

**U.S. Agriculture, 1960-96: A Multilateral Comparison of Total Factor Productivity.** By V. Eldon Ball, Jean-Pierre Butault, and Richard Nehring. Resource Economics Division, Economic Research Service, U.S. Department of Agriculture. Technical Bulletin Number 1895.

## **Abstract**

This study provides estimates of the growth and relative levels of agricultural productivity for the 48 contiguous States for the period 1960 to 1996. For the full 1960-96 period, every State exhibits a positive and generally substantial average annual rate of productivity growth. There is considerable variance, however. The wide disparity in growth rates resulted in substantial changes in the ranking order of States by productivity. For each year, we calculate the coefficient of variation of productivity levels. We use these coefficients to show that the range of levels of productivity has narrowed over time, although the pattern of convergence was far from uniform. The fact that in some States, productivity grew faster than others and yet the cross-section dispersion decreased, implies that the States whose productivity grew most rapidly were those with lower initial levels of productivity. This result is consistent with Gerschenkron's notion of the advantage of relative backwardness. The States that were particularly far behind the productivity leaders had the most to gain from the diffusion of technical knowledge and proceeded to grow most rapidly. We also observe a positive relation between capital accumulation and productivity growth, implying embodiment of technology in capital.

**Keywords:** Production accounts, multilateral index numbers, total factor productivity.

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# U.S. Agriculture, 1960-96

## A Multilateral Comparison of Total Factor Productivity

V. Eldon Ball  
Jean-Pierre Butault  
Richard Nehring

### Introduction

The rise in agricultural productivity has long been chronicled as the single most important source of economic growth in the U.S. farm sector. Though their methods differ in important ways, the major sectoral productivity studies by Kendrick and Grossman (1980) and Jorgenson, Gollop, and Fraumeni (1987) share this common conclusion.<sup>1</sup> In a recent study, Jorgenson and Gollop (1992) find that productivity growth over the 1947-85 period accounted for 82 percent of the economic growth in agriculture, compared with only 13 percent in the private nonfarm economy.<sup>2</sup> Moreover, the rate of productivity growth over this period in agriculture (1.58 percent) was nearly four times the corresponding rate in the private nonfarm economy (0.44 percent).

The U.S. Department of Agriculture (USDA) has been monitoring the industry's productivity performance for decades. In fact, the USDA in 1960 was the first agency to introduce multifactor productivity measurement into the Federal statistical program. Today, the USDA's Economic Research Service (ERS) routinely produces total factor productivity measures for the aggregate farm sector from production accounts that distinguish multiple outputs and inputs, adjust for quality change in each input category,<sup>3</sup> and recognize that some farm production (e.g., breeding livestock) is both an investment good as well as an agricultural output.<sup>4</sup>

A properly constructed measure of productivity growth for the aggregate farm sector is certainly important. It provides a useful summary statistic indicating how economic welfare is being advanced through productivity gains in agriculture, but it may mask important State-specific or regional trends. A recent study by Ball et al. (1999) focuses on agricultural productivity at both sector and State levels. A model accounting for interstate transactions in farm goods links sectorwide and State-specific measures of productivity growth. One conclusion is that there is much more volatility across States than can be inferred from productivity measures for the aggregate farm sector. The results also indicate that productivity growth in the U.S. farm sector is wholly a function of the productivity trends in individual States. Interstate shifts in production activity and resource reallocations have had little effect.

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V. Eldon Ball and Richard Nehring are economists with the U.S. Department of Agriculture's Economic Research Service, and Jean-Pierre Butault is with the Institut National de la Recherche Agronomique, Nancy, France.

In the present study, we estimate the growth and relative levels of productivity for the States for the period 1960 to 1996. We adopt an index number approach. Comparisons of productivity over time are often based on index number procedures. Recent developments in economic theory have improved our knowledge about which index number procedures are most attractive for making productivity comparisons. The distinguishing feature of these procedures is that they possess many properties considered desirable in classical index number analysis, and they represent exactly production structures that have attractive properties.

Problems arise, however, when more than two States are compared simultaneously. The use of binary indexes to compare each of the possible pairs of States gives results that may not satisfy Fisher's (1922) circularity test. Eltetö and Köves (1964) and Szulc (1964) have proposed a method that achieves transitivity while minimizing the deviations from the binary comparisons. The procedure they developed is used in this study to provide estimates of the relative levels of productivity.

The purpose of this comparison is to analyze changes in these levels over time. We find that the range of levels of productivity (as measured by the coefficient of variation) has narrowed over the study period, although the pattern of convergence was far from uniform. This is a remarkable result given the wide variation in State growth rates.

To account for the observed convergence in productivity levels, we consider two hypotheses, which are not mutually exclusive. The first is the catch-up hypothesis, which states simply that those States that lagged furthest behind the leading States in terms of levels of productivity benefit the most from the diffusion of technical knowledge and, hence, should exhibit the most rapid rates of productivity growth. The second hypothesis is that technological innovation is embodied in capital and intermediate inputs. If the input measures do not correct for changes in input quality, then a positive relation should be observed between the rate of productivity growth and the rates of growth of capital and intermediate inputs.

Support is found for the two hypotheses. First, we find a strong inverse relationship between the rates of growth of productivity and the initial levels of productivity. Second, our results support the existence of a positive interaction between capital accumulation and productivity growth. The relation between growth in materials input and productivity growth is positive, as predicted, but statistically insignificant.

## Methodology

A productivity index is generally defined as an output index divided by an input index. The measures of productivity presented in this paper are formed from Fisher indexes of outputs and inputs. Let  $p^i \gg 0_N$  denote the positive price vector for State  $i, i = 1, \dots, M$ . The corresponding quantity vector is  $x^i \geq 0_N$ . The Fisher quantity index is defined as:

$$Q_F^{jk}(p^j, p^k, x^j, x^k) \equiv \left[ \frac{p^k \cdot x^j}{p^k \cdot x^k} \frac{p^j \cdot x^j}{p^j \cdot x^k} \right]^{1/2}, \quad (1)$$

where the superscripts  $j$  and  $k$  can be interpreted as time periods or as States. Diewert (1976) showed that equation 1 can be derived from a homogeneous quadratic production or input requirements function (or aggregator function). The homogeneous quadratic aggregator function can provide a second-order approximation to an arbitrary twice differentiable, linear homogeneous function.

The direct application of equation 1 to the  $M(M - 1)/2$  possible pairs of States yields a matrix of binary comparisons that may not satisfy the transitivity condition. To eliminate this problem, we apply the multilateral Eltetö and Köves (1964) and Szulc (1964) method, which defines the index for State j relative to State k as the unweighted geometric mean of binary Fisher indexes:

$$Q_{EKS}^{jk} \equiv \left( \prod_{i=1}^M Q_F(p^j, p^i, x^j, x^i) \cdot Q_F(p^i, p^k, x^i, x^k) \right)^{1/M}, \forall j, k. \quad (2)$$

The multilateral Eltetö-Köves-Szulc index defined by equation 2 satisfies transitivity while minimizing the deviations from the binary Fisher indexes.

The binary Fisher indexes, which are the building blocks of the multilateral Eltetö-Köves-Szulc indexes, are based on prices and quantities of commodities common to both States in the comparison. Even so, these binary indexes sometimes rely on a very small number of commodities. In this study, we construct direct binary Fisher indexes if the commodities common to both States represent a minimum percentage of the value of production in both States. Below this percentage, the Eltetö-Köves-Szulc indexes are constructed using indirect binary comparisons through other States.

The indirect binary indexes are calculated using a chain-link method. Adjacent States are selected on the basis of the shortest possible path (i.e., fewest States) without falling below this predefined threshold. This method is similar to the chain-link method used in intertemporal comparisons. The only difference is that there is no natural ordering of the data points (such as chronological ordering).

## Production Accounts

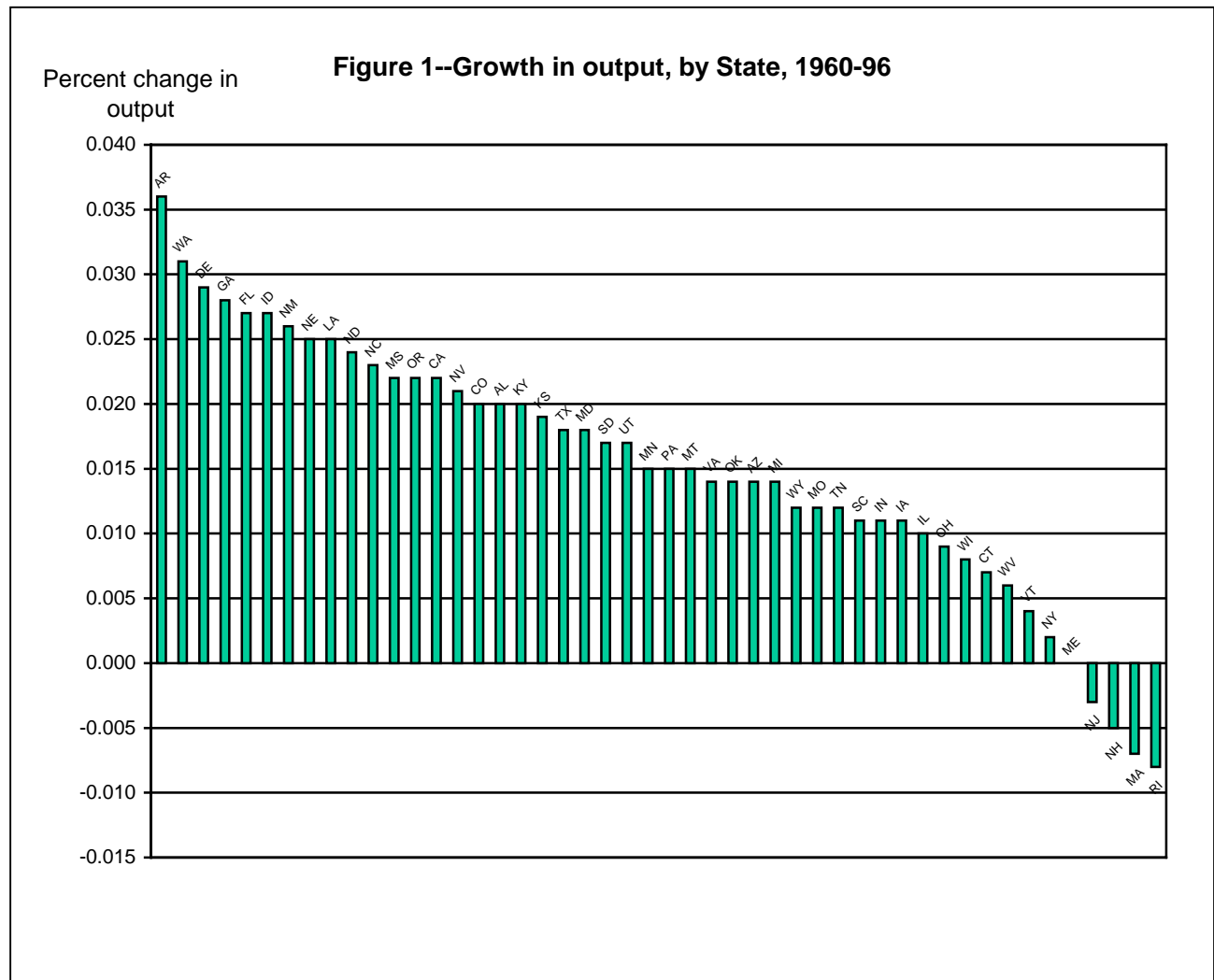
ERS has constructed State and aggregate accounts for the farm sector. Output of the sector is defined as gross production leaving the farm, as opposed to real value added. Inputs are not limited to capital and labor, but include intermediate inputs as well. Both State and aggregate accounts view all of agriculture within their respective boundaries as if it were a single farm. Output includes all off-farm deliveries but excludes intermediate goods produced and consumed on the farm. The difference is that output in the aggregate accounts is defined as deliveries to final demand and intermediate demands in the nonfarm sector. State output accounts include these deliveries plus interstate shipments to intermediate farm demands. The text in this section provides an overview of the sources and methods used to construct the annual production accounts for the 1960-96 period for each of the 48 contiguous States.

### Output

The development of a measure of output begins with disaggregated data for physical quantities and market prices of crops and livestock compiled for each State by ERS's Resource Economics Division.<sup>5</sup> The output quantity for each crop and livestock category consists of quantities of commodities sold off the farm, additions to inventory, and quantities consumed as part of final demand in farm households during the calendar year. As discussed above, off-farm sales in the aggregate accounts are defined only in terms of output leaving the sector. Off-farm sales in the State accounts include sales to the farm sector in other States as well.

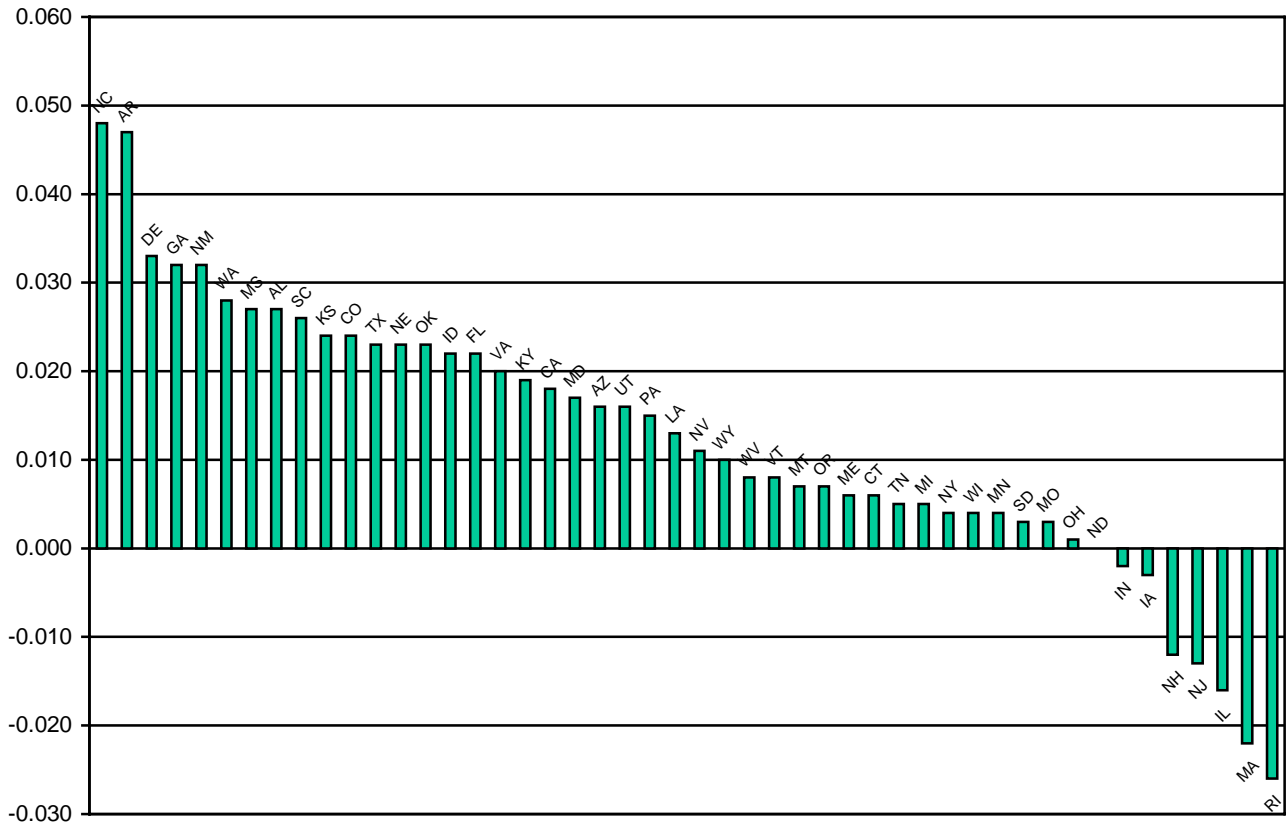
The price corresponding to each disaggregated output reflects the value of that output to the sector. That is, subsidies are added and indirect taxes are subtracted from market values.

Using equation 2, we construct indexes of crop and livestock output for the 48 States for the period 1960-96. Indexes of crop output are presented in table 1. We present indexes of livestock output in table 2. All values are shown relative to Alabama in 1996. Average annual rates of growth are presented for the full 1960-96 period and for six subperiods.<sup>6</sup>



Percent change in livestock output

**Figure 2--Growth in livestock output, by State, 1960-96**



## Intermediate Input

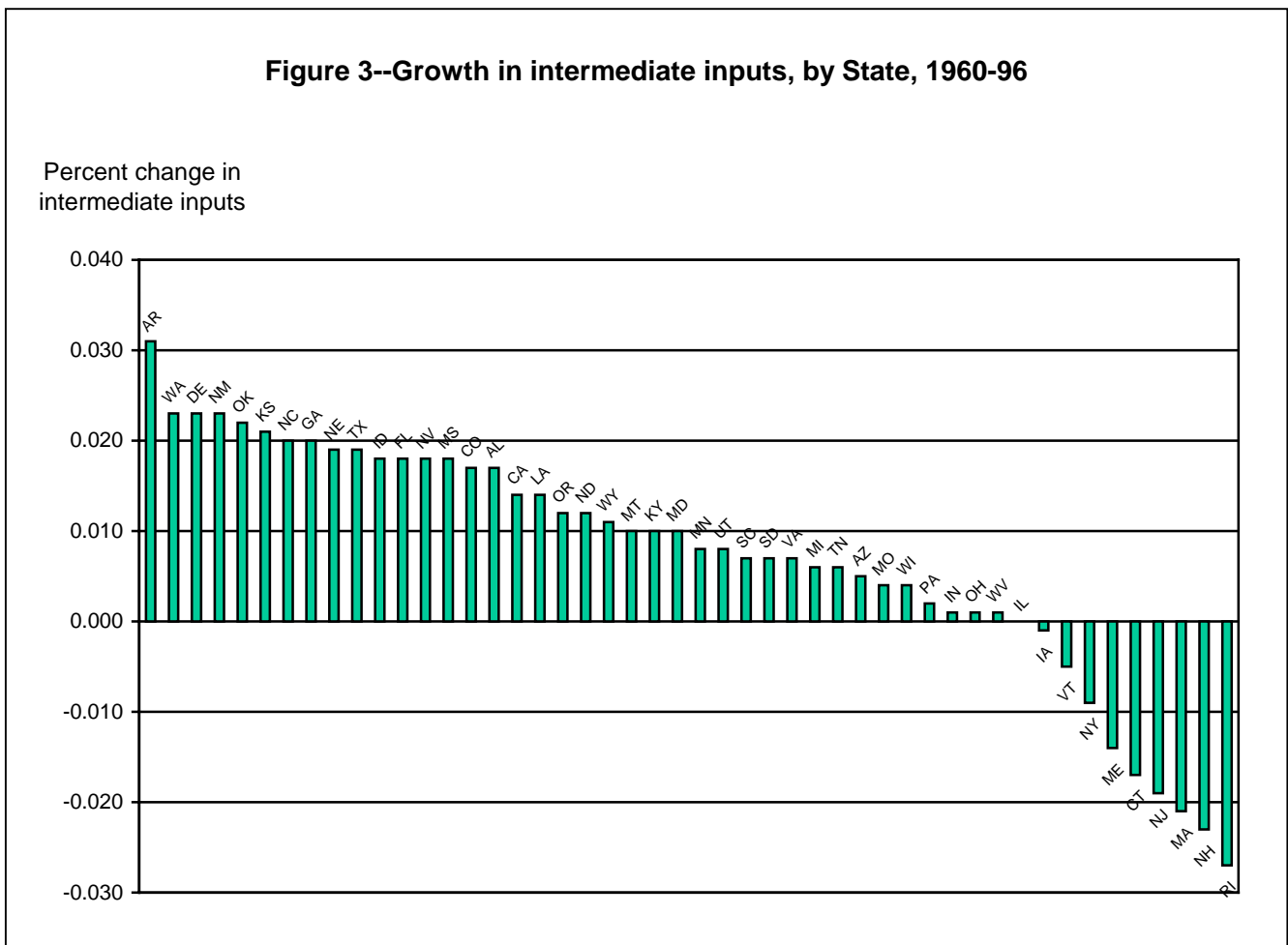
Intermediate input consists of goods used in production during the calendar year, whether withdrawn from beginning inventories or purchased from outside the farm sector or (in the case of the State production accounts) from farms in other States. The inclusion and treatment of open-market purchases of feed, seed, and livestock inputs require little discussion. These inputs should enter both State and aggregate farm sector intermediate goods accounts. However, the treatment of withdrawals from producers' inventories requires elaboration.

Inventories enter the measurement of output, intermediate input, and capital input. Beginning inventories of crops and livestock represent capital inputs and are treated as such in the discussion of capital later. Additions to these inventories represent deliveries to final demand and, therefore, are treated as part of output. Goods withdrawn from inventory are symmetrically defined as intermediate goods and, therefore, must enter the farm input accounts.

Data on current dollar consumption of petroleum fuels, natural gas, and electricity in agriculture are compiled for each State for the 1960-96 period. Prices of individual fuels are taken from the Energy Information Administration's Monthly Energy Review. The index of energy consumption is formed implicitly as the ratio of total expenditures (less State and Federal excise tax refunds) to the corresponding price index.

Pesticides and fertilizers underwent significant changes in input quality over the 1960-96 study period. Since input price and quantity series used in a study of productivity must be denominated in constant-efficiency units, we construct price indexes for fertilizers and pesticides from hedonic regression results. A price index of fertilizers is formed by regressing the prices of single-nutrient and multi-grade fertilizer materials on the proportion of nutrients contained in the materials.<sup>7</sup> Price differences across pesticides are assumed due to differences in physical characteristics such as toxicity, persistence in the environment, and leaching potential.<sup>8</sup> The corresponding quantity indexes are formed implicitly as the ratio of the value of each aggregate to its price index.

There remain several purchased inputs that collectively account for some 15 percent of the input service flow. We compute price and implicit quantity indexes of purchased services such as contract labor services, custom machine services (less income from machine hire), machine and building maintenance and repairs, and irrigation from public sellers of water. Indexes of intermediate input are constructed by aggregating across each category of intermediate input described above. These indexes and their average annual rates of growth are presented in [table 3](#).



## Capital Input

This study requires measures of capital input and capital service prices for each State. Construction of these series begins with estimating the capital stock and rental price for each asset type for each State. The perpetual inventory method is used to develop capital stocks from data on investment. Implicit rental prices for each asset are based on the correspondence between the purchase price of the asset and the discounted value of future service flows derived from that asset.

### *Capital Stocks*

Under the perpetual inventory method, capital stock at the end of each period,  $K_t$ , is measured as the sum of all past investments, each weighted by its relative efficiency,  $d_t$ :

$$K_t = \sum_{\tau=0}^{\infty} d_{\tau} I_{t-\tau}. \quad (3)$$

We assume that the relative efficiency of capital goods declines with age, giving rise to the need for replacement of productive capacity. The proportion of investment to be replaced at age  $\tau$  is equal to the decline in efficiency from age  $\tau - 1$  to age  $\tau$ :

$$m_{\tau} = -(d_{\tau} - d_{\tau-1}), \tau = 1, \dots, t. \quad (4)$$

These proportions represent mortality rates for capital goods of different ages. Replacement requirements in period  $t$  can be expressed as a weighted sum of past investments:

$$R_t = \sum_{\tau=1}^{\infty} m_{\tau} I_{t-\tau}, \quad (5)$$

where the weights are the mortality rates.

Taking the first difference of expression equation 3 and substituting from equations 4 and 5, we can write:

$$K_t - K_{t-1} = I_t - R_t. \quad (6)$$

The change in capital stock in any period is equal to the acquisition of investment goods less replacement requirements.

