manifestation is further white-collar restructuring and the continuation of corporate downsizing. The very way that all economic activity is carried out will continue to be reshaped. Unfortunately, there will still be roadkill along the information highway.
- The driving force is that the full impact of information technology and the Internet has still not yet occurred. A “speed of light” economy is evolving: an economy increasingly driven by the impact of information flowing through fiber-optic cables at the speed of light.

⁶ Areas of high population growth can have high rates of total personal income growth while showing little change in per capita personal income; i.e., income growth can be solely a function of population growth. In the case of New Jersey (which lags in population growth), the increase in absolute total income, as well as the maintenance of national share of income, is much more a function of increases in per capita income.

- This will continue to transform the way America does business, creating new industries that we cannot envision today. In fact, new information-technology products and services are still being developed at a rapid rate. Such innovations can have the same transforming effects of generating entirely new industries and spurring major productivity gains in existing business, just as the personal computer, the Internet, and increasingly powerful chip capacity have done during the past decade.
- New Jersey has a unique capacity: an enormous and growing office-space inventory that will provide the location for the future expansion of the state's economy regardless of the specific types of jobs that will be housed in this space. Offices are the factory floor of the new economy, and that is where a major part of the state's leading-edge economy will work in the future.
- Of course, New Jersey's geographic position is not subject to change. Thus, the state's key market location will continue to be a unique asset, ensuring that logistics, distribution, and wholesaling remain potent sectors.
- A recurring theme universal to almost all areas of significant job growth is the need for quality education and modern communication, computer, and technology skills. Thus, the message to the current and future workforce of New Jersey is that the state's job base will continue to require increasingly sophisticated skills. To that end, obtaining and maintaining solid education and related competencies is necessary for workforce success in global, national, regional, and state economies that are ever more dominated by technology and exposed to intensifying competition. ■

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