To estimate replacement requirements, we must introduce an explicit description of the decline in efficiency. The relative efficiency of an asset  $\tau$  years of age is given by:

$$\begin{aligned} d_{\tau} &= (L - \tau) / (L - \beta \tau), 0 \leq \tau \leq L \\ d_{\tau} &= 0, \tau > L, \end{aligned} \quad (7)$$

where  $L$  is the service life of the asset and  $\beta$  is a curvature or decay parameter.<sup>9</sup>

Little empirical evidence is available to suggest a precise value of  $\beta$ . However, two studies provide evidence suggesting that efficiency decay occurs more rapidly in the later years of service. Utilizing data on expenditures for maintenance and repairs of farm tractors covering the period 1958-74, Penson, Hughes, and Nelson (1977) found that efficiency loss was, in fact, very small in the early years of service

and increased rapidly as the end of the asset's service life approached. More recently, Romain, Penson, and Lambert (1987) compared the explanatory power of alternative capacity depreciation patterns for farm tractors in a model of investment behavior that also included the price of capital services. They observed that the concave depreciation pattern better reflected actual investment decisions.

Taken together, these studies suggest that possible values of  $\beta$  should be restricted to the zero-one interval. Ultimately, the  $\beta$  values chosen for this study were 0.50 for durable equipment and 0.75 for structures. It is assumed that the efficiency of a structure declines slowly over most of the service life until a point is reached where the cost of repairs exceeds the increased service flows derived from the repairs, at which point the structure is allowed to depreciate rapidly. The decay parameter for durable equipment assumes that the decline in efficiency was more uniformly distributed over the asset's service life.

Investment as used in this study is composed of different types of capital goods. Each type of capital good is a homogeneous group of assets for which the service life  $L$  is a random variable reflecting quality differences, maintenance schedules, etc. For each asset type, there exists some mean service life  $\bar{L}$  around which there exists some distribution of actual service lives. In order to determine the amount of capital available for production, the different service lives and their frequency of occurrence must be determined. It is assumed that this distribution can accurately be depicted by the normal distribution truncated at a point two standard deviations before and after the mean.<sup>10</sup>

Once the frequency of occurrence of a particular service life is determined, the efficiency function for that service life is calculated using the assumed value of  $\beta$ . This process is repeated for all possible service lives. An aggregate efficiency function is then constructed as a weighted sum of the individual efficiency functions using as weights the frequency of occurrence. This function reflects not only changes in efficiency, but also the discard distribution around the mean service life of the asset.

Beginning inventories of crops and livestock are treated as capital inputs.<sup>11</sup> We estimate the stock of inventories using the perpetual inventory method, assuming zero replacement.

### *Prices of Capital Services*

Firms add to the capital stock so long as the present value of the net revenue generated by an additional unit of capital exceeds the purchase price of the asset. Following Coen (1975), this can be stated algebraically as:

$$\sum_{t=1}^{\infty} \left( p \frac{\partial y}{\partial K} - w \frac{\partial R_t}{\partial K} \right) (1+r)^{-t} > w, \quad (8)$$

where  $p$  is the price of output,  $w$  is the price of an additional unit of capital, and  $r$  is the real discount rate.

To maximize net present value, firms add to the capital stock until this equation holds as an equality. This requires that:

$$\begin{aligned} p \frac{\partial y}{\partial K} &= rw + r \sum_{t=1}^{\infty} w \frac{\partial R_t}{\partial K} (1+r)^{-t} \\ &= c. \end{aligned} \quad (9)$$

The expression for  $c$  is the implicit rental price of capital corresponding to the mortality distribution  $m$ . The rental price consists of two components. The first term,  $rw$ , represents the opportunity cost of invested funds. The second term,  $r \sum_{t=1}^{\infty} w \frac{\partial R_t}{\partial K} (1+r)^{-t}$ , is the present value of all future replacements required to maintain the productive capacity of the capital stock.

Let us define  $F$  as the present value of the stream of capacity depreciation on one unit of capital according to the mortality distribution  $m$ :

$$F = \sum_{t=1}^{\infty} m_t (1+r)^{-t}. \quad (10)$$

Since replacement at time  $t$  is equal to capacity depreciation at time  $t$ :

$$\begin{aligned} \sum_{t=1}^{\infty} \frac{\partial R_t}{\partial K} (1+r)^{-t} &= \sum_{t=1}^{\infty} F^t \\ &= \frac{F}{(1-F)} \end{aligned} \quad (11)$$

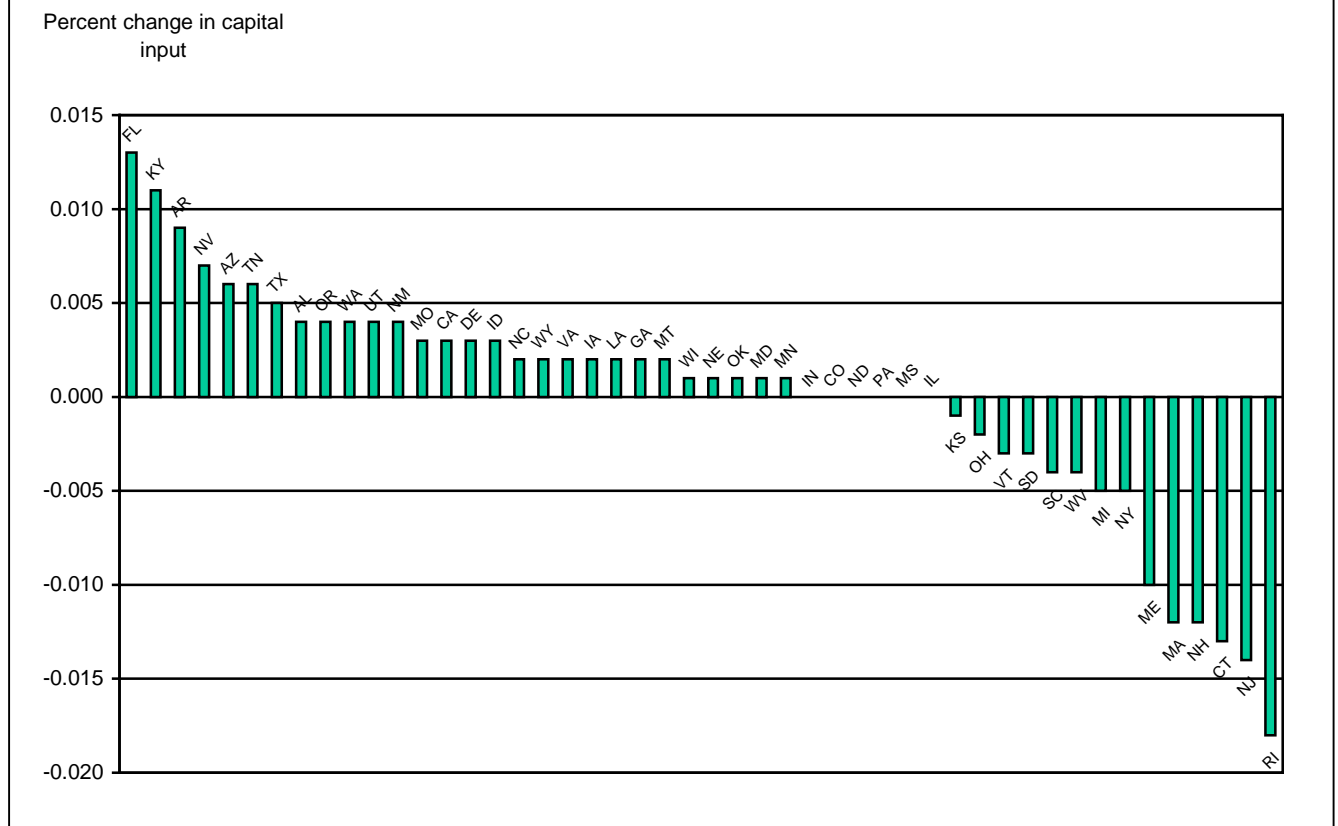
and

$$c = \frac{rw}{(1-F)}. \quad (12)$$

The real rate of return  $r$  in the above expression is calculated as the nominal yield on investment grade corporate bonds less the rate of inflation as measured by the implicit deflator for gross domestic product.<sup>12</sup> An *ex ante* rate is obtained by expressing observed real rates as an ARIMA process.<sup>13</sup> We then calculate  $F$  holding  $r$  constant for that particular vintage of capital goods. In this way, implicit rental prices  $c$  are calculated for each asset type.

Indexes of capital input in each State are constructed by aggregating over the different capital assets using as weights the asset-specific rental prices. Service prices for capital input are formed implicitly as the ratio of the total current dollar value of capital service flows to the quantity index. The resulting measure of capital input for each State, adjusted for changes in input quality, is presented in [table 4](#).

**Figure 4--Growth in capital input, by State, 1960-96**

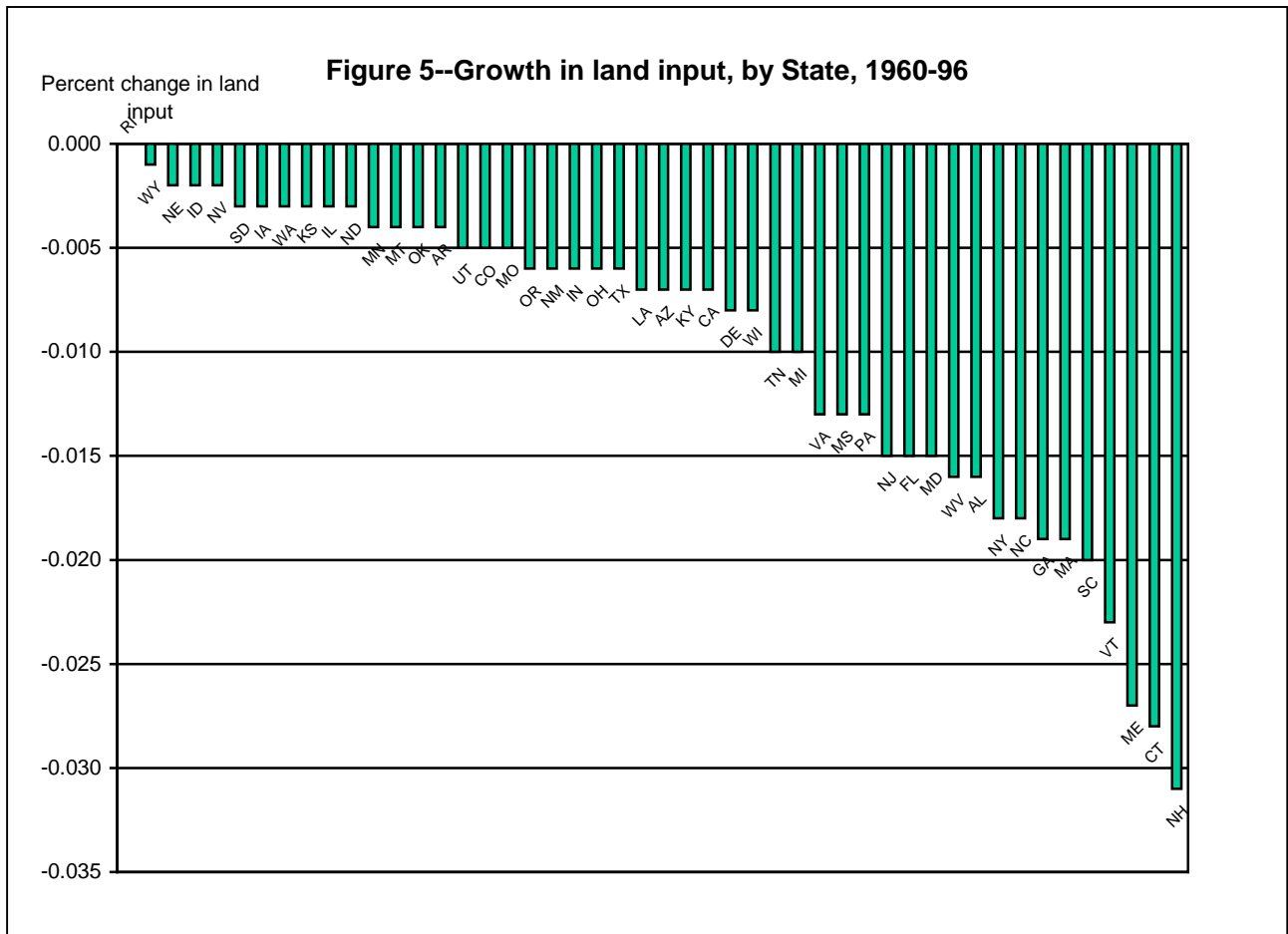


## Land Input

To obtain a constant-quality land stock, we compile data on land area and average value (excluding buildings) per acre in each Agricultural Statistics District in each State. We further disaggregate land input into irrigated and dry cropland, grazing land, and other land in 11 Western States. The land area in each district and use category is reported in the quinquennial Census of Agriculture (U.S. Department of Agriculture). USDA's National Agricultural Statistics Service annually updates State estimates of total land in farms. For the years intermediate to the censuses, percentages in each district and use category are interpolated. Land values per acre are used to aggregate across the different land categories in each State.

The service flows from public lands were estimated by means of grazing fees paid using data from the U.S. Department of the Interior's Bureau of Land Management and USDA's Forest Service.

Finally, the differences in the relative efficiency of land across States prevent the direct comparison of observed prices. We construct relative prices of land in each State based on hedonic regressions. Indexes of land service flows (table 5) are formed implicitly as the ratio of the value of service flows to the price index.



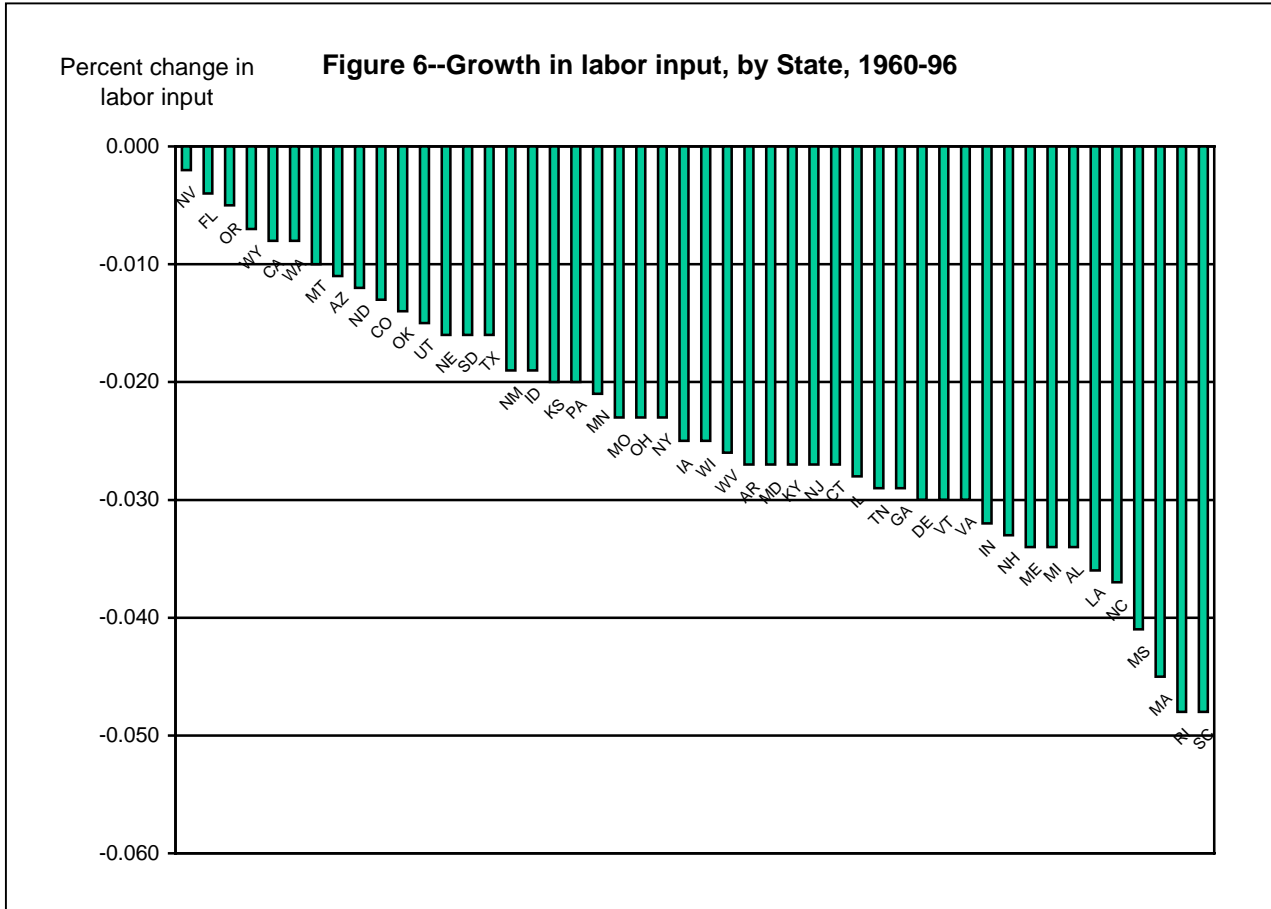
## Labor Input

The USDA labor accounts for the aggregate farm sector incorporate the demographic cross-classification of the agricultural labor force developed by Jorgenson, Gollop, and Fraumeni (1987).<sup>14</sup> Matrices of hours worked and compensation per hour have been developed for laborers cross-classified by sex, age, education, and employment class—employee versus self-employed and unpaid family workers.

The task for this study is to develop a set of similarly formatted but otherwise demographically distinct matrices of labor input and labor compensation by State. This is accomplished using the RAS procedure popularized by Jorgenson, Gollop, and Fraumeni (1987, pp. 72-76) by combining the aggregate farm sector matrices initially produced in that study but updated through 1996 with State-specific demographic information available from the decennial Census of Population (U.S. Department of Commerce).<sup>15</sup> The result is State-by-year matrices of hours worked and hourly compensation with cells cross-classified by sex, age, education, and employment class and with each matrix controlled to the USDA hours worked and compensation totals.

Labor compensation (opportunity cost) data for self-employed and unpaid family workers are not available. As a result, for each State and year, self-employed and unpaid family workers in each State are imputed the mean wage earned by hired workers with the same demographic characteristics.

Indexes of labor input are constructed for each State and the aggregate farm sector over the 1960-96



period using the demographically cross-classified hours and compensation data. Labor hours having higher marginal productivity (wages) are given higher weights in forming the index of labor input than are hours having lower marginal productivities. Doing so explicitly adjusts State and aggregate farm sector indexes of labor input for quality change in hours as originally defined by Jorgenson and Griliches (1967).<sup>16</sup> We present indexes of labor input for each State in [table 6](#).

### Total Factor Productivity

We present indexes of total output for the 48 States for the period 1960 to 1996 in [table 7](#). In [table 8](#), we present indexes of total factor input. These indexes are constructed from disaggregated industry data described earlier. Indexes of total factor productivity for each State and year are formed as the ratio of the output index to the input index. These indexes are presented in [table 9](#), along with their percentage rates of growth. Finally, in [table 10](#), we rank the States by their relative level of productivity in 1996. We also include in the table their rank in 1960 and the average annual rate of growth from 1960 to 1996.

One remarkable similarity exists across all States. For the full 1960-96 period, every State exhibited a positive and generally substantial average annual rate of productivity growth. There is considerable variance, however. The median rate of productivity growth was 1.94 percent per year. Nearly half of the States (19 of 48) had productivity growth rates averaging more than 2 percent per year. Only two States (Oklahoma and Wyoming) had an average rate of growth less than 1 percent per year. The reported annual rates of growth ranged from 0.94 percent for Wyoming to 2.84 percent for Louisiana.

The wide disparity in growth rates over the 1960-96 period resulted in substantial changes in the rank order of States. For example, between 1960 and 1996, Connecticut rose from 20<sup>th</sup> to 1<sup>st</sup>, Georgia rose from 14<sup>th</sup> to 3<sup>rd</sup>, and North Carolina rose from 22<sup>nd</sup> to 4<sup>th</sup>. In contrast, Iowa fell from 1<sup>st</sup> to 5<sup>th</sup>, Wisconsin fell from 3<sup>rd</sup> to 14<sup>th</sup>, and Colorado fell from 4<sup>th</sup> to 21<sup>st</sup> in terms of levels of productivity. West Virginia was last throughout the period. Moreover, its productivity relative to Connecticut fell from one-half in 1960 to one-third in 1996.

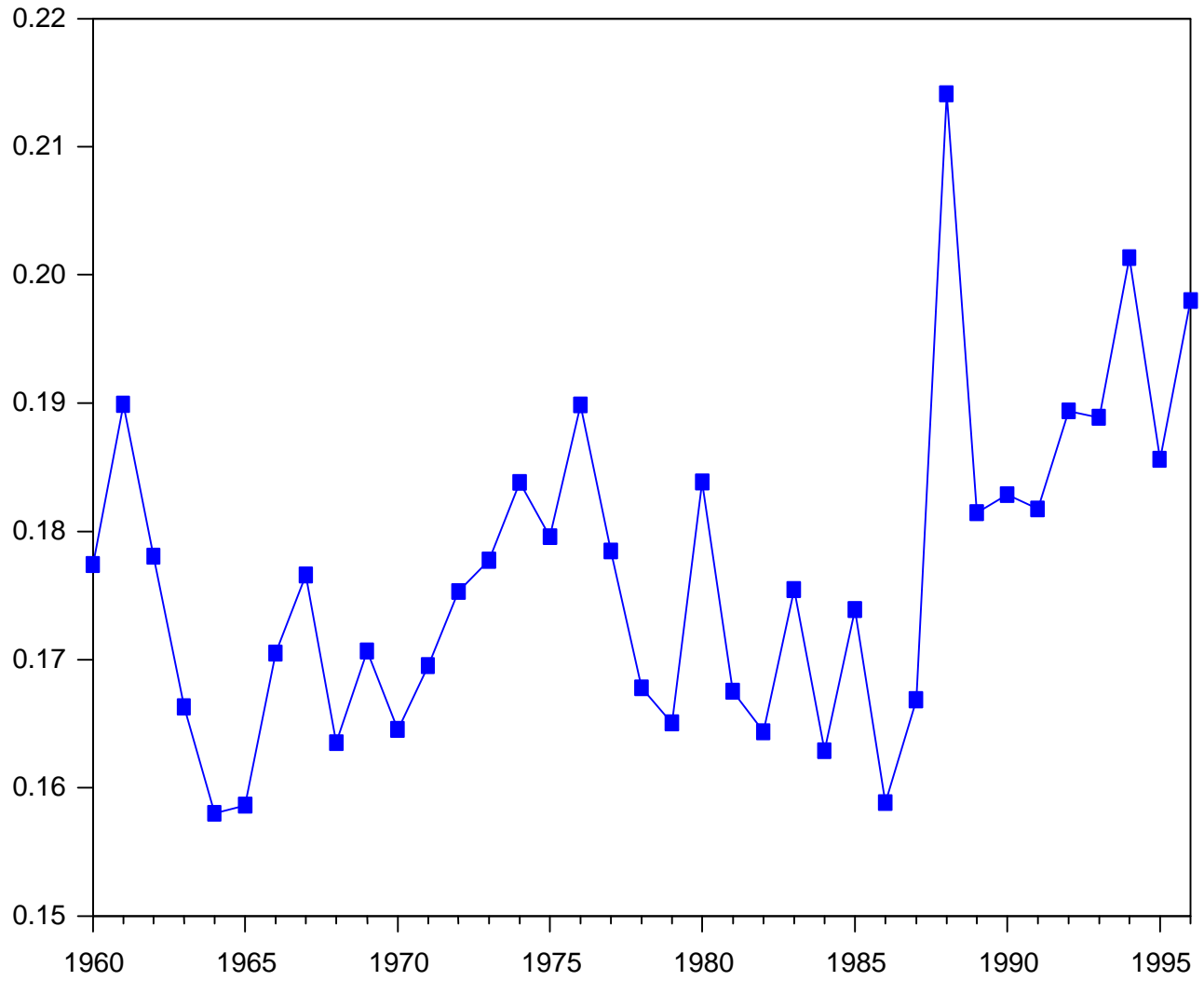
Figure 1 provides details for the intervening years. It plots for each year the coefficient of variation (the ratio of the standard deviation to the mean) of productivity levels for all 48 States. We use these coefficients to show that there was some narrowing of the range of levels of productivity between 1960 and 1987. This is a remarkable result given the wide variation in productivity growth rates. The fact that some States grew more rapidly than others and yet the cross-section dispersion decreased implies that the States that grew most rapidly were those with lower initial levels of productivity, a finding consistent with Gerschenkron's (1952) notion of the advantages of relative backwardness. Those States that were particularly far behind had the most to gain from the diffusion of technical information and proceeded to grow most rapidly.

There was a sharp increase in dispersion between 1988 and 1996. This was a consequence of extreme variability in growing conditions. The drought of 1988 was the worst since 1956, with one-third of the Nation experiencing a severe to extreme drought, as defined by the Palmer Drought Index. Also during 1988, the Southwestern United States experienced above-normal precipitation. The effect of such extremes on productivity can be seen in [table 9](#). Twenty-three States showed increases in productivity in 1988, while 24 States exhibited decreases in productivity.

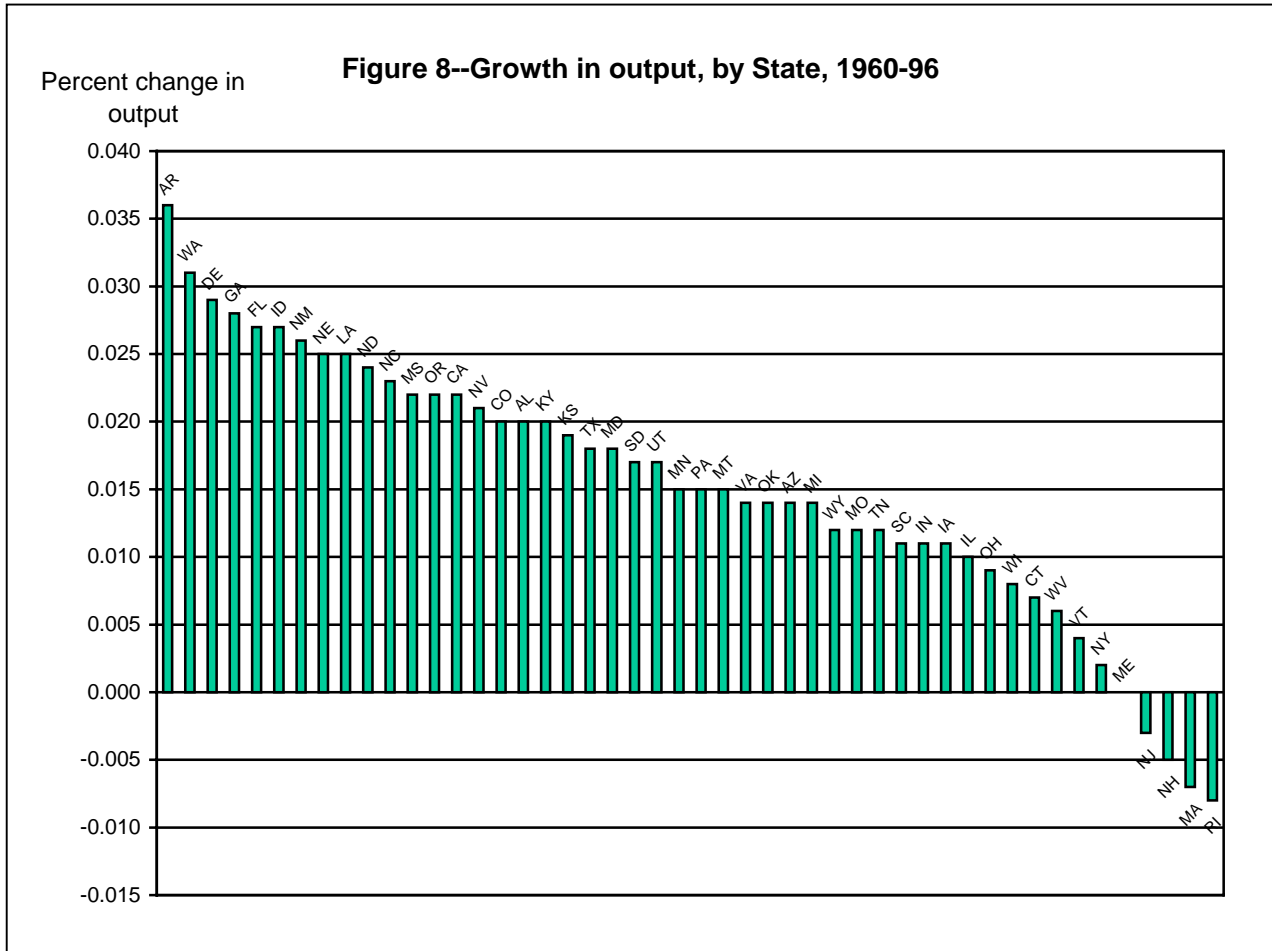
In 1993, when severe spring and summer flooding affected the upper Midwest, a major drought gripped the Southeastern United States. In fact, while floodwaters coursed down the Mississippi River in late July and August, adjacent land in the Bootheel of Missouri was parched by drought. According to [table 9](#), 29 of 48 States had negative productivity growth.

In the West, above-normal precipitation has been the rule during recent wet seasons (roughly October-April). This follows the long-running drought of 1986-87 to 1991-92 and a recurrence of drought in 1993-94. The summer of 1994, which featured record corn and soybean production in the Midwest, was one of the hottest, driest summers on record in the West.

**Figure 7--Coefficients of variation of State productivity**

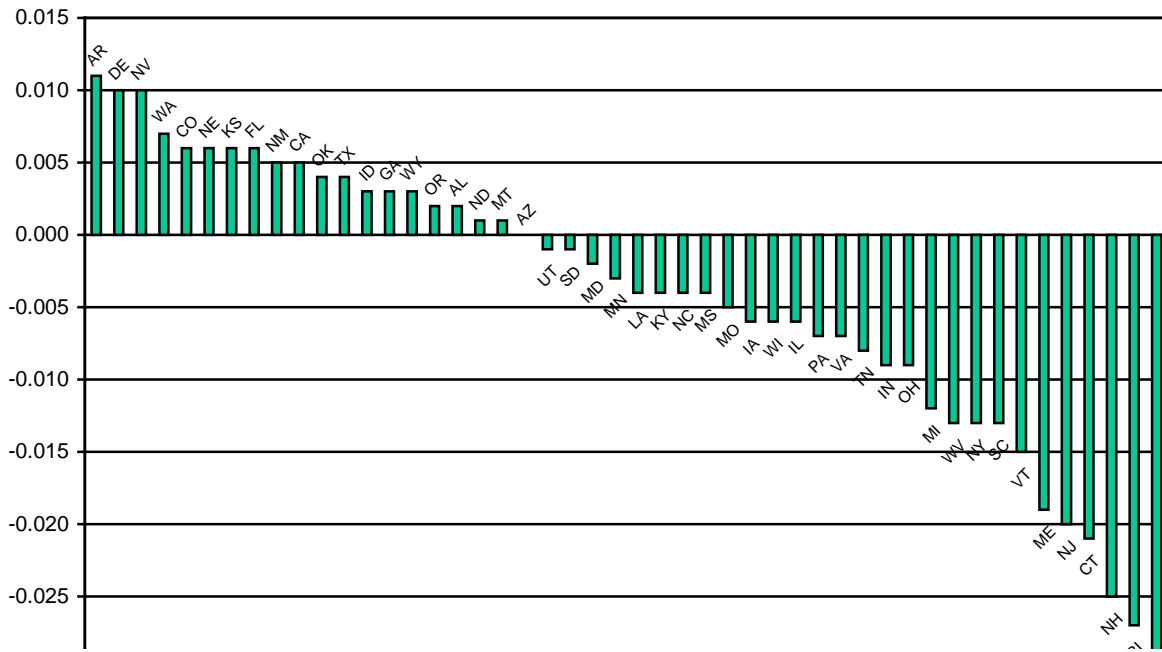


The Southern High Plains, including western Texas, were parched by the drought of 1994, and have yet to fully recover. But nearly ideal growing conditions prevailed in the Midwest during the 1992, 1994, and 1996 seasons. In 1996, 43 of 48 States posted positive productivity growth. Such a large number of States recorded gains in productivity in only 3 of the 37 years we studied.



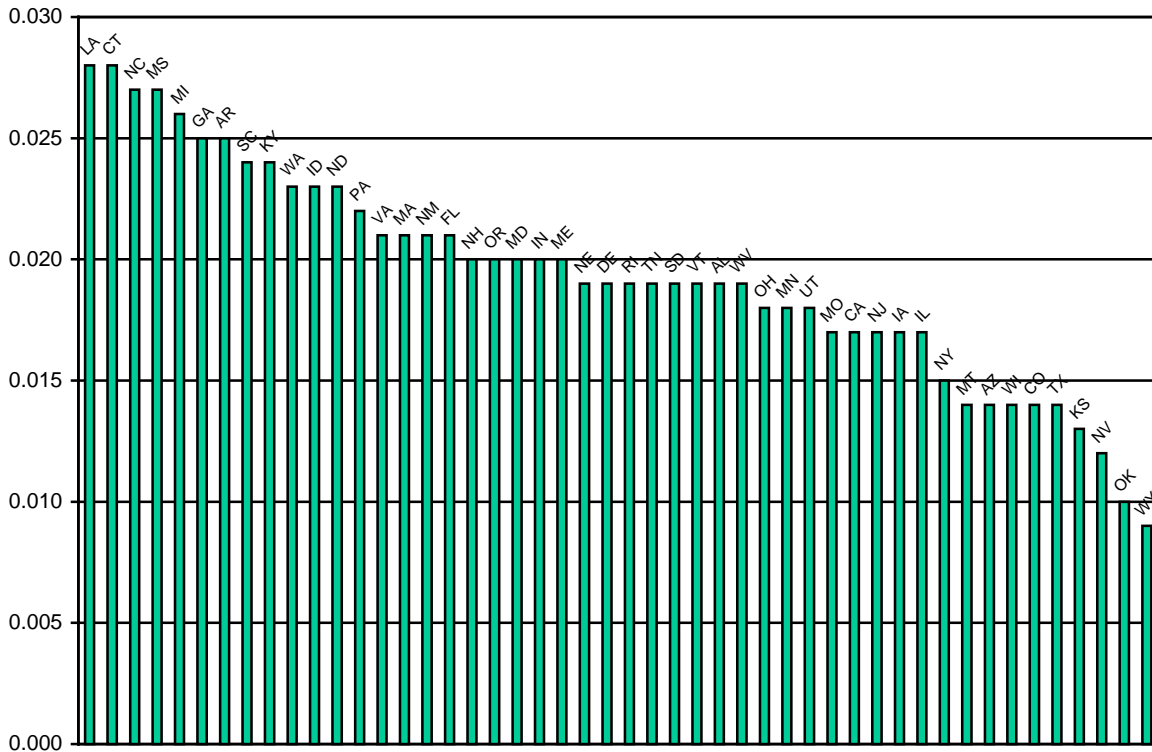
**Figure 9--Growth in inputs, by State, 1960-96**

Percent change in inputs



**Figure 10--Growth in total factor productivity, by State, 1960-96**

Percent change in total factor productivity



## Analysis of Differences in Productivity

In this section, we turn to a regression framework to test two hypotheses concerning technology convergence. The first is the catch-up hypothesis, which states simply that those States that lag furthest behind the technology leaders should exhibit the most rapid rates of growth in productivity. Taking each State as an observation, this hypothesis implies that the rate of growth of productivity is inversely correlated with the initial level of productivity.

The second hypothesis is that technological innovation is embodied in capital and intermediate inputs. If the input measures do not fully reflect the changes in input quality, then this hypothesis suggests that the rate of growth of productivity will be positively correlated with growth of capital and intermediate inputs. Again, we can treat each State as an observation to test this hypothesis.

To investigate both hypotheses, we employ the basic specification:

$$\hat{TFP}_t^i = \beta_0 + \beta_1 \ln TFP_t^i + \beta_2 \left( \frac{\hat{K}}{L} \right)_t^i + \beta_3 \left( \frac{\hat{M}}{L} \right)_t^i + \varepsilon_{it}, \quad i = 1, \dots, M, \quad t = 1, \dots, T, \quad (13)$$

where  $TFP_t^i$  is the relative level of productivity of State  $i$  at the beginning of each period,

$\left( \frac{K}{L} \right)_t^i$  and  $\left( \frac{M}{L} \right)_t^i$  are relative factor intensities, and  $\varepsilon_{it}$  is a stochastic error term. The circumflexes ( $\wedge$ )

denote time derivatives or relative rates of change. Both 3- and 5-year averages are used for the rates of growth to reduce random noise.

The data consist of time series observations on each of several cross sections or States. We include State dummy variables to control for State-specific effects, such as the stock of infrastructure and expenditures on research and extension. Time dummy variables are included to allow productivity growth rates to vary by period (e.g., in response to unevenness in the flow of new technologies).

The regression results, shown in [table 11](#), confirm the catch-up hypothesis, showing a highly significant inverse relation between the rate of productivity convergence by State and its initial level of productivity. The results for the embodiment hypothesis are mixed. Coefficient estimates for growth of the capital-labor ratio are positive and significant at the 1-percent level. These results suggest that embodiment of technology in capital was an important source of productivity growth.

The coefficient estimates for the materials-labor ratio are all positive, as predicted, but statistically not significant. We conclude that the input indexes fully reflect the improvements in their quality.

Table 11. Regressions of total factor productivity growth on relative productivity level and growth in factor intensities, 1960-96

| Independent variables            | Three-year averages             | Five-year averages              |
|----------------------------------|---------------------------------|---------------------------------|
|                                  | $\hat{TFP}$                     | $\hat{TFP}$                     |
| Constant                         | -0.007 <sup>*</sup><br>(2.10)   | -0.007 <sup>**</sup><br>(2.09)  |
| $\ln TFP$                        | -0.186 <sup>**</sup><br>(24.54) | -0.127 <sup>**</sup><br>(25.71) |
| $\left(\frac{\hat{K}}{L}\right)$ | 0.107 <sup>**</sup><br>(4.63)   | 0.089 <sup>**</sup><br>(4.47)   |
| $\left(\frac{\hat{M}}{L}\right)$ | 0.018<br>(0.84)                 | 0.017<br>(0.85)                 |
| $R^2$                            | 0.504                           | 0.546                           |
| $\sqrt{MSE}$                     | 0.023                           | 0.014                           |
| <i>F Value</i>                   | 16.74 <sup>**</sup>             | 19.74 <sup>**</sup>             |
| Sample Size                      | 1548                            | 1454                            |

Note: t-ratios are shown in parentheses below the coefficient estimate. State and time dummy variables are included in the specification, but the results are not shown. The observations are based on 3- or 5-year averages, as indicated.

\* Significant at the 5 percent level; \*\* significant at the 1 percent level.

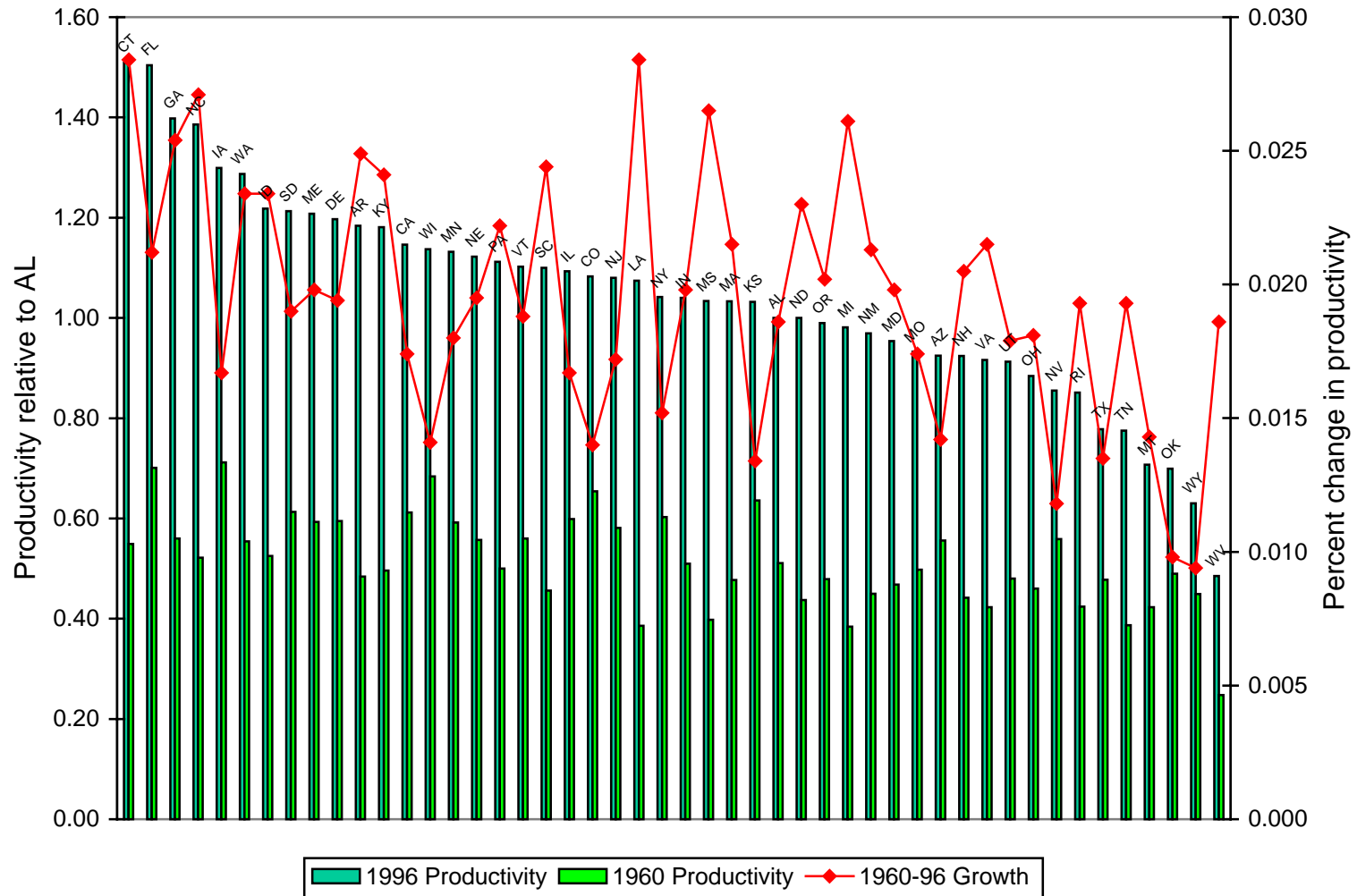
## Summary and Conclusion

In this study, we estimate the growth and relative levels of productivity for the 48 contiguous States for the period 1960 to 1996. For the full 1960-96 period, every State exhibits a positive and generally substantial average annual rate of productivity growth. There is considerable variance, however. The median rate of productivity growth was 1.94 percent per year, while average growth rates ranged from 0.94 percent for Wyoming to 2.84 percent for Louisiana.

The wide disparity in growth rates resulted in substantial changes in the rank order of States. For each year, we compute the coefficient of variation of productivity levels for all 48 States. We use these coefficients to show that the range of levels of productivity has narrowed over time, although the pattern of convergence was far from uniform. The fact that some States grew faster than others and yet the cross section dispersion decreased implies that the States that grew most rapidly were those with lower initial levels of productivity. This result is consistent with Gerschenkron's (1952) notion of the advantages of relative backwardness. The States that were particularly far behind the productivity leaders had the most to gain from the diffusion of technical information and proceeded to grow most rapidly.

Finally, there was a positive correlation between productivity growth and growth of the capital-labor ratio, implying embodiment of technology in capital.

**Figure 11--Productivity level and productivity growth, by State, 1960-96**



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## Footnotes

1. Jorgenson, Gollop, and Fraumeni (1987), table 6.7, pp. 198-200.
2. Jorgenson and Gollop (1992), pp. 746 and 750.
3. See Jorgenson and Griliches (1967) for a discussion of input quality.
4. For a description of USDA methods, see Ball (1985) and Ball et al. (1997).
5. The estimates of output are product based. The product approach proceeds by valuing final output of all agricultural products, but only those products. Thus, agricultural products from establishments that produce agricultural goods as a minor or secondary activity are valued, while goods and services that might be produced on farms but are secondary to agriculture are excluded.
6. The six subperiods are not chosen arbitrarily but represent cyclical peaks. Since the data reported for each subperiod are average annual growth rates, the unequal lengths of the subperiods do not affect comparisons among the subperiods.
7. The observations consist of average prices for each of the chemicals. When average data are used rather than actual observations on prices, the disturbance terms are likely to be heteroskedastic. Efficient parameter estimates are obtained by applying weighted least squares. Expenditure shares are used as weights.
8. The pesticides model is estimated in double logarithmic form. It is well known that the antilog of  $\hat{\delta}_t$  is not an unbiased estimate of  $\delta_t$ , which means that price indexes based on the dummy variable method are biased. A standard bias correction is to add one-half of the coefficient's standard error to the estimated coefficient. See Teekens and Koerts (1972).
9. The decay function defined by equation 8 incorporates many of the commonly used forms of capacity depreciation as special cases. The upper limit of  $\beta$  is unity. This corresponds to the one-hoss shay form of depreciation. As the value of  $\beta$  approaches zero, decay occurs at an increasing rate over time. If  $\beta$  is zero, the function corresponds to the formula for straight-line depreciation. Finally, if  $\beta$  is negative, decay occurs most rapidly in the early years of service, corresponding to accelerated forms of depreciation such as geometric decay.
10. Mean service lives for each asset type are taken from *Fixed Reproducible Tangible Wealth in the United States, 1925-94* (U.S. Department of Commerce).
11. Net additions to inventory during the calendar year are considered a component of output.
12. The nominal rate was taken to be the average yield on Moody's BAA bonds over all maturities.
13. Observed real rates are expressed as an AR(1) process. We use this specification after examining the correlation coefficients for auto correlation, partial and inverse auto correlation, and performing the unit root and white noise tests. We centered each time series by subtracting its sample mean. The analysis was performed on the centered data.
14. See Ball et al. (1997).

15. For 1960 and 1970, see "Characteristics of the Population," *Census of the Population, Volume 1*; for 1980, see "Detailed Population Characteristics," *Census of the Population*, Chapter D. The Bureau of the Census did not tabulate State-specific demographic data for agriculture in 1990. Consequently, the 1990 marginal matrices described in the text were constructed from 1980 marginals adjusted for 1980-90 trends from series updated from those initially reported in Jorgenson, Gollop, and Fraumeni (1987) and controlled to USDA totals by employment class.
16. For a discussion of the theoretical basis for adjusting labor input for compositional shifts in the labor force, see Jorgenson and Gollop (1992).

Table 1. Crop Output Relative to 1996 Level for Alabama

| Year    | AL                   | AR    | AZ     | CA     | CO     | CT     | DE     | FL    | GA     | IA     | ID    | IL     | IN    | KS     | KY     |
|---------|----------------------|-------|--------|--------|--------|--------|--------|-------|--------|--------|-------|--------|-------|--------|--------|
| 1960    | 0.706                | 1.098 | 0.799  | 6.814  | 0.936  | 0.165  | 0.099  | 1.945 | 1.357  | 3.761  | 0.877 | 3.614  | 2.073 | 2.531  | 1.177  |
| 1961    | 0.663                | 1.128 | 0.839  | 6.730  | 0.910  | 0.169  | 0.096  | 2.199 | 1.410  | 3.826  | 0.963 | 3.697  | 2.012 | 2.270  | 1.323  |
| 1962    | 0.619                | 1.171 | 0.822  | 6.999  | 0.809  | 0.163  | 0.092  | 2.523 | 1.358  | 3.814  | 1.040 | 3.809  | 2.144 | 2.004  | 1.311  |
| 1963    | 0.775                | 1.222 | 0.889  | 7.160  | 0.700  | 0.170  | 0.090  | 2.026 | 1.573  | 4.265  | 1.092 | 4.105  | 2.336 | 1.830  | 1.439  |
| 1964    | 0.764                | 1.289 | 0.794  | 7.494  | 0.705  | 0.163  | 0.085  | 1.989 | 1.561  | 4.030  | 1.114 | 3.818  | 2.045 | 1.837  | 1.605  |
| 1965    | 0.777                | 1.412 | 0.847  | 7.253  | 0.669  | 0.163  | 0.116  | 2.377 | 1.603  | 4.128  | 1.102 | 4.602  | 2.403 | 2.183  | 1.381  |
| 1966    | 0.602                | 1.225 | 0.817  | 7.767  | 0.819  | 0.167  | 0.077  | 2.550 | 1.385  | 4.606  | 1.078 | 4.204  | 2.231 | 1.940  | 1.280  |
| 1967    | 0.603                | 1.223 | 0.804  | 6.993  | 0.755  | 0.157  | 0.120  | 3.015 | 1.743  | 4.822  | 1.280 | 5.166  | 2.346 | 2.151  | 1.681  |
| 1968    | 0.601                | 1.394 | 0.823  | 8.043  | 0.866  | 0.146  | 0.093  | 2.516 | 1.473  | 4.826  | 1.263 | 4.689  | 2.440 | 2.408  | 1.373  |
| 1969    | 0.646                | 1.427 | 0.869  | 8.256  | 0.959  | 0.141  | 0.117  | 2.925 | 1.446  | 4.886  | 1.307 | 4.905  | 2.618 | 2.732  | 1.500  |
| 1970    | 0.615                | 1.446 | 0.818  | 8.055  | 1.027  | 0.135  | 0.111  | 2.903 | 1.567  | 4.689  | 1.312 | 4.120  | 2.302 | 2.462  | 1.407  |
| 1971    | 0.783                | 1.475 | 0.778  | 8.370  | 1.011  | 0.141  | 0.108  | 2.966 | 1.895  | 5.621  | 1.396 | 5.322  | 2.948 | 3.037  | 1.445  |
| 1972    | 0.722                | 1.421 | 0.826  | 8.461  | 0.941  | 0.124  | 0.116  | 3.194 | 1.793  | 6.033  | 1.383 | 5.355  | 2.763 | 3.073  | 1.555  |
| 1973    | 0.750                | 1.620 | 0.884  | 9.260  | 1.026  | 0.121  | 0.137  | 3.603 | 1.932  | 6.367  | 1.458 | 5.368  | 3.004 | 3.490  | 1.489  |
| 1974    | 0.793                | 1.322 | 0.967  | 9.911  | 1.045  | 0.125  | 0.125  | 3.658 | 2.280  | 5.063  | 1.462 | 4.377  | 2.361 | 2.741  | 1.647  |
| 1975    | 0.882                | 1.899 | 0.887  | 10.598 | 1.053  | 0.145  | 0.136  | 3.938 | 2.352  | 5.861  | 1.449 | 6.444  | 3.121 | 3.012  | 1.599  |
| 1976    | 0.876                | 1.618 | 0.979  | 10.844 | 1.105  | 0.129  | 0.134  | 4.183 | 2.233  | 5.786  | 1.632 | 6.092  | 3.443 | 3.068  | 1.894  |
| 1977    | 0.804                | 1.824 | 0.980  | 11.005 | 1.139  | 0.140  | 0.111  | 4.033 | 1.702  | 6.017  | 1.528 | 6.513  | 3.534 | 3.439  | 2.118  |
| 1978    | 0.882                | 1.841 | 1.035  | 10.867 | 1.167  | 0.137  | 0.138  | 4.269 | 2.031  | 7.387  | 1.827 | 6.367  | 3.554 | 3.015  | 1.898  |
| 1979    | 1.046                | 2.040 | 1.181  | 12.209 | 1.375  | 0.119  | 0.148  | 4.284 | 2.449  | 8.157  | 1.786 | 7.472  | 3.731 | 3.911  | 2.016  |
| 1980    | 0.784                | 1.506 | 1.109  | 12.858 | 1.494  | 0.128  | 0.117  | 4.807 | 1.731  | 7.611  | 1.886 | 6.045  | 3.553 | 3.228  | 1.807  |
| 1981    | 1.256                | 2.223 | 1.304  | 13.035 | 1.528  | 0.128  | 0.144  | 4.593 | 2.381  | 8.607  | 1.957 | 7.543  | 3.697 | 3.430  | 2.189  |
| 1982    | 1.184                | 2.091 | 1.279  | 13.679 | 1.459  | 0.145  | 0.152  | 4.384 | 2.529  | 7.876  | 2.054 | 7.606  | 4.225 | 4.001  | 2.362  |
| 1983    | 0.900                | 1.543 | 1.091  | 12.125 | 1.506  | 0.118  | 0.142  | 4.500 | 2.177  | 4.876  | 1.999 | 4.340  | 2.469 | 3.245  | 1.589  |
| 1984    | 1.045                | 2.054 | 1.102  | 13.344 | 1.610  | 0.127  | 0.158  | 4.303 | 2.506  | 7.135  | 2.021 | 6.464  | 3.853 | 3.728  | 2.105  |
| 1985    | 1.113                | 2.013 | 1.097  | 13.366 | 1.787  | 0.132  | 0.169  | 4.282 | 2.464  | 8.275  | 1.824 | 7.919  | 4.223 | 4.299  | 2.384  |
| 1986    | 0.825                | 1.791 | 1.145  | 13.036 | 1.589  | 0.144  | 0.147  | 4.614 | 1.859  | 8.252  | 1.950 | 7.325  | 3.790 | 4.044  | 1.896  |
| 1987    | 0.874                | 1.942 | 1.197  | 14.876 | 1.650  | 0.181  | 0.132  | 4.679 | 1.977  | 7.123  | 2.032 | 6.608  | 3.830 | 3.981  | 1.719  |
| 1988    | 0.903                | 2.217 | 1.030  | 12.664 | 1.587  | 0.177  | 0.154  | 5.185 | 2.137  | 5.121  | 1.867 | 4.479  | 2.608 | 3.356  | 1.565  |
| 1989    | 0.860                | 2.132 | 1.307  | 14.838 | 1.527  | 0.169  | 0.170  | 5.073 | 2.390  | 7.328  | 2.015 | 7.318  | 3.972 | 2.913  | 2.183  |
| 1990    | 0.757                | 2.264 | 1.031  | 15.271 | 1.662  | 0.185  | 0.191  | 4.879 | 2.033  | 7.738  | 2.147 | 7.240  | 4.018 | 4.144  | 2.160  |
| 1991    | 0.955                | 2.297 | 1.097  | 13.772 | 1.640  | 0.183  | 0.202  | 5.102 | 2.512  | 7.372  | 1.803 | 6.563  | 3.313 | 3.612  | 2.202  |
| 1992    | 0.994                | 2.888 | 1.083  | 15.253 | 1.639  | 0.190  | 0.207  | 5.342 | 2.655  | 8.945  | 2.217 | 8.504  | 4.621 | 4.274  | 2.497  |
| 1993    | 0.838                | 2.341 | 1.065  | 15.594 | 1.721  | 0.176  | 0.170  | 5.709 | 2.253  | 4.939  | 2.338 | 7.424  | 4.418 | 3.916  | 2.427  |
| 1994    | 1.007                | 2.860 | 1.141  | 16.376 | 1.726  | 0.191  | 0.209  | 5.782 | 2.876  | 9.441  | 2.371 | 8.933  | 4.936 | 4.624  | 2.379  |
| 1995    | 0.813                | 2.503 | 1.107  | 15.642 | 1.680  | 0.198  | 0.177  | 5.659 | 2.873  | 7.589  | 2.426 | 6.773  | 3.873 | 3.491  | 2.134  |
| 1996    | 1.000                | 2.893 | 1.251  | 16.293 | 1.721  | 0.217  | 0.213  | 5.414 | 3.187  | 8.596  | 2.462 | 7.783  | 4.063 | 4.420  | 2.424  |
| Average | annual growth rates: |       |        |        |        |        |        |       |        |        |       |        |       |        |        |
| 1960-96 | 0.010                | 0.027 | 0.012  | 0.024  | 0.017  | 0.007  | 0.021  | 0.028 | 0.024  | 0.023  | 0.029 | 0.021  | 0.019 | 0.015  | 0.020  |
| 1960-66 | -0.026               | 0.018 | 0.004  | 0.022  | -0.022 | 0.002  | -0.041 | 0.045 | 0.003  | 0.034  | 0.034 | 0.025  | 0.012 | -0.044 | 0.014  |
| 1966-69 | 0.023                | 0.051 | 0.021  | 0.020  | 0.052  | -0.055 | 0.139  | 0.046 | 0.014  | 0.020  | 0.064 | 0.051  | 0.053 | 0.114  | 0.053  |
| 1969-73 | 0.037                | 0.032 | 0.004  | 0.029  | 0.017  | -0.040 | 0.039  | 0.052 | 0.073  | 0.066  | 0.027 | 0.023  | 0.034 | 0.061  | -0.002 |
| 1973-79 | 0.055                | 0.038 | 0.048  | 0.046  | 0.049  | -0.002 | 0.013  | 0.029 | 0.039  | 0.041  | 0.034 | 0.055  | 0.036 | 0.019  | 0.051  |
| 1979-89 | -0.020               | 0.004 | 0.010  | 0.020  | 0.010  | 0.035  | 0.014  | 0.017 | -0.002 | -0.011 | 0.012 | -0.002 | 0.006 | -0.029 | 0.008  |
| 1989-96 | 0.021                | 0.044 | -0.006 | 0.013  | 0.017  | 0.036  | 0.032  | 0.009 | 0.041  | 0.023  | 0.029 | 0.009  | 0.003 | 0.060  | 0.015  |

table 1 Continued

| LA                   | MA     | MD     | ME     | MI    | MN    | MO     | MS     | MT     | NC     | ND     | NE    | NH     | NJ     | NM     | NV    |
|----------------------|--------|--------|--------|-------|-------|--------|--------|--------|--------|--------|-------|--------|--------|--------|-------|
| 0.627                | 0.224  | 0.319  | 0.354  | 1.355 | 2.293 | 1.795  | 1.023  | 0.661  | 2.552  | 1.384  | 2.266 | 0.063  | 0.467  | 0.312  | 0.057 |
| 0.656                | 0.221  | 0.319  | 0.387  | 1.472 | 2.357 | 1.769  | 1.095  | 0.505  | 2.524  | 0.842  | 1.943 | 0.060  | 0.443  | 0.310  | 0.054 |
| 0.686                | 0.223  | 0.302  | 0.388  | 1.442 | 2.061 | 1.644  | 1.104  | 0.732  | 2.656  | 1.735  | 2.061 | 0.064  | 0.453  | 0.334  | 0.069 |
| 0.830                | 0.220  | 0.291  | 0.395  | 1.457 | 2.504 | 1.851  | 1.328  | 0.784  | 2.713  | 1.477  | 2.027 | 0.060  | 0.425  | 0.325  | 0.074 |
| 0.792                | 0.209  | 0.309  | 0.380  | 1.571 | 2.104 | 1.709  | 1.395  | 0.787  | 2.846  | 1.570  | 1.818 | 0.053  | 0.412  | 0.301  | 0.073 |
| 0.814                | 0.205  | 0.356  | 0.358  | 1.423 | 2.208 | 1.964  | 1.276  | 0.856  | 2.400  | 1.831  | 1.966 | 0.053  | 0.433  | 0.296  | 0.086 |
| 0.853                | 0.208  | 0.279  | 0.352  | 1.429 | 2.519 | 1.814  | 1.178  | 0.841  | 2.355  | 1.629  | 2.509 | 0.056  | 0.394  | 0.338  | 0.075 |
| 0.956                | 0.188  | 0.383  | 0.356  | 1.423 | 2.611 | 1.873  | 1.099  | 0.898  | 2.656  | 1.672  | 2.376 | 0.056  | 0.411  | 0.318  | 0.088 |
| 1.075                | 0.183  | 0.347  | 0.357  | 1.487 | 2.801 | 2.216  | 1.294  | 0.925  | 2.216  | 1.982  | 2.292 | 0.054  | 0.401  | 0.352  | 0.075 |
| 0.908                | 0.181  | 0.377  | 0.335  | 1.484 | 2.740 | 1.854  | 1.216  | 0.883  | 2.375  | 2.046  | 2.807 | 0.049  | 0.385  | 0.331  | 0.095 |
| 1.003                | 0.196  | 0.372  | 0.308  | 1.556 | 2.776 | 1.808  | 1.273  | 0.831  | 2.488  | 1.635  | 2.388 | 0.053  | 0.392  | 0.309  | 0.092 |
| 0.996                | 0.202  | 0.359  | 0.311  | 1.469 | 3.210 | 2.345  | 1.380  | 0.906  | 2.460  | 2.456  | 2.881 | 0.055  | 0.390  | 0.313  | 0.103 |
| 1.043                | 0.188  | 0.346  | 0.319  | 1.585 | 3.218 | 2.255  | 1.305  | 0.896  | 2.410  | 2.097  | 3.164 | 0.052  | 0.334  | 0.318  | 0.095 |
| 0.989                | 0.197  | 0.381  | 0.292  | 1.641 | 3.927 | 2.336  | 1.451  | 0.869  | 2.793  | 2.194  | 3.407 | 0.052  | 0.373  | 0.351  | 0.109 |
| 1.034                | 0.197  | 0.413  | 0.243  | 1.544 | 2.984 | 1.807  | 1.210  | 0.910  | 2.713  | 1.851  | 2.585 | 0.053  | 0.410  | 0.263  | 0.108 |
| 1.115                | 0.212  | 0.437  | 0.284  | 1.871 | 3.313 | 2.114  | 1.288  | 1.109  | 2.920  | 2.283  | 3.173 | 0.058  | 0.398  | 0.339  | 0.112 |
| 1.241                | 0.209  | 0.431  | 0.271  | 1.674 | 2.914 | 1.939  | 1.395  | 1.147  | 2.953  | 2.378  | 3.130 | 0.056  | 0.426  | 0.319  | 0.125 |
| 1.190                | 0.208  | 0.399  | 0.259  | 2.001 | 4.659 | 2.671  | 1.485  | 0.995  | 2.481  | 2.341  | 3.941 | 0.058  | 0.401  | 0.403  | 0.129 |
| 1.290                | 0.210  | 0.473  | 0.269  | 2.028 | 4.724 | 2.546  | 1.489  | 1.127  | 2.904  | 3.004  | 4.156 | 0.054  | 0.432  | 0.359  | 0.128 |
| 1.423                | 0.182  | 0.480  | 0.269  | 2.291 | 4.714 | 3.045  | 1.722  | 0.934  | 2.625  | 2.801  | 4.520 | 0.055  | 0.433  | 0.381  | 0.144 |
| 1.193                | 0.182  | 0.404  | 0.252  | 2.374 | 4.583 | 2.261  | 1.287  | 0.944  | 2.626  | 2.065  | 3.823 | 0.055  | 0.412  | 0.365  | 0.149 |
| 1.426                | 0.209  | 0.507  | 0.239  | 2.533 | 5.226 | 3.108  | 1.730  | 1.245  | 3.028  | 3.494  | 4.780 | 0.059  | 0.450  | 0.423  | 0.146 |
| 1.579                | 0.201  | 0.512  | 0.273  | 2.671 | 5.288 | 2.962  | 1.925  | 1.353  | 2.929  | 3.404  | 4.526 | 0.060  | 0.469  | 0.454  | 0.153 |
| 1.297                | 0.208  | 0.434  | 0.272  | 2.248 | 3.779 | 1.866  | 1.398  | 1.110  | 2.224  | 2.849  | 3.236 | 0.064  | 0.418  | 0.419  | 0.155 |
| 1.484                | 0.226  | 0.560  | 0.237  | 2.604 | 5.182 | 2.449  | 1.698  | 0.886  | 2.714  | 3.164  | 4.558 | 0.064  | 0.449  | 0.459  | 0.178 |
| 1.299                | 0.230  | 0.567  | 0.256  | 2.957 | 5.336 | 3.275  | 1.794  | 0.524  | 2.516  | 3.460  | 5.321 | 0.063  | 0.506  | 0.503  | 0.171 |
| 1.230                | 0.239  | 0.451  | 0.296  | 2.649 | 5.116 | 2.985  | 1.243  | 1.150  | 2.146  | 3.561  | 5.068 | 0.061  | 0.477  | 0.439  | 0.169 |
| 1.276                | 0.242  | 0.450  | 0.258  | 2.452 | 4.835 | 2.878  | 1.592  | 1.237  | 2.127  | 3.238  | 4.615 | 0.069  | 0.465  | 0.462  | 0.170 |
| 1.603                | 0.246  | 0.440  | 0.279  | 2.072 | 3.161 | 2.349  | 1.634  | 0.586  | 2.374  | 1.491  | 4.412 | 0.071  | 0.449  | 0.448  | 0.163 |
| 1.351                | 0.256  | 0.487  | 0.255  | 2.641 | 4.884 | 2.796  | 1.455  | 1.126  | 2.483  | 2.436  | 4.502 | 0.066  | 0.440  | 0.471  | 0.185 |
| 1.535                | 0.239  | 0.566  | 0.266  | 2.922 | 5.221 | 2.744  | 1.593  | 1.111  | 2.626  | 3.391  | 5.070 | 0.071  | 0.456  | 0.470  | 0.183 |
| 1.407                | 0.283  | 0.536  | 0.247  | 2.927 | 5.074 | 2.766  | 1.707  | 1.294  | 2.820  | 3.341  | 5.109 | 0.073  | 0.508  | 0.482  | 0.154 |
| 1.756                | 0.262  | 0.587  | 0.280  | 2.949 | 5.316 | 3.474  | 2.153  | 1.105  | 2.864  | 4.184  | 5.595 | 0.087  | 0.513  | 0.484  | 0.141 |
| 1.443                | 0.273  | 0.489  | 0.253  | 3.035 | 3.226 | 2.571  | 1.596  | 1.379  | 2.706  | 3.099  | 4.488 | 0.075  | 0.512  | 0.485  | 0.175 |
| 1.682                | 0.248  | 0.570  | 0.225  | 3.154 | 5.800 | 3.339  | 1.795  | 1.213  | 3.055  | 3.607  | 5.881 | 0.083  | 0.561  | 0.513  | 0.188 |
| 1.557                | 0.231  | 0.512  | 0.237  | 3.215 | 5.263 | 2.585  | 1.719  | 1.393  | 2.894  | 3.164  | 4.595 | 0.079  | 0.528  | 0.499  | 0.201 |
| 1.825                | 0.253  | 0.607  | 0.273  | 2.766 | 5.699 | 3.479  | 1.909  | 1.261  | 3.000  | 3.946  | 5.974 | 0.078  | 0.552  | 0.526  | 0.211 |
| annual growth rates: |        |        |        |       |       |        |        |        |        |        |       |        |        |        |       |
| 0.030                | 0.003  | 0.018  | -0.007 | 0.020 | 0.025 | 0.018  | 0.017  | 0.018  | 0.004  | 0.029  | 0.027 | 0.006  | 0.005  | 0.015  | 0.036 |
| 0.051                | -0.012 | -0.023 | -0.001 | 0.009 | 0.016 | 0.002  | 0.023  | 0.040  | -0.013 | 0.027  | 0.017 | -0.021 | -0.028 | 0.014  | 0.046 |
| 0.021                | -0.047 | 0.101  | -0.016 | 0.013 | 0.028 | 0.007  | 0.011  | 0.016  | 0.003  | 0.076  | 0.037 | -0.045 | -0.007 | -0.007 | 0.077 |
| 0.021                | 0.021  | 0.003  | -0.034 | 0.025 | 0.090 | 0.058  | 0.044  | -0.004 | 0.041  | 0.017  | 0.048 | 0.014  | -0.008 | 0.015  | 0.036 |
| 0.061                | -0.013 | 0.038  | -0.014 | 0.056 | 0.030 | 0.044  | 0.029  | 0.012  | -0.010 | 0.041  | 0.047 | 0.011  | 0.025  | 0.013  | 0.046 |
| -0.005               | 0.035  | 0.002  | -0.005 | 0.014 | 0.004 | -0.009 | -0.017 | 0.019  | -0.006 | -0.014 | 0.000 | 0.018  | 0.002  | 0.021  | 0.026 |
| 0.043                | -0.002 | 0.031  | 0.009  | 0.007 | 0.022 | 0.031  | 0.039  | 0.016  | 0.027  | 0.069  | 0.040 | 0.022  | 0.033  | 0.016  | 0.018 |

table 1 Continued

| NY                   | OH     | OK     | OR    | PA     | RI     | SC     | SD     | TN     | TX     | UT    | VA     | VT     | WA    | WI     | WV     | WY     |
|----------------------|--------|--------|-------|--------|--------|--------|--------|--------|--------|-------|--------|--------|-------|--------|--------|--------|
| 1.280                | 1.815  | 1.336  | 0.823 | 1.134  | 0.025  | 0.917  | 1.219  | 0.898  | 3.718  | 0.199 | 0.840  | 0.141  | 1.277 | 1.524  | 0.160  | 0.183  |
| 1.332                | 1.715  | 1.199  | 0.823 | 1.169  | 0.025  | 0.938  | 0.959  | 0.945  | 3.647  | 0.187 | 0.874  | 0.142  | 1.287 | 1.628  | 0.159  | 0.197  |
| 1.238                | 1.696  | 0.926  | 0.893 | 0.969  | 0.026  | 0.998  | 1.156  | 0.888  | 3.428  | 0.220 | 0.898  | 0.136  | 1.385 | 1.685  | 0.148  | 0.199  |
| 1.297                | 1.797  | 0.955  | 0.908 | 1.041  | 0.025  | 0.988  | 1.193  | 0.975  | 3.838  | 0.216 | 0.682  | 0.136  | 1.507 | 1.504  | 0.141  | 0.226  |
| 1.213                | 1.669  | 1.055  | 0.934 | 1.058  | 0.025  | 0.992  | 0.933  | 1.072  | 3.553  | 0.213 | 0.834  | 0.129  | 1.563 | 1.474  | 0.142  | 0.216  |
| 1.261                | 1.801  | 1.379  | 0.989 | 1.097  | 0.024  | 0.998  | 1.135  | 1.024  | 3.998  | 0.232 | 0.823  | 0.115  | 1.543 | 1.611  | 0.135  | 0.195  |
| 1.285                | 1.977  | 1.095  | 0.971 | 0.939  | 0.025  | 0.858  | 1.114  | 0.874  | 3.989  | 0.217 | 0.718  | 0.130  | 1.675 | 1.721  | 0.105  | 0.199  |
| 1.373                | 1.870  | 1.072  | 1.002 | 1.210  | 0.022  | 0.962  | 1.294  | 0.883  | 3.657  | 0.255 | 0.819  | 0.127  | 1.828 | 1.768  | 0.146  | 0.263  |
| 1.280                | 2.041  | 1.260  | 0.924 | 1.142  | 0.022  | 0.792  | 1.344  | 0.857  | 4.146  | 0.241 | 0.800  | 0.115  | 1.714 | 1.911  | 0.143  | 0.257  |
| 1.243                | 1.891  | 1.291  | 1.070 | 1.194  | 0.021  | 0.890  | 1.325  | 0.915  | 3.829  | 0.238 | 0.832  | 0.106  | 1.744 | 1.798  | 0.144  | 0.250  |
| 1.312                | 1.954  | 1.175  | 1.046 | 1.261  | 0.023  | 0.855  | 1.188  | 0.895  | 3.846  | 0.241 | 0.811  | 0.102  | 1.769 | 1.831  | 0.147  | 0.253  |
| 1.313                | 2.331  | 1.031  | 1.109 | 1.256  | 0.023  | 0.965  | 1.471  | 0.993  | 3.373  | 0.246 | 0.798  | 0.112  | 1.932 | 2.139  | 0.151  | 0.274  |
| 1.030                | 2.164  | 1.133  | 1.075 | 1.119  | 0.020  | 0.867  | 1.578  | 0.963  | 3.883  | 0.221 | 0.811  | 0.098  | 1.974 | 1.983  | 0.149  | 0.269  |
| 1.169                | 2.031  | 1.673  | 1.200 | 1.265  | 0.022  | 0.926  | 1.549  | 0.999  | 5.101  | 0.246 | 0.895  | 0.104  | 1.842 | 1.874  | 0.159  | 0.262  |
| 1.288                | 2.255  | 1.356  | 1.254 | 1.369  | 0.020  | 1.014  | 1.166  | 0.912  | 3.956  | 0.259 | 0.904  | 0.100  | 2.061 | 1.883  | 0.156  | 0.247  |
| 1.327                | 2.630  | 1.561  | 1.322 | 1.401  | 0.028  | 1.112  | 1.294  | 1.057  | 4.785  | 0.259 | 0.917  | 0.095  | 2.412 | 2.070  | 0.162  | 0.277  |
| 1.293                | 2.805  | 1.413  | 1.369 | 1.418  | 0.025  | 0.960  | 0.669  | 1.132  | 4.796  | 0.272 | 0.869  | 0.103  | 2.485 | 1.663  | 0.142  | 0.300  |
| 1.290                | 2.966  | 1.656  | 1.329 | 1.445  | 0.023  | 0.901  | 1.652  | 1.178  | 5.092  | 0.260 | 0.753  | 0.089  | 2.221 | 2.531  | 0.134  | 0.250  |
| 1.358                | 2.916  | 1.468  | 1.378 | 1.531  | 0.025  | 1.003  | 1.865  | 1.224  | 4.591  | 0.286 | 0.919  | 0.105  | 2.543 | 2.476  | 0.157  | 0.299  |
| 1.456                | 3.212  | 2.029  | 1.494 | 1.551  | 0.024  | 1.074  | 1.979  | 1.293  | 5.777  | 0.305 | 0.903  | 0.101  | 2.462 | 2.675  | 0.143  | 0.294  |
| 1.503                | 3.240  | 1.576  | 1.692 | 1.464  | 0.024  | 0.831  | 1.534  | 1.073  | 4.630  | 0.304 | 0.742  | 0.104  | 2.799 | 2.792  | 0.158  | 0.295  |
| 1.449                | 2.705  | 1.601  | 1.771 | 1.663  | 0.022  | 1.108  | 1.919  | 1.487  | 5.887  | 0.331 | 1.023  | 0.111  | 2.916 | 2.840  | 0.144  | 0.331  |
| 1.460                | 3.192  | 1.928  | 1.634 | 1.678  | 0.032  | 1.118  | 2.335  | 1.527  | 5.672  | 0.331 | 0.992  | 0.111  | 2.809 | 3.014  | 0.156  | 0.322  |
| 1.412                | 2.323  | 1.456  | 1.639 | 1.456  | 0.035  | 0.774  | 1.855  | 1.000  | 4.655  | 0.319 | 0.732  | 0.115  | 3.034 | 2.443  | 0.149  | 0.318  |
| 1.468                | 3.290  | 1.615  | 1.769 | 1.838  | 0.036  | 1.040  | 2.482  | 1.470  | 4.572  | 0.329 | 1.024  | 0.110  | 3.000 | 2.963  | 0.180  | 0.314  |
| 1.491                | 3.745  | 1.653  | 1.664 | 1.915  | 0.045  | 0.965  | 2.484  | 1.558  | 5.459  | 0.327 | 0.919  | 0.111  | 2.732 | 2.869  | 0.195  | 0.274  |
| 1.442                | 3.461  | 1.571  | 1.754 | 1.828  | 0.043  | 0.708  | 2.613  | 1.219  | 4.744  | 0.334 | 0.724  | 0.108  | 2.750 | 2.854  | 0.160  | 0.350  |
| 1.443                | 3.165  | 1.487  | 1.867 | 1.753  | 0.042  | 0.821  | 2.478  | 1.266  | 4.437  | 0.350 | 0.778  | 0.098  | 3.027 | 2.610  | 0.160  | 0.325  |
| 1.291                | 2.399  | 1.739  | 2.006 | 1.570  | 0.042  | 0.868  | 1.385  | 1.227  | 4.742  | 0.334 | 0.863  | 0.090  | 3.241 | 1.487  | 0.142  | 0.282  |
| 1.332                | 3.048  | 1.704  | 2.032 | 1.761  | 0.035  | 0.968  | 1.963  | 1.304  | 5.246  | 0.317 | 0.992  | 0.098  | 3.193 | 2.576  | 0.162  | 0.279  |
| 1.377                | 3.414  | 1.855  | 2.118 | 1.830  | 0.032  | 0.798  | 2.578  | 1.353  | 4.894  | 0.330 | 1.033  | 0.104  | 3.541 | 2.852  | 0.175  | 0.322  |
| 1.401                | 2.907  | 1.581  | 2.089 | 1.611  | 0.034  | 0.901  | 2.597  | 1.339  | 5.458  | 0.344 | 0.983  | 0.099  | 3.264 | 3.019  | 0.153  | 0.375  |
| 1.192                | 3.664  | 1.829  | 2.006 | 1.978  | 0.037  | 0.958  | 2.799  | 1.661  | 5.912  | 0.367 | 1.104  | 0.127  | 3.344 | 2.521  | 0.188  | 0.305  |
| 1.203                | 3.212  | 1.698  | 2.264 | 1.815  | 0.032  | 0.807  | 2.253  | 1.479  | 5.867  | 0.374 | 0.905  | 0.109  | 3.823 | 2.158  | 0.182  | 0.351  |
| 1.290                | 3.809  | 1.664  | 2.241 | 1.900  | 0.033  | 1.073  | 3.264  | 1.674  | 5.695  | 0.371 | 1.040  | 0.115  | 3.771 | 3.018  | 0.177  | 0.295  |
| 1.218                | 3.312  | 1.361  | 2.324 | 1.808  | 0.031  | 0.963  | 2.590  | 1.574  | 4.825  | 0.378 | 1.025  | 0.103  | 3.977 | 2.693  | 0.175  | 0.374  |
| 1.187                | 3.011  | 1.427  | 2.425 | 1.968  | 0.031  | 1.002  | 3.498  | 1.655  | 5.429  | 0.368 | 1.096  | 0.103  | 3.998 | 2.573  | 0.166  | 0.328  |
| annual growth rates: |        |        |       |        |        |        |        |        |        |       |        |        |       |        |        |        |
| -0.002               | 0.014  | 0.002  | 0.030 | 0.015  | 0.006  | 0.002  | 0.029  | 0.017  | 0.011  | 0.017 | 0.007  | -0.009 | 0.032 | 0.015  | 0.001  | 0.016  |
| 0.001                | 0.014  | -0.033 | 0.028 | -0.031 | -0.003 | -0.011 | -0.015 | -0.005 | 0.012  | 0.015 | -0.026 | -0.013 | 0.045 | 0.020  | -0.069 | 0.014  |
| -0.011               | -0.015 | 0.055  | 0.032 | 0.080  | -0.054 | 0.012  | 0.058  | 0.016  | -0.014 | 0.031 | 0.049  | -0.069 | 0.013 | 0.015  | 0.103  | 0.077  |
| -0.015               | 0.018  | 0.065  | 0.029 | 0.015  | 0.018  | 0.010  | 0.039  | 0.022  | 0.072  | 0.009 | 0.018  | -0.005 | 0.014 | 0.010  | 0.025  | 0.011  |
| 0.037                | 0.076  | 0.032  | 0.037 | 0.034  | 0.012  | 0.025  | 0.041  | 0.043  | 0.021  | 0.036 | 0.001  | -0.004 | 0.048 | 0.059  | -0.017 | 0.019  |
| -0.009               | -0.005 | -0.017 | 0.031 | 0.013  | 0.038  | -0.010 | -0.001 | 0.001  | -0.010 | 0.004 | 0.009  | -0.003 | 0.026 | -0.004 | 0.012  | -0.005 |
| -0.016               | -0.002 | -0.025 | 0.025 | 0.016  | -0.019 | 0.005  | 0.082  | 0.034  | 0.005  | 0.022 | 0.014  | 0.007  | 0.032 | 0.000  | 0.004  | 0.023  |

Table 2. Livestock Output Relative to 1996 Level for Alabama

| Year                         | AL    | AR    | AZ     | CA    | CO     | CT     | DE    | FL    | GA    | IA     | ID    | IL     | IN     | KS    | KY     |
|------------------------------|-------|-------|--------|-------|--------|--------|-------|-------|-------|--------|-------|--------|--------|-------|--------|
| 1960                         | 0.379 | 0.291 | 0.267  | 1.759 | 0.656  | 0.098  | 0.075 | 0.276 | 0.469 | 3.334  | 0.356 | 1.920  | 1.116  | 1.130 | 0.555  |
| 1961                         | 0.411 | 0.347 | 0.285  | 1.869 | 0.713  | 0.098  | 0.073 | 0.280 | 0.508 | 3.435  | 0.365 | 1.951  | 1.130  | 1.372 | 0.577  |
| 1962                         | 0.431 | 0.358 | 0.324  | 1.975 | 0.775  | 0.096  | 0.075 | 0.294 | 0.526 | 3.546  | 0.369 | 1.976  | 1.126  | 1.395 | 0.589  |
| 1963                         | 0.444 | 0.387 | 0.311  | 1.995 | 0.810  | 0.095  | 0.083 | 0.307 | 0.570 | 3.673  | 0.386 | 1.973  | 1.134  | 1.518 | 0.604  |
| 1964                         | 0.471 | 0.428 | 0.317  | 1.982 | 0.806  | 0.097  | 0.086 | 0.331 | 0.600 | 3.919  | 0.381 | 1.975  | 1.119  | 1.483 | 0.621  |
| 1965                         | 0.510 | 0.453 | 0.341  | 2.108 | 0.879  | 0.096  | 0.086 | 0.335 | 0.631 | 3.701  | 0.378 | 1.814  | 1.025  | 1.401 | 0.599  |
| 1966                         | 0.557 | 0.510 | 0.348  | 2.117 | 0.929  | 0.095  | 0.092 | 0.355 | 0.683 | 3.849  | 0.375 | 1.792  | 1.003  | 1.545 | 0.609  |
| 1967                         | 0.574 | 0.549 | 0.367  | 2.174 | 1.045  | 0.093  | 0.096 | 0.384 | 0.726 | 4.049  | 0.379 | 1.779  | 1.039  | 1.565 | 0.628  |
| 1968                         | 0.594 | 0.574 | 0.418  | 2.183 | 1.018  | 0.089  | 0.088 | 0.416 | 0.735 | 3.983  | 0.402 | 1.793  | 0.992  | 1.593 | 0.668  |
| 1969                         | 0.621 | 0.603 | 0.489  | 2.176 | 1.159  | 0.087  | 0.103 | 0.447 | 0.777 | 3.768  | 0.392 | 1.669  | 0.967  | 1.701 | 0.667  |
| 1970                         | 0.628 | 0.639 | 0.467  | 2.252 | 1.268  | 0.085  | 0.102 | 0.435 | 0.808 | 3.833  | 0.424 | 1.666  | 1.023  | 1.827 | 0.685  |
| 1971                         | 0.652 | 0.675 | 0.493  | 2.264 | 1.437  | 0.084  | 0.098 | 0.459 | 0.821 | 3.772  | 0.446 | 1.643  | 1.050  | 1.971 | 0.702  |
| 1972                         | 0.669 | 0.718 | 0.538  | 2.369 | 1.501  | 0.085  | 0.102 | 0.466 | 0.821 | 3.629  | 0.447 | 1.599  | 1.040  | 2.201 | 0.684  |
| 1973                         | 0.660 | 0.691 | 0.563  | 2.337 | 1.329  | 0.082  | 0.110 | 0.481 | 0.800 | 3.409  | 0.443 | 1.561  | 1.027  | 2.023 | 0.660  |
| 1974                         | 0.646 | 0.762 | 0.485  | 2.337 | 1.149  | 0.076  | 0.113 | 0.519 | 0.821 | 3.360  | 0.425 | 1.504  | 0.965  | 1.775 | 0.685  |
| 1975                         | 0.677 | 0.706 | 0.482  | 2.333 | 1.184  | 0.076  | 0.105 | 0.528 | 0.766 | 3.110  | 0.417 | 1.388  | 0.907  | 1.706 | 0.609  |
| 1976                         | 0.708 | 0.787 | 0.444  | 2.400 | 1.219  | 0.081  | 0.120 | 0.517 | 0.806 | 3.445  | 0.414 | 1.419  | 0.976  | 1.902 | 0.637  |
| 1977                         | 0.709 | 0.826 | 0.455  | 2.344 | 1.359  | 0.083  | 0.122 | 0.528 | 0.834 | 3.667  | 0.424 | 1.429  | 0.938  | 2.076 | 0.765  |
| 1978                         | 0.708 | 0.866 | 0.546  | 2.426 | 1.448  | 0.083  | 0.127 | 0.509 | 0.861 | 3.591  | 0.441 | 1.391  | 0.952  | 2.052 | 0.702  |
| 1979                         | 0.725 | 0.897 | 0.424  | 2.375 | 1.304  | 0.084  | 0.140 | 0.534 | 0.960 | 3.405  | 0.522 | 1.421  | 0.980  | 2.025 | 0.664  |
| 1980                         | 0.721 | 0.894 | 0.462  | 2.297 | 1.265  | 0.085  | 0.131 | 0.559 | 0.962 | 3.636  | 0.529 | 1.470  | 1.034  | 1.986 | 0.761  |
| 1981                         | 0.744 | 0.931 | 0.420  | 2.416 | 1.117  | 0.088  | 0.139 | 0.535 | 0.994 | 3.530  | 0.548 | 1.402  | 0.988  | 1.962 | 0.835  |
| 1982                         | 0.713 | 0.882 | 0.422  | 2.516 | 1.174  | 0.094  | 0.148 | 0.587 | 0.965 | 3.304  | 0.551 | 1.303  | 0.961  | 1.953 | 0.817  |
| 1983                         | 0.709 | 0.877 | 0.452  | 2.424 | 1.180  | 0.093  | 0.157 | 0.582 | 0.943 | 3.131  | 0.527 | 1.311  | 1.045  | 2.020 | 0.929  |
| 1984                         | 0.718 | 0.951 | 0.481  | 2.559 | 1.217  | 0.096  | 0.164 | 0.552 | 0.941 | 2.972  | 0.521 | 1.252  | 0.996  | 2.037 | 0.899  |
| 1985                         | 0.749 | 0.982 | 0.468  | 2.656 | 1.233  | 0.097  | 0.169 | 0.568 | 0.974 | 2.970  | 0.569 | 1.275  | 1.043  | 2.050 | 0.889  |
| 1986                         | 0.795 | 1.028 | 0.465  | 2.698 | 1.296  | 0.098  | 0.171 | 0.581 | 0.977 | 2.971  | 0.542 | 1.216  | 1.056  | 2.199 | 0.868  |
| 1987                         | 0.843 | 1.153 | 0.478  | 2.673 | 1.306  | 0.091  | 0.187 | 0.536 | 1.000 | 3.101  | 0.564 | 1.237  | 1.105  | 2.214 | 0.853  |
| 1988                         | 0.846 | 1.145 | 0.444  | 2.833 | 1.319  | 0.088  | 0.192 | 0.556 | 1.031 | 3.101  | 0.626 | 1.332  | 1.085  | 2.237 | 0.839  |
| 1989                         | 0.875 | 1.238 | 0.400  | 2.885 | 1.270  | 0.079  | 0.197 | 0.569 | 1.056 | 3.102  | 0.603 | 1.273  | 1.044  | 2.273 | 0.866  |
| 1990                         | 0.973 | 1.277 | 0.434  | 2.929 | 1.282  | 0.093  | 0.203 | 0.562 | 1.103 | 3.153  | 0.646 | 1.246  | 1.076  | 2.363 | 0.843  |
| 1991                         | 1.013 | 1.316 | 0.437  | 2.983 | 1.290  | 0.090  | 0.210 | 0.542 | 1.119 | 3.106  | 0.619 | 1.277  | 1.087  | 2.326 | 0.891  |
| 1992                         | 0.982 | 1.338 | 0.484  | 2.907 | 1.355  | 0.111  | 0.220 | 0.571 | 1.179 | 3.385  | 0.641 | 1.299  | 1.135  | 2.462 | 0.885  |
| 1993                         | 0.956 | 1.394 | 0.479  | 2.935 | 1.441  | 0.111  | 0.226 | 0.584 | 1.244 | 3.328  | 0.662 | 1.273  | 1.118  | 2.381 | 0.883  |
| 1994                         | 0.996 | 1.465 | 0.447  | 3.184 | 1.437  | 0.112  | 0.236 | 0.601 | 1.386 | 3.321  | 0.706 | 1.243  | 1.102  | 2.610 | 0.929  |
| 1995                         | 1.033 | 1.465 | 0.476  | 3.305 | 1.528  | 0.124  | 0.239 | 0.584 | 1.396 | 3.174  | 0.746 | 1.174  | 1.102  | 2.623 | 1.024  |
| 1996                         | 1.000 | 1.572 | 0.479  | 3.352 | 1.540  | 0.120  | 0.242 | 0.607 | 1.489 | 3.016  | 0.798 | 1.071  | 1.022  | 2.655 | 1.109  |
| Average annual growth rates: |       |       |        |       |        |        |       |       |       |        |       |        |        |       |        |
| 1960-96                      | 0.027 | 0.047 | 0.016  | 0.018 | 0.024  | 0.006  | 0.033 | 0.022 | 0.032 | -0.003 | 0.022 | -0.016 | -0.002 | 0.024 | 0.019  |
| 1960-66                      | 0.064 | 0.094 | 0.044  | 0.031 | 0.058  | -0.005 | 0.035 | 0.042 | 0.063 | 0.024  | 0.009 | -0.011 | -0.018 | 0.052 | 0.016  |
| 1966-69                      | 0.036 | 0.056 | 0.114  | 0.009 | 0.074  | -0.031 | 0.037 | 0.077 | 0.043 | -0.007 | 0.015 | -0.024 | -0.012 | 0.032 | 0.030  |
| 1969-73                      | 0.015 | 0.034 | 0.035  | 0.018 | 0.034  | -0.016 | 0.016 | 0.019 | 0.007 | -0.025 | 0.030 | -0.017 | 0.015  | 0.043 | -0.003 |
| 1973-79                      | 0.016 | 0.044 | -0.047 | 0.003 | -0.003 | 0.004  | 0.041 | 0.017 | 0.031 | 0.000  | 0.027 | -0.016 | -0.008 | 0.000 | 0.001  |
| 1979-89                      | 0.019 | 0.032 | -0.006 | 0.019 | -0.003 | -0.006 | 0.034 | 0.006 | 0.010 | -0.009 | 0.014 | -0.011 | 0.006  | 0.012 | 0.027  |
| 1989-96                      | 0.019 | 0.034 | 0.026  | 0.021 | 0.028  | 0.060  | 0.029 | 0.009 | 0.049 | -0.004 | 0.040 | -0.025 | -0.003 | 0.022 | 0.035  |

table 2 Continued

| LA                   | MA     | MD    | ME     | MI     | MN     | MO     | MS     | MT     | NC    | ND     | NE     | NH     | NJ     | NM     | NV     |
|----------------------|--------|-------|--------|--------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|
| 0.225                | 0.117  | 0.195 | 0.113  | 0.665  | 1.897  | 1.187  | 0.354  | 0.367  | 0.363 | 0.341  | 1.302  | 0.053  | 0.195  | 0.238  | 0.069  |
| 0.238                | 0.115  | 0.198 | 0.119  | 0.678  | 1.964  | 1.249  | 0.386  | 0.355  | 0.401 | 0.392  | 1.405  | 0.057  | 0.187  | 0.258  | 0.063  |
| 0.241                | 0.113  | 0.209 | 0.122  | 0.718  | 1.942  | 1.248  | 0.402  | 0.361  | 0.418 | 0.393  | 1.481  | 0.057  | 0.179  | 0.271  | 0.065  |
| 0.252                | 0.112  | 0.213 | 0.127  | 0.717  | 1.947  | 1.279  | 0.430  | 0.395  | 0.433 | 0.437  | 1.562  | 0.056  | 0.172  | 0.287  | 0.068  |
| 0.265                | 0.110  | 0.211 | 0.131  | 0.746  | 2.012  | 1.302  | 0.443  | 0.419  | 0.451 | 0.459  | 1.654  | 0.055  | 0.162  | 0.247  | 0.071  |
| 0.277                | 0.106  | 0.221 | 0.131  | 0.710  | 1.905  | 1.250  | 0.472  | 0.429  | 0.470 | 0.432  | 1.610  | 0.053  | 0.152  | 0.293  | 0.075  |
| 0.284                | 0.102  | 0.225 | 0.133  | 0.675  | 1.893  | 1.299  | 0.497  | 0.445  | 0.505 | 0.428  | 1.744  | 0.054  | 0.135  | 0.324  | 0.077  |
| 0.298                | 0.101  | 0.221 | 0.134  | 0.649  | 1.915  | 1.372  | 0.526  | 0.434  | 0.543 | 0.413  | 1.845  | 0.052  | 0.128  | 0.362  | 0.076  |
| 0.297                | 0.097  | 0.227 | 0.134  | 0.635  | 1.912  | 1.364  | 0.530  | 0.466  | 0.571 | 0.393  | 1.919  | 0.049  | 0.116  | 0.357  | 0.081  |
| 0.296                | 0.090  | 0.240 | 0.139  | 0.633  | 1.836  | 1.336  | 0.547  | 0.458  | 0.606 | 0.377  | 1.836  | 0.047  | 0.111  | 0.389  | 0.086  |
| 0.314                | 0.087  | 0.245 | 0.147  | 0.645  | 1.890  | 1.410  | 0.567  | 0.472  | 0.645 | 0.390  | 2.075  | 0.044  | 0.105  | 0.434  | 0.086  |
| 0.329                | 0.086  | 0.249 | 0.148  | 0.667  | 1.964  | 1.454  | 0.573  | 0.488  | 0.648 | 0.425  | 2.120  | 0.045  | 0.104  | 0.412  | 0.092  |
| 0.342                | 0.081  | 0.241 | 0.150  | 0.667  | 1.888  | 1.449  | 0.575  | 0.482  | 0.659 | 0.430  | 2.160  | 0.043  | 0.097  | 0.477  | 0.096  |
| 0.304                | 0.075  | 0.242 | 0.154  | 0.646  | 1.932  | 1.443  | 0.548  | 0.466  | 0.656 | 0.452  | 2.116  | 0.043  | 0.088  | 0.511  | 0.098  |
| 0.305                | 0.075  | 0.243 | 0.159  | 0.613  | 1.865  | 1.384  | 0.550  | 0.450  | 0.666 | 0.466  | 1.984  | 0.040  | 0.087  | 0.401  | 0.095  |
| 0.304                | 0.077  | 0.244 | 0.162  | 0.615  | 1.752  | 1.290  | 0.529  | 0.410  | 0.634 | 0.435  | 1.850  | 0.042  | 0.079  | 0.434  | 0.097  |
| 0.321                | 0.074  | 0.256 | 0.172  | 0.649  | 1.814  | 1.322  | 0.546  | 0.424  | 0.688 | 0.429  | 2.019  | 0.041  | 0.076  | 0.437  | 0.090  |
| 0.311                | 0.074  | 0.255 | 0.174  | 0.657  | 1.860  | 1.335  | 0.549  | 0.392  | 0.711 | 0.401  | 2.048  | 0.040  | 0.083  | 0.491  | 0.088  |
| 0.288                | 0.071  | 0.276 | 0.179  | 0.653  | 1.822  | 1.313  | 0.515  | 0.434  | 0.742 | 0.358  | 2.093  | 0.042  | 0.077  | 0.467  | 0.087  |
| 0.280                | 0.068  | 0.288 | 0.177  | 0.638  | 1.912  | 1.332  | 0.487  | 0.409  | 0.815 | 0.388  | 2.415  | 0.041  | 0.069  | 0.464  | 0.091  |
| 0.285                | 0.068  | 0.298 | 0.160  | 0.672  | 2.110  | 1.300  | 0.512  | 0.439  | 0.857 | 0.421  | 2.454  | 0.038  | 0.071  | 0.452  | 0.099  |
| 0.282                | 0.068  | 0.314 | 0.161  | 0.680  | 2.084  | 1.295  | 0.525  | 0.478  | 0.889 | 0.420  | 2.373  | 0.040  | 0.070  | 0.392  | 0.099  |
| 0.288                | 0.068  | 0.312 | 0.155  | 0.713  | 2.055  | 1.196  | 0.542  | 0.449  | 0.891 | 0.409  | 2.479  | 0.040  | 0.070  | 0.423  | 0.100  |
| 0.289                | 0.067  | 0.320 | 0.135  | 0.749  | 2.093  | 1.280  | 0.544  | 0.514  | 0.944 | 0.440  | 2.474  | 0.040  | 0.072  | 0.433  | 0.109  |
| 0.277                | 0.063  | 0.322 | 0.137  | 0.749  | 1.975  | 1.169  | 0.544  | 0.479  | 0.947 | 0.443  | 2.379  | 0.038  | 0.070  | 0.470  | 0.105  |
| 0.295                | 0.066  | 0.335 | 0.128  | 0.765  | 2.070  | 1.163  | 0.576  | 0.428  | 1.015 | 0.450  | 2.534  | 0.038  | 0.082  | 0.496  | 0.094  |
| 0.300                | 0.064  | 0.327 | 0.119  | 0.755  | 2.041  | 1.128  | 0.566  | 0.417  | 1.061 | 0.413  | 2.559  | 0.038  | 0.082  | 0.489  | 0.091  |
| 0.276                | 0.058  | 0.335 | 0.117  | 0.756  | 2.078  | 1.146  | 0.575  | 0.409  | 1.145 | 0.419  | 2.774  | 0.035  | 0.100  | 0.492  | 0.092  |
| 0.300                | 0.054  | 0.319 | 0.109  | 0.755  | 2.103  | 1.151  | 0.593  | 0.427  | 1.195 | 0.326  | 2.858  | 0.032  | 0.099  | 0.536  | 0.084  |
| 0.246                | 0.053  | 0.322 | 0.098  | 0.753  | 2.066  | 1.125  | 0.597  | 0.432  | 1.258 | 0.340  | 3.009  | 0.030  | 0.090  | 0.551  | 0.085  |
| 0.276                | 0.056  | 0.325 | 0.114  | 0.749  | 2.032  | 1.108  | 0.623  | 0.447  | 1.317 | 0.336  | 3.016  | 0.031  | 0.088  | 0.527  | 0.092  |
| 0.275                | 0.057  | 0.333 | 0.114  | 0.767  | 2.069  | 1.158  | 0.654  | 0.467  | 1.409 | 0.324  | 2.930  | 0.032  | 0.090  | 0.565  | 0.098  |
| 0.304                | 0.058  | 0.346 | 0.120  | 0.802  | 2.184  | 1.204  | 0.707  | 0.451  | 1.557 | 0.397  | 2.985  | 0.034  | 0.097  | 0.582  | 0.090  |
| 0.330                | 0.056  | 0.357 | 0.122  | 0.808  | 2.132  | 1.256  | 0.762  | 0.467  | 1.663 | 0.338  | 3.018  | 0.033  | 0.092  | 0.605  | 0.094  |
| 0.338                | 0.056  | 0.350 | 0.127  | 0.837  | 2.130  | 1.272  | 0.834  | 0.469  | 1.796 | 0.341  | 2.899  | 0.032  | 0.096  | 0.661  | 0.098  |
| 0.349                | 0.053  | 0.359 | 0.141  | 0.820  | 2.162  | 1.358  | 0.896  | 0.478  | 1.958 | 0.360  | 3.044  | 0.035  | 0.118  | 0.606  | 0.096  |
| 0.353                | 0.053  | 0.360 | 0.142  | 0.782  | 2.175  | 1.342  | 0.939  | 0.479  | 2.018 | 0.342  | 2.939  | 0.035  | 0.121  | 0.751  | 0.103  |
| annual growth rates: |        |       |        |        |        |        |        |        |       |        |        |        |        |        |        |
| 0.013                | -0.022 | 0.017 | 0.006  | 0.005  | 0.004  | 0.003  | 0.027  | 0.007  | 0.048 | 0.000  | 0.023  | -0.012 | -0.013 | 0.032  | 0.011  |
| 0.039                | -0.022 | 0.023 | 0.028  | 0.003  | 0.000  | 0.015  | 0.057  | 0.032  | 0.055 | 0.038  | 0.049  | 0.001  | -0.061 | 0.051  | 0.017  |
| 0.014                | -0.043 | 0.022 | 0.013  | -0.022 | -0.010 | 0.009  | 0.032  | 0.010  | 0.061 | -0.042 | 0.017  | -0.044 | -0.064 | 0.061  | 0.038  |
| 0.007                | -0.044 | 0.002 | 0.026  | 0.005  | 0.013  | 0.019  | 0.001  | 0.004  | 0.020 | 0.045  | 0.036  | -0.025 | -0.058 | 0.068  | 0.032  |
| -0.014               | -0.017 | 0.029 | 0.023  | -0.002 | -0.002 | -0.013 | -0.020 | -0.022 | 0.036 | -0.026 | 0.022  | -0.005 | -0.041 | -0.016 | -0.012 |
| -0.013               | -0.025 | 0.011 | -0.059 | 0.017  | 0.008  | -0.017 | 0.020  | 0.005  | 0.043 | -0.013 | 0.022  | -0.030 | 0.026  | 0.017  | -0.007 |
| 0.052                | 0.000  | 0.016 | 0.053  | 0.006  | 0.007  | 0.025  | 0.065  | 0.015  | 0.067 | 0.001  | -0.003 | 0.021  | 0.042  | 0.044  | 0.027  |

table 2 Continued

| NY                   | OH     | OK     | OR     | PA     | RI     | SC    | SD     | TN     | TX     | UT     | VA    | VT    | WA     | WI     | WV     | WY     |
|----------------------|--------|--------|--------|--------|--------|-------|--------|--------|--------|--------|-------|-------|--------|--------|--------|--------|
| 0.936                | 0.962  | 0.584  | 0.302  | 0.828  | 0.015  | 0.141 | 0.818  | 0.450  | 1.790  | 0.208  | 0.370 | 0.162 | 0.334  | 1.922  | 0.121  | 0.220  |
| 0.954                | 1.013  | 0.624  | 0.318  | 0.834  | 0.014  | 0.148 | 0.896  | 0.460  | 1.872  | 0.215  | 0.373 | 0.170 | 0.341  | 1.949  | 0.117  | 0.208  |
| 0.964                | 1.038  | 0.629  | 0.321  | 0.840  | 0.014  | 0.150 | 0.928  | 0.470  | 1.970  | 0.213  | 0.368 | 0.171 | 0.349  | 1.991  | 0.112  | 0.221  |
| 0.973                | 1.036  | 0.659  | 0.324  | 0.839  | 0.014  | 0.154 | 0.983  | 0.478  | 1.991  | 0.216  | 0.378 | 0.172 | 0.350  | 2.009  | 0.109  | 0.249  |
| 1.001                | 1.064  | 0.690  | 0.329  | 0.843  | 0.014  | 0.152 | 1.056  | 0.480  | 1.983  | 0.217  | 0.365 | 0.173 | 0.358  | 2.079  | 0.109  | 0.250  |
| 1.005                | 1.000  | 0.735  | 0.323  | 0.846  | 0.013  | 0.157 | 1.018  | 0.484  | 1.997  | 0.212  | 0.367 | 0.175 | 0.371  | 1.991  | 0.106  | 0.258  |
| 0.971                | 1.002  | 0.761  | 0.330  | 0.834  | 0.013  | 0.167 | 1.057  | 0.499  | 2.075  | 0.226  | 0.371 | 0.163 | 0.374  | 1.934  | 0.102  | 0.261  |
| 0.962                | 0.989  | 0.781  | 0.330  | 0.834  | 0.012  | 0.183 | 1.122  | 0.518  | 2.133  | 0.224  | 0.377 | 0.158 | 0.361  | 1.942  | 0.099  | 0.282  |
| 0.945                | 0.964  | 0.814  | 0.331  | 0.826  | 0.011  | 0.181 | 1.116  | 0.521  | 2.178  | 0.224  | 0.385 | 0.159 | 0.371  | 1.938  | 0.098  | 0.279  |
| 0.946                | 0.957  | 0.853  | 0.319  | 0.843  | 0.011  | 0.193 | 1.047  | 0.520  | 2.381  | 0.225  | 0.396 | 0.164 | 0.355  | 1.874  | 0.094  | 0.266  |
| 0.943                | 0.969  | 0.947  | 0.325  | 0.846  | 0.010  | 0.201 | 1.076  | 0.542  | 2.506  | 0.233  | 0.410 | 0.169 | 0.372  | 1.941  | 0.095  | 0.269  |
| 0.948                | 0.995  | 0.994  | 0.323  | 0.865  | 0.009  | 0.218 | 1.141  | 0.546  | 2.692  | 0.231  | 0.421 | 0.172 | 0.375  | 1.971  | 0.099  | 0.294  |
| 0.937                | 0.967  | 1.105  | 0.338  | 0.843  | 0.008  | 0.218 | 1.119  | 0.562  | 3.083  | 0.232  | 0.425 | 0.173 | 0.399  | 1.961  | 0.097  | 0.289  |
| 0.887                | 0.857  | 1.168  | 0.328  | 0.815  | 0.008  | 0.207 | 1.197  | 0.558  | 3.154  | 0.224  | 0.408 | 0.166 | 0.420  | 1.874  | 0.095  | 0.278  |
| 0.914                | 0.851  | 1.183  | 0.315  | 0.842  | 0.008  | 0.204 | 1.235  | 0.541  | 3.061  | 0.224  | 0.429 | 0.166 | 0.427  | 1.924  | 0.100  | 0.293  |
| 0.917                | 0.868  | 1.104  | 0.314  | 0.867  | 0.008  | 0.206 | 1.052  | 0.565  | 3.031  | 0.232  | 0.428 | 0.174 | 0.418  | 1.903  | 0.099  | 0.284  |
| 0.914                | 0.899  | 1.032  | 0.326  | 0.912  | 0.008  | 0.210 | 1.057  | 0.588  | 3.075  | 0.228  | 0.433 | 0.183 | 0.453  | 2.011  | 0.094  | 0.305  |
| 0.913                | 0.858  | 1.164  | 0.319  | 0.950  | 0.007  | 0.209 | 1.071  | 0.579  | 3.158  | 0.222  | 0.454 | 0.185 | 0.444  | 2.068  | 0.097  | 0.295  |
| 0.934                | 0.808  | 0.991  | 0.322  | 0.983  | 0.007  | 0.219 | 1.040  | 0.573  | 3.162  | 0.232  | 0.471 | 0.187 | 0.499  | 2.122  | 0.095  | 0.311  |
| 0.989                | 0.870  | 1.115  | 0.370  | 1.031  | 0.007  | 0.224 | 1.027  | 0.581  | 3.064  | 0.224  | 0.537 | 0.185 | 0.520  | 2.176  | 0.108  | 0.295  |
| 1.039                | 0.848  | 1.191  | 0.359  | 1.112  | 0.008  | 0.237 | 1.118  | 0.579  | 2.922  | 0.232  | 0.564 | 0.185 | 0.467  | 2.214  | 0.109  | 0.289  |
| 1.054                | 0.847  | 1.153  | 0.381  | 1.179  | 0.007  | 0.243 | 1.098  | 0.585  | 3.006  | 0.265  | 0.549 | 0.188 | 0.550  | 2.309  | 0.108  | 0.298  |
| 1.058                | 0.878  | 1.178  | 0.381  | 1.179  | 0.007  | 0.230 | 1.026  | 0.595  | 3.445  | 0.263  | 0.556 | 0.201 | 0.551  | 2.284  | 0.102  | 0.289  |
| 1.055                | 0.919  | 1.125  | 0.378  | 1.223  | 0.007  | 0.233 | 1.078  | 0.609  | 3.045  | 0.251  | 0.591 | 0.199 | 0.534  | 2.269  | 0.122  | 0.296  |
| 1.040                | 0.910  | 1.108  | 0.379  | 1.187  | 0.007  | 0.247 | 1.080  | 0.634  | 3.207  | 0.233  | 0.604 | 0.187 | 0.550  | 2.264  | 0.117  | 0.294  |
| 1.087                | 0.947  | 1.132  | 0.395  | 1.264  | 0.007  | 0.252 | 1.090  | 0.657  | 3.219  | 0.245  | 0.639 | 0.194 | 0.566  | 2.400  | 0.112  | 0.307  |
| 1.047                | 0.949  | 1.218  | 0.394  | 1.305  | 0.006  | 0.260 | 0.970  | 0.660  | 3.354  | 0.260  | 0.666 | 0.192 | 0.572  | 2.393  | 0.125  | 0.297  |
| 1.023                | 0.975  | 1.200  | 0.385  | 1.320  | 0.007  | 0.266 | 1.095  | 0.653  | 3.421  | 0.269  | 0.670 | 0.197 | 0.585  | 2.484  | 0.124  | 0.301  |
| 1.018                | 0.975  | 1.184  | 0.390  | 1.325  | 0.007  | 0.280 | 1.135  | 0.614  | 3.476  | 0.294  | 0.665 | 0.193 | 0.654  | 2.469  | 0.112  | 0.304  |
| 1.013                | 0.929  | 1.224  | 0.400  | 1.323  | 0.006  | 0.281 | 1.130  | 0.560  | 3.369  | 0.288  | 0.673 | 0.188 | 0.651  | 2.361  | 0.118  | 0.287  |
| 0.994                | 1.024  | 1.172  | 0.411  | 1.316  | 0.006  | 0.294 | 1.139  | 0.532  | 3.673  | 0.292  | 0.667 | 0.190 | 0.711  | 2.367  | 0.129  | 0.276  |
| 1.007                | 0.925  | 1.197  | 0.409  | 1.331  | 0.006  | 0.287 | 1.132  | 0.543  | 3.923  | 0.289  | 0.689 | 0.191 | 0.734  | 2.335  | 0.132  | 0.351  |
| 1.064                | 0.923  | 1.159  | 0.401  | 1.353  | 0.007  | 0.312 | 1.130  | 0.575  | 3.912  | 0.313  | 0.702 | 0.194 | 0.782  | 2.304  | 0.134  | 0.306  |
| 1.038                | 0.955  | 1.184  | 0.399  | 1.348  | 0.007  | 0.314 | 1.001  | 0.553  | 4.126  | 0.308  | 0.714 | 0.202 | 0.817  | 2.312  | 0.153  | 0.316  |
| 1.014                | 0.939  | 1.363  | 0.401  | 1.369  | 0.006  | 0.319 | 1.000  | 0.542  | 4.295  | 0.329  | 0.734 | 0.199 | 0.852  | 2.248  | 0.165  | 0.293  |
| 1.071                | 0.953  | 1.310  | 0.397  | 1.395  | 0.006  | 0.335 | 0.982  | 0.545  | 4.683  | 0.341  | 0.754 | 0.207 | 0.885  | 2.269  | 0.173  | 0.305  |
| 1.101                | 0.988  | 1.315  | 0.388  | 1.407  | 0.006  | 0.363 | 0.927  | 0.531  | 4.100  | 0.370  | 0.773 | 0.213 | 0.900  | 2.223  | 0.162  | 0.313  |
| annual growth rates: |        |        |        |        |        |       |        |        |        |        |       |       |        |        |        |        |
| 0.004                | 0.001  | 0.023  | 0.007  | 0.015  | -0.026 | 0.026 | 0.003  | 0.005  | 0.023  | 0.016  | 0.020 | 0.008 | 0.028  | 0.004  | 0.008  | 0.010  |
| 0.006                | 0.007  | 0.044  | 0.015  | 0.001  | -0.026 | 0.029 | 0.043  | 0.017  | 0.025  | 0.014  | 0.001 | 0.019 | 0.001  | -0.028 | 0.029  |        |
| -0.009               | -0.016 | 0.038  | -0.011 | 0.004  | -0.053 | 0.048 | -0.003 | 0.014  | 0.046  | -0.001 | 0.022 | 0.001 | -0.017 | -0.010 | -0.027 | 0.006  |
| -0.016               | -0.028 | 0.079  | 0.007  | -0.008 | -0.081 | 0.017 | 0.033  | 0.018  | 0.070  | -0.002 | 0.007 | 0.003 | 0.042  | 0.000  | 0.002  | 0.011  |
| 0.018                | 0.003  | -0.008 | 0.020  | 0.039  | -0.018 | 0.014 | -0.026 | 0.007  | -0.005 | 0.000  | 0.046 | 0.018 | 0.036  | 0.025  | 0.021  | 0.010  |
| 0.002                | 0.007  | 0.009  | 0.008  | 0.025  | -0.015 | 0.022 | 0.010  | -0.004 | 0.009  | 0.025  | 0.023 | 0.002 | 0.023  | 0.008  | 0.009  | -0.003 |
| 0.012                | 0.009  | 0.010  | -0.005 | 0.009  | -0.003 | 0.037 | -0.028 | -0.008 | 0.028  | 0.036  | 0.020 | 0.018 | 0.046  | -0.009 | 0.046  | 0.012  |

Table 3. Intermediate Input Relative to 1996 Level for Alabama

| Year                         | AL    | AR    | AZ     | CA     | CO     | CT     | DE     | FL     | GA     | IA     | ID     | IL     | IN     | KS     | KY     |
|------------------------------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1960                         | 0.550 | 0.628 | 0.431  | 2.605  | 0.862  | 0.123  | 0.106  | 0.523  | 0.750  | 3.846  | 0.550  | 2.438  | 1.509  | 1.581  | 0.620  |
| 1961                         | 0.542 | 0.672 | 0.434  | 2.559  | 0.890  | 0.111  | 0.093  | 0.519  | 0.752  | 3.816  | 0.560  | 2.353  | 1.426  | 1.791  | 0.607  |
| 1962                         | 0.593 | 0.706 | 0.505  | 2.739  | 0.972  | 0.105  | 0.095  | 0.568  | 0.802  | 3.951  | 0.561  | 2.421  | 1.417  | 1.711  | 0.628  |
| 1963                         | 0.596 | 0.751 | 0.481  | 2.786  | 0.973  | 0.104  | 0.102  | 0.570  | 0.807  | 4.033  | 0.591  | 2.385  | 1.413  | 1.839  | 0.652  |
| 1964                         | 0.621 | 0.789 | 0.465  | 2.730  | 0.962  | 0.106  | 0.106  | 0.588  | 0.873  | 4.214  | 0.605  | 2.435  | 1.442  | 1.681  | 0.646  |
| 1965                         | 0.662 | 0.822 | 0.492  | 2.840  | 1.039  | 0.096  | 0.105  | 0.591  | 0.920  | 4.109  | 0.593  | 2.376  | 1.373  | 1.707  | 0.627  |
| 1966                         | 0.707 | 0.874 | 0.478  | 2.749  | 1.104  | 0.097  | 0.112  | 0.638  | 0.992  | 4.480  | 0.606  | 2.586  | 1.536  | 1.865  | 0.678  |
| 1967                         | 0.717 | 0.930 | 0.501  | 2.825  | 1.187  | 0.097  | 0.114  | 0.708  | 1.009  | 4.621  | 0.606  | 2.583  | 1.466  | 1.857  | 0.668  |
| 1968                         | 0.714 | 0.963 | 0.529  | 2.836  | 1.129  | 0.091  | 0.098  | 0.692  | 0.998  | 4.549  | 0.627  | 2.601  | 1.403  | 1.905  | 0.699  |
| 1969                         | 0.745 | 1.020 | 0.609  | 2.873  | 1.318  | 0.088  | 0.107  | 0.734  | 1.055  | 4.514  | 0.635  | 2.513  | 1.407  | 2.127  | 0.690  |
| 1970                         | 0.769 | 1.049 | 0.561  | 2.864  | 1.426  | 0.085  | 0.107  | 0.739  | 1.043  | 4.565  | 0.670  | 2.471  | 1.425  | 2.182  | 0.705  |
| 1971                         | 0.751 | 1.056 | 0.600  | 2.949  | 1.624  | 0.079  | 0.096  | 0.731  | 1.000  | 4.443  | 0.687  | 2.312  | 1.383  | 2.270  | 0.660  |
| 1972                         | 0.749 | 1.049 | 0.657  | 2.922  | 1.720  | 0.076  | 0.092  | 0.760  | 1.008  | 4.489  | 0.691  | 2.393  | 1.440  | 2.644  | 0.724  |
| 1973                         | 0.771 | 1.055 | 0.663  | 2.971  | 1.440  | 0.073  | 0.104  | 0.756  | 1.041  | 4.356  | 0.743  | 2.406  | 1.494  | 2.518  | 0.693  |
| 1974                         | 0.766 | 1.070 | 0.587  | 3.088  | 1.288  | 0.083  | 0.111  | 0.820  | 1.071  | 4.295  | 0.740  | 2.545  | 1.544  | 2.186  | 0.731  |
| 1975                         | 0.716 | 0.958 | 0.571  | 3.097  | 1.252  | 0.077  | 0.100  | 0.784  | 1.014  | 4.348  | 0.714  | 2.476  | 1.513  | 2.155  | 0.698  |
| 1976                         | 0.776 | 1.098 | 0.596  | 3.294  | 1.358  | 0.077  | 0.107  | 0.769  | 1.105  | 4.751  | 0.715  | 2.734  | 1.650  | 2.446  | 0.710  |
| 1977                         | 0.735 | 1.108 | 0.612  | 3.135  | 1.475  | 0.075  | 0.110  | 0.771  | 1.050  | 4.622  | 0.736  | 2.778  | 1.643  | 2.518  | 0.734  |
| 1978                         | 0.841 | 1.226 | 0.718  | 3.607  | 1.739  | 0.080  | 0.143  | 0.953  | 1.163  | 4.878  | 0.923  | 2.815  | 1.779  | 3.102  | 0.816  |
| 1979                         | 0.907 | 1.304 | 0.615  | 3.656  | 1.656  | 0.083  | 0.149  | 1.092  | 1.319  | 4.985  | 0.995  | 3.004  | 1.837  | 3.087  | 0.801  |
| 1980                         | 0.900 | 1.300 | 0.619  | 3.482  | 1.649  | 0.087  | 0.150  | 1.093  | 1.323  | 5.093  | 0.994  | 3.047  | 1.876  | 3.036  | 0.826  |
| 1981                         | 0.859 | 1.251 | 0.575  | 3.535  | 1.441  | 0.082  | 0.150  | 1.011  | 1.286  | 4.865  | 0.975  | 2.922  | 1.756  | 2.727  | 0.770  |
| 1982                         | 0.798 | 1.165 | 0.585  | 3.538  | 1.566  | 0.077  | 0.146  | 0.974  | 1.129  | 4.748  | 0.963  | 2.841  | 1.766  | 2.936  | 0.745  |
| 1983                         | 0.817 | 1.209 | 0.593  | 3.453  | 1.593  | 0.083  | 0.157  | 1.011  | 1.183  | 4.459  | 0.940  | 2.723  | 1.786  | 2.993  | 0.738  |
| 1984                         | 0.854 | 1.300 | 0.598  | 3.605  | 1.555  | 0.078  | 0.176  | 0.972  | 1.193  | 3.977  | 0.903  | 2.457  | 1.627  | 2.910  | 0.678  |
| 1985                         | 0.825 | 1.246 | 0.550  | 3.351  | 1.514  | 0.074  | 0.163  | 0.937  | 1.131  | 3.857  | 0.873  | 2.407  | 1.589  | 2.853  | 0.671  |
| 1986                         | 0.831 | 1.311 | 0.530  | 3.368  | 1.562  | 0.075  | 0.160  | 0.954  | 1.120  | 3.880  | 0.849  | 2.426  | 1.627  | 3.040  | 0.712  |
| 1987                         | 0.922 | 1.495 | 0.539  | 3.321  | 1.538  | 0.073  | 0.181  | 1.012  | 1.186  | 3.947  | 0.851  | 2.308  | 1.630  | 2.956  | 0.683  |
| 1988                         | 0.909 | 1.538 | 0.500  | 3.384  | 1.578  | 0.068  | 0.184  | 0.934  | 1.151  | 3.797  | 0.900  | 2.272  | 1.559  | 2.952  | 0.756  |
| 1989                         | 0.903 | 1.720 | 0.485  | 3.557  | 1.468  | 0.070  | 0.192  | 0.951  | 1.176  | 3.750  | 0.908  | 2.216  | 1.519  | 2.905  | 0.742  |
| 1990                         | 0.950 | 1.889 | 0.450  | 3.575  | 1.468  | 0.075  | 0.186  | 0.967  | 1.157  | 4.109  | 0.849  | 2.307  | 1.620  | 3.094  | 0.814  |
| 1991                         | 0.911 | 1.943 | 0.459  | 3.782  | 1.384  | 0.071  | 0.190  | 0.955  | 1.152  | 4.021  | 0.846  | 2.394  | 1.638  | 2.878  | 0.834  |
| 1992                         | 0.909 | 1.883 | 0.457  | 3.645  | 1.428  | 0.072  | 0.187  | 0.951  | 1.158  | 4.029  | 0.897  | 2.444  | 1.658  | 3.085  | 0.826  |
| 1993                         | 0.953 | 1.992 | 0.465  | 4.028  | 1.482  | 0.072  | 0.186  | 1.053  | 1.274  | 3.948  | 0.856  | 2.479  | 1.724  | 3.042  | 0.866  |
| 1994                         | 0.949 | 2.057 | 0.491  | 4.216  | 1.566  | 0.075  | 0.201  | 1.015  | 1.294  | 3.815  | 1.020  | 2.472  | 1.716  | 3.153  | 0.830  |
| 1995                         | 1.018 | 1.898 | 0.539  | 4.845  | 1.672  | 0.076  | 0.230  | 1.130  | 1.484  | 3.690  | 1.098  | 2.390  | 1.656  | 3.255  | 0.859  |
| 1996                         | 1.000 | 1.892 | 0.510  | 4.371  | 1.593  | 0.066  | 0.242  | 1.009  | 1.515  | 3.667  | 1.071  | 2.417  | 1.588  | 3.314  | 0.883  |
| Average annual growth rates: |       |       |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 1960-96                      | 0.017 | 0.031 | 0.005  | 0.014  | 0.017  | -0.017 | 0.023  | 0.018  | 0.020  | -0.001 | 0.018  | 0.000  | 0.001  | 0.021  | 0.010  |
| 1960-66                      | 0.042 | 0.055 | 0.017  | 0.009  | 0.041  | -0.040 | 0.010  | 0.033  | 0.047  | 0.025  | 0.016  | 0.010  | 0.003  | 0.028  | 0.015  |
| 1966-69                      | 0.018 | 0.052 | 0.081  | 0.015  | 0.059  | -0.032 | -0.015 | 0.047  | 0.021  | 0.003  | 0.016  | -0.010 | -0.029 | 0.044  | 0.006  |
| 1969-73                      | 0.008 | 0.008 | 0.021  | 0.008  | 0.022  | -0.046 | -0.008 | 0.007  | -0.003 | -0.009 | 0.039  | -0.011 | 0.015  | 0.042  | 0.001  |
| 1973-79                      | 0.027 | 0.035 | -0.013 | 0.035  | 0.023  | 0.022  | 0.061  | 0.061  | 0.039  | 0.022  | 0.049  | 0.037  | 0.034  | 0.034  | 0.024  |
| 1979-89                      | 0.000 | 0.028 | -0.024 | -0.003 | -0.012 | -0.018 | 0.025  | -0.014 | -0.011 | -0.028 | -0.009 | -0.030 | -0.019 | -0.006 | -0.008 |
| 1989-96                      | 0.015 | 0.014 | 0.007  | 0.029  | 0.012  | -0.007 | 0.033  | 0.008  | 0.036  | -0.003 | 0.024  | 0.012  | 0.006  | 0.019  | 0.025  |

table 3 Continued

| LA                   | MA     | MD     | ME     | MI     | MN     | MO     | MS    | MT     | NC     | ND     | NE     | NH     | NJ     | NM     | NV     |
|----------------------|--------|--------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0.429                | 0.149  | 0.301  | 0.199  | 0.962  | 2.053  | 1.442  | 0.734 | 0.504  | 0.728  | 0.700  | 1.759  | 0.064  | 0.267  | 0.243  | 0.054  |
| 0.433                | 0.135  | 0.293  | 0.188  | 0.942  | 2.067  | 1.429  | 0.736 | 0.495  | 0.724  | 0.680  | 1.867  | 0.058  | 0.240  | 0.268  | 0.050  |
| 0.435                | 0.131  | 0.304  | 0.188  | 0.907  | 2.070  | 1.395  | 0.786 | 0.485  | 0.752  | 0.757  | 1.936  | 0.056  | 0.234  | 0.275  | 0.054  |
| 0.473                | 0.128  | 0.297  | 0.189  | 0.912  | 2.015  | 1.424  | 0.817 | 0.556  | 0.753  | 0.779  | 2.094  | 0.054  | 0.215  | 0.300  | 0.050  |
| 0.471                | 0.122  | 0.298  | 0.191  | 0.938  | 2.082  | 1.481  | 0.858 | 0.569  | 0.762  | 0.828  | 2.007  | 0.050  | 0.208  | 0.259  | 0.055  |
| 0.486                | 0.110  | 0.307  | 0.188  | 0.879  | 1.910  | 1.440  | 0.852 | 0.538  | 0.809  | 0.805  | 2.012  | 0.045  | 0.188  | 0.302  | 0.065  |
| 0.515                | 0.109  | 0.319  | 0.192  | 0.905  | 2.075  | 1.644  | 0.852 | 0.594  | 0.821  | 0.823  | 2.288  | 0.046  | 0.182  | 0.339  | 0.062  |
| 0.552                | 0.111  | 0.311  | 0.192  | 0.895  | 2.119  | 1.605  | 0.901 | 0.611  | 0.862  | 0.836  | 2.303  | 0.047  | 0.181  | 0.402  | 0.072  |
| 0.567                | 0.102  | 0.310  | 0.181  | 0.841  | 2.101  | 1.600  | 0.876 | 0.591  | 0.867  | 0.833  | 2.399  | 0.043  | 0.170  | 0.372  | 0.064  |
| 0.565                | 0.099  | 0.309  | 0.185  | 0.865  | 2.111  | 1.709  | 0.898 | 0.625  | 0.897  | 0.855  | 2.352  | 0.042  | 0.157  | 0.421  | 0.069  |
| 0.583                | 0.093  | 0.319  | 0.184  | 0.902  | 2.082  | 1.656  | 0.966 | 0.639  | 0.937  | 0.843  | 2.630  | 0.044  | 0.153  | 0.435  | 0.070  |
| 0.593                | 0.088  | 0.307  | 0.172  | 0.869  | 2.141  | 1.591  | 0.946 | 0.642  | 0.870  | 0.872  | 2.643  | 0.043  | 0.143  | 0.428  | 0.078  |
| 0.607                | 0.084  | 0.280  | 0.164  | 0.832  | 2.228  | 1.701  | 0.948 | 0.648  | 0.858  | 0.846  | 2.855  | 0.040  | 0.131  | 0.489  | 0.084  |
| 0.573                | 0.078  | 0.299  | 0.170  | 0.879  | 2.255  | 1.643  | 0.949 | 0.680  | 0.903  | 0.929  | 2.992  | 0.038  | 0.125  | 0.513  | 0.083  |
| 0.594                | 0.093  | 0.320  | 0.210  | 0.899  | 2.186  | 1.723  | 0.915 | 0.665  | 0.953  | 0.869  | 2.642  | 0.043  | 0.130  | 0.392  | 0.089  |
| 0.550                | 0.089  | 0.309  | 0.186  | 0.862  | 2.132  | 1.493  | 0.793 | 0.638  | 0.934  | 0.922  | 2.382  | 0.039  | 0.129  | 0.448  | 0.083  |
| 0.630                | 0.089  | 0.312  | 0.190  | 0.954  | 2.244  | 1.588  | 0.894 | 0.673  | 1.043  | 0.981  | 2.612  | 0.039  | 0.128  | 0.434  | 0.085  |
| 0.577                | 0.087  | 0.313  | 0.197  | 0.858  | 2.173  | 1.557  | 0.864 | 0.685  | 1.026  | 0.946  | 2.706  | 0.040  | 0.122  | 0.510  | 0.084  |
| 0.669                | 0.089  | 0.372  | 0.213  | 1.025  | 2.549  | 1.649  | 0.971 | 0.820  | 1.213  | 1.058  | 3.147  | 0.040  | 0.128  | 0.505  | 0.099  |
| 0.681                | 0.090  | 0.395  | 0.203  | 1.092  | 2.633  | 1.746  | 1.005 | 0.814  | 1.239  | 1.152  | 3.584  | 0.039  | 0.131  | 0.513  | 0.104  |
| 0.701                | 0.087  | 0.424  | 0.204  | 1.146  | 2.753  | 1.747  | 0.981 | 0.727  | 1.228  | 1.084  | 3.621  | 0.040  | 0.133  | 0.463  | 0.110  |
| 0.638                | 0.084  | 0.435  | 0.189  | 1.140  | 2.698  | 1.582  | 0.952 | 0.736  | 1.200  | 1.034  | 3.326  | 0.037  | 0.119  | 0.377  | 0.102  |
| 0.635                | 0.084  | 0.399  | 0.148  | 1.145  | 2.745  | 1.591  | 0.903 | 0.719  | 1.116  | 1.012  | 3.582  | 0.038  | 0.118  | 0.393  | 0.085  |
| 0.632                | 0.087  | 0.430  | 0.151  | 1.195  | 2.769  | 1.621  | 0.922 | 0.721  | 1.130  | 1.054  | 3.555  | 0.039  | 0.118  | 0.413  | 0.098  |
| 0.644                | 0.083  | 0.430  | 0.146  | 1.211  | 2.632  | 1.446  | 0.985 | 0.683  | 1.163  | 1.010  | 3.232  | 0.036  | 0.117  | 0.427  | 0.101  |
| 0.594                | 0.080  | 0.400  | 0.124  | 1.117  | 2.601  | 1.416  | 0.889 | 0.601  | 1.083  | 0.988  | 3.264  | 0.035  | 0.116  | 0.410  | 0.089  |
| 0.604                | 0.080  | 0.377  | 0.125  | 1.158  | 2.538  | 1.517  | 0.900 | 0.557  | 1.064  | 0.968  | 3.369  | 0.035  | 0.117  | 0.423  | 0.096  |
| 0.616                | 0.076  | 0.379  | 0.127  | 1.121  | 2.400  | 1.545  | 0.960 | 0.628  | 1.112  | 1.015  | 3.378  | 0.032  | 0.115  | 0.455  | 0.097  |
| 0.666                | 0.070  | 0.367  | 0.116  | 1.019  | 2.337  | 1.490  | 1.014 | 0.651  | 1.106  | 0.974  | 3.393  | 0.029  | 0.117  | 0.458  | 0.095  |
| 0.730                | 0.073  | 0.383  | 0.120  | 1.058  | 2.297  | 1.437  | 1.084 | 0.615  | 1.124  | 0.889  | 3.444  | 0.030  | 0.118  | 0.445  | 0.094  |
| 0.732                | 0.074  | 0.398  | 0.123  | 1.111  | 2.535  | 1.581  | 1.167 | 0.625  | 1.079  | 0.971  | 3.549  | 0.030  | 0.120  | 0.442  | 0.094  |
| 0.751                | 0.075  | 0.413  | 0.123  | 1.204  | 2.660  | 1.620  | 1.245 | 0.613  | 1.082  | 0.962  | 3.284  | 0.029  | 0.124  | 0.456  | 0.088  |
| 0.741                | 0.070  | 0.409  | 0.119  | 1.188  | 2.707  | 1.639  | 1.208 | 0.592  | 1.156  | 1.029  | 3.383  | 0.029  | 0.125  | 0.457  | 0.093  |
| 0.750                | 0.070  | 0.408  | 0.119  | 1.283  | 2.663  | 1.694  | 1.328 | 0.612  | 1.236  | 1.035  | 3.455  | 0.029  | 0.125  | 0.477  | 0.091  |
| 0.731                | 0.075  | 0.423  | 0.126  | 1.314  | 2.783  | 1.710  | 1.348 | 0.704  | 1.284  | 1.058  | 3.305  | 0.029  | 0.135  | 0.514  | 0.107  |
| 0.701                | 0.077  | 0.445  | 0.139  | 1.304  | 2.873  | 1.740  | 1.381 | 0.691  | 1.482  | 1.042  | 3.419  | 0.030  | 0.145  | 0.472  | 0.106  |
| 0.712                | 0.070  | 0.425  | 0.119  | 1.200  | 2.737  | 1.677  | 1.387 | 0.723  | 1.500  | 1.089  | 3.504  | 0.028  | 0.133  | 0.548  | 0.103  |
| annual growth rates: |        |        |        |        |        |        |       |        |        |        |        |        |        |        |        |
| 0.014                | -0.021 | 0.010  | -0.014 | 0.006  | 0.008  | 0.004  | 0.018 | 0.010  | 0.020  | 0.012  | 0.019  | -0.023 | -0.019 | 0.023  | 0.018  |
| 0.031                | -0.051 | 0.010  | -0.005 | -0.010 | 0.002  | 0.022  | 0.025 | 0.027  | 0.020  | 0.027  | 0.044  | -0.056 | -0.063 | 0.056  | 0.023  |
| 0.031                | -0.034 | -0.011 | -0.014 | -0.015 | 0.006  | 0.013  | 0.018 | 0.017  | 0.030  | 0.013  | 0.009  | -0.031 | -0.050 | 0.072  | 0.036  |
| 0.003                | -0.057 | -0.008 | -0.021 | 0.004  | 0.017  | -0.010 | 0.014 | 0.021  | 0.002  | 0.021  | 0.060  | -0.025 | -0.056 | 0.049  | 0.046  |
| 0.029                | 0.024  | 0.046  | 0.030  | 0.036  | 0.026  | 0.010  | 0.010 | 0.030  | 0.053  | 0.036  | 0.030  | 0.004  | 0.007  | 0.000  | 0.038  |
| 0.007                | -0.021 | -0.003 | -0.052 | -0.003 | -0.014 | -0.019 | 0.008 | -0.028 | -0.010 | -0.026 | -0.004 | -0.024 | -0.010 | -0.014 | -0.010 |
| -0.004               | -0.007 | 0.015  | -0.002 | 0.018  | 0.025  | 0.022  | 0.035 | 0.023  | 0.041  | 0.029  | 0.002  | -0.013 | 0.017  | 0.030  | 0.014  |

table 3 Continued

| NY                   | OH     | OK     | OR     | PA     | RI     | SC     | SD     | TN     | TX     | UT     | VA     | VT     | WA    | WI     | WV     | WY     |
|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|--------|--------|
| 1.076                | 1.226  | 0.696  | 0.408  | 0.975  | 0.039  | 0.335  | 1.020  | 0.601  | 2.165  | 0.215  | 0.490  | 0.151  | 0.612 | 1.597  | 0.172  | 0.222  |
| 1.020                | 1.237  | 0.705  | 0.408  | 0.926  | 0.035  | 0.331  | 1.052  | 0.566  | 2.265  | 0.211  | 0.467  | 0.140  | 0.596 | 1.585  | 0.162  | 0.216  |
| 1.028                | 1.179  | 0.723  | 0.430  | 0.889  | 0.032  | 0.323  | 1.091  | 0.583  | 2.361  | 0.207  | 0.481  | 0.146  | 0.625 | 1.565  | 0.163  | 0.234  |
| 0.990                | 1.168  | 0.756  | 0.444  | 0.844  | 0.029  | 0.319  | 1.193  | 0.608  | 2.444  | 0.212  | 0.461  | 0.140  | 0.647 | 1.536  | 0.157  | 0.250  |
| 1.027                | 1.168  | 0.767  | 0.429  | 0.850  | 0.026  | 0.334  | 1.170  | 0.623  | 2.360  | 0.207  | 0.421  | 0.137  | 0.638 | 1.508  | 0.155  | 0.253  |
| 0.939                | 1.147  | 0.814  | 0.440  | 0.848  | 0.026  | 0.323  | 1.160  | 0.617  | 2.523  | 0.193  | 0.444  | 0.133  | 0.667 | 1.475  | 0.144  | 0.260  |
| 0.970                | 1.202  | 0.874  | 0.438  | 0.860  | 0.025  | 0.332  | 1.198  | 0.654  | 2.732  | 0.224  | 0.471  | 0.128  | 0.665 | 1.588  | 0.141  | 0.262  |
| 1.003                | 1.183  | 0.848  | 0.469  | 0.815  | 0.025  | 0.346  | 1.263  | 0.714  | 2.746  | 0.210  | 0.459  | 0.132  | 0.720 | 1.630  | 0.139  | 0.307  |
| 0.974                | 1.136  | 0.904  | 0.431  | 0.879  | 0.024  | 0.359  | 1.236  | 0.667  | 2.785  | 0.206  | 0.469  | 0.123  | 0.668 | 1.608  | 0.144  | 0.321  |
| 0.964                | 1.157  | 1.006  | 0.444  | 0.873  | 0.021  | 0.368  | 1.278  | 0.670  | 3.090  | 0.216  | 0.491  | 0.127  | 0.669 | 1.669  | 0.138  | 0.309  |
| 0.957                | 1.157  | 1.036  | 0.450  | 0.867  | 0.020  | 0.379  | 1.280  | 0.695  | 2.957  | 0.218  | 0.491  | 0.126  | 0.701 | 1.699  | 0.137  | 0.305  |
| 0.918                | 1.164  | 1.097  | 0.450  | 0.879  | 0.019  | 0.374  | 1.315  | 0.662  | 3.269  | 0.211  | 0.471  | 0.128  | 0.702 | 1.671  | 0.132  | 0.324  |
| 0.893                | 1.156  | 1.193  | 0.443  | 0.820  | 0.018  | 0.386  | 1.285  | 0.701  | 3.744  | 0.209  | 0.474  | 0.127  | 0.737 | 1.727  | 0.137  | 0.346  |
| 0.851                | 1.141  | 1.308  | 0.461  | 0.817  | 0.018  | 0.388  | 1.448  | 0.704  | 3.870  | 0.196  | 0.499  | 0.114  | 0.742 | 1.688  | 0.140  | 0.333  |
| 1.009                | 1.209  | 1.262  | 0.452  | 0.878  | 0.019  | 0.462  | 1.288  | 0.710  | 3.436  | 0.212  | 0.552  | 0.135  | 0.793 | 1.763  | 0.146  | 0.305  |
| 0.951                | 1.202  | 1.137  | 0.410  | 0.896  | 0.019  | 0.351  | 1.221  | 0.686  | 3.393  | 0.216  | 0.528  | 0.130  | 0.691 | 1.753  | 0.145  | 0.306  |
| 0.972                | 1.323  | 1.125  | 0.471  | 0.960  | 0.020  | 0.389  | 1.116  | 0.740  | 3.681  | 0.215  | 0.517  | 0.135  | 0.767 | 1.847  | 0.145  | 0.344  |
| 0.975                | 1.277  | 1.256  | 0.485  | 0.985  | 0.019  | 0.375  | 1.193  | 0.735  | 3.588  | 0.222  | 0.507  | 0.137  | 0.760 | 1.774  | 0.136  | 0.326  |
| 1.006                | 1.310  | 1.293  | 0.567  | 1.029  | 0.019  | 0.417  | 1.439  | 0.768  | 4.079  | 0.272  | 0.580  | 0.139  | 1.011 | 2.024  | 0.147  | 0.399  |
| 1.034                | 1.380  | 1.492  | 0.657  | 1.069  | 0.019  | 0.446  | 1.472  | 0.809  | 4.284  | 0.262  | 0.655  | 0.150  | 1.028 | 2.145  | 0.160  | 0.396  |
| 1.088                | 1.479  | 1.504  | 0.600  | 1.140  | 0.019  | 0.450  | 1.422  | 0.812  | 4.021  | 0.267  | 0.678  | 0.157  | 0.976 | 2.273  | 0.158  | 0.378  |
| 1.065                | 1.382  | 1.288  | 0.627  | 1.121  | 0.019  | 0.422  | 1.339  | 0.775  | 3.869  | 0.274  | 0.636  | 0.154  | 1.061 | 2.258  | 0.152  | 0.333  |
| 0.953                | 1.304  | 1.218  | 0.576  | 1.067  | 0.018  | 0.371  | 1.484  | 0.761  | 4.068  | 0.257  | 0.598  | 0.155  | 1.059 | 2.129  | 0.148  | 0.338  |
| 1.074                | 1.342  | 1.228  | 0.581  | 1.184  | 0.019  | 0.371  | 1.505  | 0.783  | 3.786  | 0.266  | 0.604  | 0.162  | 1.038 | 2.351  | 0.161  | 0.370  |
| 1.005                | 1.293  | 1.192  | 0.596  | 1.089  | 0.018  | 0.377  | 1.420  | 0.763  | 3.929  | 0.252  | 0.588  | 0.149  | 1.082 | 2.216  | 0.163  | 0.358  |
| 0.922                | 1.255  | 1.195  | 0.584  | 1.087  | 0.018  | 0.358  | 1.434  | 0.771  | 3.680  | 0.245  | 0.573  | 0.139  | 1.002 | 2.208  | 0.161  | 0.356  |
| 0.890                | 1.290  | 1.248  | 0.553  | 1.093  | 0.017  | 0.346  | 1.352  | 0.749  | 3.799  | 0.248  | 0.562  | 0.145  | 0.987 | 2.070  | 0.149  | 0.313  |
| 0.876                | 1.293  | 1.335  | 0.553  | 1.090  | 0.016  | 0.347  | 1.399  | 0.773  | 3.900  | 0.264  | 0.561  | 0.137  | 0.963 | 2.109  | 0.148  | 0.362  |
| 0.834                | 1.207  | 1.389  | 0.561  | 1.051  | 0.014  | 0.341  | 1.351  | 0.754  | 3.995  | 0.263  | 0.580  | 0.118  | 1.057 | 1.845  | 0.141  | 0.373  |
| 0.833                | 1.174  | 1.413  | 0.608  | 1.102  | 0.014  | 0.378  | 1.182  | 0.669  | 3.773  | 0.243  | 0.555  | 0.126  | 1.069 | 1.780  | 0.133  | 0.352  |
| 0.863                | 1.242  | 1.408  | 0.600  | 1.142  | 0.014  | 0.360  | 1.341  | 0.678  | 4.114  | 0.235  | 0.549  | 0.136  | 1.091 | 2.025  | 0.151  | 0.294  |
| 0.886                | 1.286  | 1.428  | 0.593  | 1.103  | 0.015  | 0.363  | 1.260  | 0.659  | 4.133  | 0.228  | 0.548  | 0.136  | 1.191 | 2.060  | 0.147  | 0.398  |
| 0.816                | 1.257  | 1.377  | 0.626  | 1.037  | 0.016  | 0.352  | 1.256  | 0.689  | 4.071  | 0.243  | 0.560  | 0.128  | 1.205 | 1.965  | 0.135  | 0.322  |
| 0.780                | 1.315  | 1.390  | 0.598  | 1.055  | 0.016  | 0.385  | 1.263  | 0.709  | 4.272  | 0.238  | 0.586  | 0.129  | 1.320 | 1.855  | 0.167  | 0.321  |
| 0.840                | 1.289  | 1.522  | 0.614  | 1.100  | 0.016  | 0.389  | 1.253  | 0.678  | 4.104  | 0.276  | 0.579  | 0.130  | 1.342 | 1.986  | 0.177  | 0.339  |
| 0.862                | 1.319  | 1.576  | 0.698  | 1.143  | 0.015  | 0.434  | 1.366  | 0.729  | 4.710  | 0.286  | 0.615  | 0.136  | 1.534 | 2.009  | 0.177  | 0.338  |
| 0.789                | 1.252  | 1.516  | 0.638  | 1.062  | 0.015  | 0.439  | 1.322  | 0.733  | 4.277  | 0.286  | 0.633  | 0.125  | 1.419 | 1.836  | 0.175  | 0.324  |
| annual growth rates: |        |        |        |        |        |        |        |        |        |        |        |        |       |        |        |        |
| -0.009               | 0.001  | 0.022  | 0.012  | 0.002  | -0.027 | 0.007  | 0.007  | 0.006  | 0.019  | 0.008  | 0.007  | -0.005 | 0.023 | 0.004  | 0.001  | 0.011  |
| -0.017               | -0.003 | 0.038  | 0.012  | -0.021 | -0.073 | -0.002 | 0.027  | 0.014  | 0.039  | 0.007  | -0.007 | -0.028 | 0.014 | -0.001 | -0.033 | 0.028  |
| -0.002               | -0.013 | 0.047  | 0.005  | 0.005  | -0.054 | 0.034  | 0.022  | 0.008  | 0.041  | -0.011 | 0.014  | -0.001 | 0.002 | 0.017  | -0.008 | 0.055  |
| -0.031               | -0.004 | 0.066  | 0.009  | -0.017 | -0.044 | 0.013  | 0.031  | 0.012  | 0.056  | -0.025 | 0.004  | -0.028 | 0.026 | 0.003  | 0.004  | 0.019  |
| 0.032                | 0.032  | 0.022  | 0.059  | 0.045  | 0.009  | 0.023  | 0.003  | 0.023  | 0.017  | 0.048  | 0.045  | 0.046  | 0.054 | 0.040  | 0.023  | 0.029  |
| -0.022               | -0.016 | -0.005 | -0.008 | 0.003  | -0.028 | -0.017 | -0.022 | -0.019 | -0.013 | -0.008 | -0.017 | -0.017 | 0.004 | -0.019 | -0.019 | -0.012 |
| -0.008               | 0.009  | 0.010  | 0.007  | -0.005 | 0.004  | 0.022  | 0.016  | 0.013  | 0.018  | 0.023  | 0.019  | -0.002 | 0.040 | 0.004  | 0.039  | -0.012 |

Table 4. Capital Input Relative to 1996 Level for Alabama

| Year                         | AL     | AR     | AZ     | CA     | CO     | CT     | DE     | FL     | GA     | IA     | ID     | IL     | IN     | KS     | KY     |
|------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1960                         | 0.858  | 0.964  | 0.350  | 2.931  | 1.227  | 0.282  | 0.115  | 0.679  | 1.172  | 5.235  | 0.928  | 4.646  | 2.747  | 2.882  | 1.355  |
| 1961                         | 0.847  | 0.957  | 0.359  | 2.897  | 1.220  | 0.275  | 0.113  | 0.690  | 1.155  | 5.174  | 0.924  | 4.614  | 2.746  | 2.906  | 1.352  |
| 1962                         | 0.844  | 0.959  | 0.375  | 2.868  | 1.217  | 0.270  | 0.111  | 0.701  | 1.149  | 5.218  | 0.927  | 4.630  | 2.734  | 2.906  | 1.359  |
| 1963                         | 0.849  | 0.986  | 0.397  | 2.883  | 1.210  | 0.267  | 0.111  | 0.726  | 1.149  | 5.289  | 0.944  | 4.677  | 2.775  | 2.917  | 1.385  |
| 1964                         | 0.872  | 1.029  | 0.426  | 2.909  | 1.199  | 0.266  | 0.111  | 0.766  | 1.175  | 5.422  | 0.972  | 4.782  | 2.838  | 2.926  | 1.426  |
| 1965                         | 0.899  | 1.091  | 0.460  | 2.948  | 1.197  | 0.265  | 0.111  | 0.808  | 1.195  | 5.539  | 1.003  | 4.857  | 2.882  | 2.952  | 1.455  |
| 1966                         | 0.931  | 1.165  | 0.497  | 3.015  | 1.224  | 0.268  | 0.115  | 0.857  | 1.224  | 5.737  | 1.040  | 5.136  | 2.984  | 3.061  | 1.517  |
| 1967                         | 0.956  | 1.239  | 0.524  | 3.085  | 1.257  | 0.272  | 0.115  | 0.909  | 1.260  | 6.046  | 1.070  | 5.273  | 3.086  | 3.119  | 1.592  |
| 1968                         | 0.999  | 1.319  | 0.560  | 3.170  | 1.285  | 0.276  | 0.120  | 0.972  | 1.318  | 6.343  | 1.131  | 5.614  | 3.194  | 3.226  | 1.698  |
| 1969                         | 1.010  | 1.363  | 0.588  | 3.217  | 1.303  | 0.276  | 0.118  | 1.015  | 1.327  | 6.547  | 1.156  | 5.666  | 3.255  | 3.313  | 1.739  |
| 1970                         | 1.028  | 1.407  | 0.613  | 3.223  | 1.317  | 0.274  | 0.120  | 1.066  | 1.347  | 6.611  | 1.189  | 5.776  | 3.311  | 3.388  | 1.785  |
| 1971                         | 1.040  | 1.462  | 0.631  | 3.280  | 1.357  | 0.274  | 0.122  | 1.086  | 1.378  | 6.695  | 1.210  | 5.799  | 3.385  | 3.420  | 1.822  |
| 1972                         | 1.073  | 1.500  | 0.641  | 3.286  | 1.369  | 0.273  | 0.121  | 1.140  | 1.404  | 6.858  | 1.238  | 6.022  | 3.458  | 3.453  | 1.889  |
| 1973                         | 1.090  | 1.567  | 0.663  | 3.317  | 1.385  | 0.270  | 0.125  | 1.192  | 1.427  | 7.066  | 1.267  | 6.191  | 3.562  | 3.470  | 1.934  |
| 1974                         | 1.152  | 1.702  | 0.682  | 3.489  | 1.425  | 0.272  | 0.132  | 1.284  | 1.506  | 7.429  | 1.350  | 6.543  | 3.736  | 3.664  | 2.037  |
| 1975                         | 1.227  | 1.810  | 0.706  | 3.606  | 1.460  | 0.274  | 0.138  | 1.376  | 1.598  | 7.547  | 1.427  | 6.657  | 3.817  | 3.751  | 2.153  |
| 1976                         | 1.268  | 1.861  | 0.724  | 3.705  | 1.492  | 0.275  | 0.144  | 1.423  | 1.644  | 7.865  | 1.456  | 7.139  | 3.973  | 3.868  | 2.207  |
| 1977                         | 1.305  | 1.890  | 0.746  | 3.810  | 1.519  | 0.277  | 0.151  | 1.472  | 1.694  | 8.118  | 1.507  | 7.299  | 4.143  | 3.980  | 2.312  |
| 1978                         | 1.327  | 1.961  | 0.784  | 3.904  | 1.559  | 0.277  | 0.156  | 1.505  | 1.710  | 8.417  | 1.540  | 7.552  | 4.227  | 4.038  | 2.422  |
| 1979                         | 1.360  | 2.025  | 0.818  | 4.037  | 1.586  | 0.280  | 0.162  | 1.576  | 1.760  | 8.665  | 1.594  | 7.700  | 4.395  | 4.087  | 2.503  |
| 1980                         | 1.407  | 2.125  | 0.838  | 4.154  | 1.645  | 0.283  | 0.170  | 1.669  | 1.838  | 9.066  | 1.631  | 8.086  | 4.572  | 4.235  | 2.628  |
| 1981                         | 1.415  | 2.108  | 0.854  | 4.252  | 1.646  | 0.282  | 0.171  | 1.726  | 1.831  | 9.026  | 1.653  | 7.812  | 4.505  | 4.134  | 2.609  |
| 1982                         | 1.414  | 2.101  | 0.843  | 4.269  | 1.618  | 0.277  | 0.171  | 1.714  | 1.823  | 8.811  | 1.617  | 7.786  | 4.454  | 3.961  | 2.633  |
| 1983                         | 1.368  | 2.015  | 0.823  | 4.162  | 1.581  | 0.269  | 0.168  | 1.685  | 1.773  | 8.571  | 1.581  | 7.638  | 4.364  | 3.908  | 2.595  |
| 1984                         | 1.318  | 1.936  | 0.793  | 4.053  | 1.566  | 0.261  | 0.163  | 1.641  | 1.701  | 8.105  | 1.531  | 7.066  | 4.120  | 3.811  | 2.483  |
| 1985                         | 1.282  | 1.906  | 0.776  | 3.975  | 1.526  | 0.251  | 0.159  | 1.586  | 1.651  | 7.992  | 1.478  | 6.980  | 4.092  | 3.740  | 2.481  |
| 1986                         | 1.234  | 1.801  | 0.735  | 3.846  | 1.449  | 0.239  | 0.154  | 1.507  | 1.576  | 7.457  | 1.402  | 6.548  | 3.847  | 3.557  | 2.386  |
| 1987                         | 1.177  | 1.710  | 0.690  | 3.691  | 1.373  | 0.227  | 0.147  | 1.433  | 1.489  | 6.998  | 1.304  | 6.141  | 3.627  | 3.395  | 2.286  |
| 1988                         | 1.147  | 1.642  | 0.651  | 3.599  | 1.358  | 0.218  | 0.142  | 1.371  | 1.447  | 6.677  | 1.259  | 5.802  | 3.496  | 3.222  | 2.247  |
| 1989                         | 1.119  | 1.587  | 0.611  | 3.536  | 1.353  | 0.210  | 0.140  | 1.325  | 1.405  | 6.597  | 1.225  | 5.569  | 3.343  | 3.136  | 2.208  |
| 1990                         | 1.098  | 1.540  | 0.577  | 3.517  | 1.335  | 0.206  | 0.139  | 1.285  | 1.386  | 6.480  | 1.194  | 5.544  | 3.327  | 3.054  | 2.209  |
| 1991                         | 1.085  | 1.504  | 0.552  | 3.487  | 1.320  | 0.202  | 0.139  | 1.254  | 1.358  | 6.444  | 1.173  | 5.419  | 3.249  | 3.034  | 2.191  |
| 1992                         | 1.051  | 1.464  | 0.529  | 3.457  | 1.313  | 0.196  | 0.138  | 1.218  | 1.333  | 6.211  | 1.141  | 5.178  | 3.109  | 2.931  | 2.155  |
| 1993                         | 1.029  | 1.424  | 0.503  | 3.410  | 1.295  | 0.192  | 0.135  | 1.181  | 1.305  | 6.072  | 1.095  | 5.093  | 3.071  | 2.907  | 2.131  |
| 1994                         | 1.017  | 1.394  | 0.478  | 3.362  | 1.284  | 0.187  | 0.132  | 1.149  | 1.277  | 5.713  | 1.078  | 4.878  | 2.943  | 2.836  | 2.097  |
| 1995                         | 1.015  | 1.373  | 0.456  | 3.333  | 1.257  | 0.183  | 0.131  | 1.123  | 1.267  | 5.783  | 1.049  | 4.845  | 2.918  | 2.824  | 2.083  |
| 1996                         | 1.000  | 1.334  | 0.438  | 3.292  | 1.248  | 0.178  | 0.128  | 1.090  | 1.239  | 5.590  | 1.031  | 4.592  | 2.795  | 2.744  | 2.048  |
| Average annual growth rates: |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 1960-96                      | 0.004  | 0.009  | 0.006  | 0.003  | 0.000  | -0.013 | 0.003  | 0.013  | 0.002  | 0.002  | 0.003  | 0.000  | 0.000  | -0.001 | 0.011  |
| 1960-66                      | 0.014  | 0.032  | 0.058  | 0.005  | -0.001 | -0.009 | -0.001 | 0.039  | 0.007  | 0.015  | 0.019  | 0.017  | 0.014  | 0.010  | 0.019  |
| 1966-69                      | 0.027  | 0.052  | 0.056  | 0.022  | 0.021  | 0.010  | 0.011  | 0.056  | 0.027  | 0.044  | 0.036  | 0.033  | 0.029  | 0.026  | 0.046  |
| 1969-73                      | 0.019  | 0.035  | 0.030  | 0.008  | 0.015  | -0.005 | 0.013  | 0.040  | 0.018  | 0.019  | 0.023  | 0.022  | 0.023  | 0.012  | 0.027  |
| 1973-79                      | 0.037  | 0.043  | 0.035  | 0.033  | 0.023  | 0.006  | 0.043  | 0.047  | 0.035  | 0.034  | 0.038  | 0.036  | 0.035  | 0.027  | 0.043  |
| 1979-89                      | -0.020 | -0.024 | -0.029 | -0.013 | -0.016 | -0.028 | -0.015 | -0.017 | -0.023 | -0.027 | -0.026 | -0.032 | -0.027 | -0.026 | -0.013 |
| 1989-96                      | -0.016 | -0.025 | -0.048 | -0.010 | -0.012 | -0.024 | -0.013 | -0.028 | -0.018 | -0.024 | -0.025 | -0.028 | -0.026 | -0.019 | -0.011 |

table 4 Continued

| LA                   | MA     | MD     | ME     | MI     | MN     | MO     | MS     | MT     | NC     | ND     | NE     | NH     | NJ     | NM     | NV     |
|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0.744                | 0.316  | 0.566  | 0.336  | 2.337  | 4.027  | 2.434  | 1.046  | 1.139  | 1.581  | 1.926  | 2.882  | 0.133  | 0.498  | 0.390  | 0.122  |
| 0.745                | 0.308  | 0.558  | 0.329  | 2.294  | 4.006  | 2.415  | 1.040  | 1.120  | 1.579  | 1.921  | 2.888  | 0.129  | 0.487  | 0.386  | 0.120  |
| 0.747                | 0.300  | 0.547  | 0.321  | 2.274  | 4.020  | 2.438  | 1.040  | 1.090  | 1.586  | 1.848  | 2.871  | 0.125  | 0.479  | 0.391  | 0.119  |
| 0.761                | 0.295  | 0.540  | 0.317  | 2.266  | 4.011  | 2.460  | 1.054  | 1.118  | 1.622  | 1.932  | 2.915  | 0.123  | 0.473  | 0.395  | 0.120  |
| 0.796                | 0.292  | 0.536  | 0.318  | 2.277  | 4.086  | 2.544  | 1.084  | 1.144  | 1.670  | 1.945  | 2.935  | 0.120  | 0.470  | 0.406  | 0.123  |
| 0.829                | 0.289  | 0.536  | 0.328  | 2.305  | 4.104  | 2.627  | 1.127  | 1.161  | 1.738  | 1.995  | 2.951  | 0.118  | 0.465  | 0.412  | 0.125  |
| 0.859                | 0.289  | 0.544  | 0.332  | 2.322  | 4.183  | 2.763  | 1.166  | 1.197  | 1.803  | 2.054  | 3.043  | 0.118  | 0.467  | 0.424  | 0.126  |
| 0.908                | 0.291  | 0.548  | 0.338  | 2.363  | 4.328  | 2.885  | 1.222  | 1.228  | 1.892  | 2.092  | 3.200  | 0.118  | 0.471  | 0.443  | 0.129  |
| 0.964                | 0.292  | 0.565  | 0.339  | 2.410  | 4.460  | 3.030  | 1.263  | 1.279  | 1.990  | 2.150  | 3.314  | 0.117  | 0.480  | 0.461  | 0.133  |
| 1.004                | 0.290  | 0.566  | 0.341  | 2.432  | 4.540  | 3.156  | 1.305  | 1.307  | 2.034  | 2.201  | 3.376  | 0.116  | 0.477  | 0.463  | 0.136  |
| 1.012                | 0.286  | 0.569  | 0.340  | 2.436  | 4.566  | 3.170  | 1.296  | 1.314  | 2.075  | 2.255  | 3.476  | 0.113  | 0.474  | 0.485  | 0.141  |
| 1.051                | 0.284  | 0.579  | 0.339  | 2.457  | 4.610  | 3.248  | 1.348  | 1.308  | 2.123  | 2.248  | 3.457  | 0.112  | 0.472  | 0.470  | 0.145  |
| 1.065                | 0.281  | 0.580  | 0.339  | 2.444  | 4.670  | 3.346  | 1.357  | 1.321  | 2.151  | 2.317  | 3.514  | 0.111  | 0.467  | 0.481  | 0.146  |
| 1.100                | 0.277  | 0.585  | 0.348  | 2.484  | 4.709  | 3.438  | 1.389  | 1.318  | 2.185  | 2.302  | 3.573  | 0.112  | 0.462  | 0.492  | 0.148  |
| 1.147                | 0.278  | 0.610  | 0.372  | 2.550  | 4.965  | 3.644  | 1.477  | 1.377  | 2.297  | 2.382  | 3.734  | 0.113  | 0.471  | 0.504  | 0.154  |
| 1.235                | 0.279  | 0.639  | 0.379  | 2.620  | 5.117  | 3.758  | 1.535  | 1.428  | 2.385  | 2.439  | 3.753  | 0.115  | 0.479  | 0.520  | 0.159  |
| 1.255                | 0.280  | 0.658  | 0.388  | 2.670  | 5.272  | 3.837  | 1.577  | 1.492  | 2.431  | 2.592  | 3.889  | 0.117  | 0.482  | 0.534  | 0.165  |
| 1.272                | 0.284  | 0.684  | 0.396  | 2.693  | 5.367  | 3.922  | 1.606  | 1.539  | 2.499  | 2.705  | 4.015  | 0.120  | 0.490  | 0.541  | 0.171  |
| 1.281                | 0.286  | 0.699  | 0.400  | 2.738  | 5.686  | 4.053  | 1.644  | 1.545  | 2.559  | 2.746  | 4.171  | 0.122  | 0.496  | 0.561  | 0.177  |
| 1.310                | 0.292  | 0.728  | 0.407  | 2.803  | 5.725  | 4.181  | 1.666  | 1.562  | 2.649  | 2.796  | 4.147  | 0.124  | 0.510  | 0.574  | 0.185  |
| 1.353                | 0.300  | 0.754  | 0.412  | 2.896  | 6.045  | 4.323  | 1.749  | 1.601  | 2.726  | 2.921  | 4.430  | 0.127  | 0.523  | 0.601  | 0.196  |
| 1.361                | 0.301  | 0.759  | 0.412  | 2.884  | 6.060  | 4.230  | 1.721  | 1.585  | 2.749  | 2.777  | 4.358  | 0.126  | 0.520  | 0.581  | 0.205  |
| 1.356                | 0.297  | 0.766  | 0.406  | 2.866  | 5.957  | 4.239  | 1.726  | 1.586  | 2.737  | 2.742  | 4.251  | 0.126  | 0.515  | 0.585  | 0.210  |
| 1.304                | 0.291  | 0.753  | 0.390  | 2.817  | 5.853  | 4.121  | 1.680  | 1.562  | 2.657  | 2.677  | 4.231  | 0.122  | 0.498  | 0.575  | 0.206  |
| 1.263                | 0.283  | 0.730  | 0.376  | 2.709  | 5.631  | 3.885  | 1.606  | 1.512  | 2.553  | 2.564  | 4.130  | 0.119  | 0.476  | 0.554  | 0.205  |
| 1.227                | 0.276  | 0.719  | 0.360  | 2.648  | 5.569  | 3.770  | 1.555  | 1.429  | 2.478  | 2.494  | 4.079  | 0.116  | 0.459  | 0.551  | 0.199  |
| 1.157                | 0.264  | 0.695  | 0.340  | 2.520  | 5.140  | 3.636  | 1.463  | 1.303  | 2.345  | 2.327  | 3.757  | 0.112  | 0.434  | 0.533  | 0.193  |
| 1.091                | 0.251  | 0.660  | 0.320  | 2.383  | 4.803  | 3.436  | 1.381  | 1.280  | 2.202  | 2.203  | 3.499  | 0.107  | 0.406  | 0.507  | 0.182  |
| 1.045                | 0.242  | 0.646  | 0.305  | 2.280  | 4.616  | 3.277  | 1.332  | 1.263  | 2.108  | 2.140  | 3.373  | 0.104  | 0.385  | 0.493  | 0.176  |
| 0.999                | 0.236  | 0.636  | 0.292  | 2.222  | 4.610  | 3.155  | 1.281  | 1.207  | 2.042  | 2.066  | 3.445  | 0.102  | 0.367  | 0.485  | 0.169  |
| 0.973                | 0.232  | 0.630  | 0.283  | 2.201  | 4.532  | 3.117  | 1.240  | 1.229  | 1.992  | 2.090  | 3.298  | 0.099  | 0.355  | 0.480  | 0.171  |
| 0.945                | 0.229  | 0.628  | 0.275  | 2.187  | 4.581  | 3.060  | 1.197  | 1.224  | 1.936  | 2.100  | 3.362  | 0.098  | 0.344  | 0.471  | 0.168  |
| 0.903                | 0.224  | 0.615  | 0.264  | 2.135  | 4.410  | 2.984  | 1.159  | 1.239  | 1.884  | 2.055  | 3.253  | 0.095  | 0.333  | 0.470  | 0.165  |
| 0.870                | 0.220  | 0.610  | 0.255  | 2.089  | 4.304  | 2.933  | 1.130  | 1.207  | 1.829  | 2.051  | 3.205  | 0.093  | 0.323  | 0.460  | 0.159  |
| 0.836                | 0.215  | 0.599  | 0.247  | 2.051  | 4.133  | 2.858  | 1.088  | 1.220  | 1.776  | 2.008  | 3.086  | 0.091  | 0.314  | 0.451  | 0.159  |
| 0.813                | 0.211  | 0.595  | 0.239  | 2.019  | 4.166  | 2.810  | 1.068  | 1.198  | 1.752  | 1.990  | 3.074  | 0.088  | 0.308  | 0.451  | 0.158  |
| 0.787                | 0.206  | 0.582  | 0.233  | 1.985  | 4.107  | 2.735  | 1.036  | 1.203  | 1.714  | 1.946  | 2.980  | 0.086  | 0.300  | 0.446  | 0.158  |
| annual growth rates: |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 0.002                | -0.012 | 0.001  | -0.010 | -0.005 | 0.001  | 0.003  | 0.000  | 0.002  | 0.002  | 0.000  | 0.001  | -0.012 | -0.014 | 0.004  | 0.007  |
| 0.024                | -0.015 | -0.007 | -0.002 | -0.001 | 0.006  | 0.021  | 0.018  | 0.008  | 0.022  | 0.011  | 0.009  | -0.021 | -0.011 | 0.014  | 0.006  |
| 0.052                | 0.001  | 0.013  | 0.009  | 0.015  | 0.027  | 0.044  | 0.038  | 0.029  | 0.040  | 0.023  | 0.035  | -0.005 | 0.007  | 0.029  | 0.025  |
| 0.023                | -0.011 | 0.008  | 0.005  | 0.005  | 0.009  | 0.021  | 0.016  | 0.002  | 0.018  | 0.011  | 0.014  | -0.009 | -0.008 | 0.015  | 0.020  |
| 0.029                | 0.009  | 0.037  | 0.026  | 0.020  | 0.033  | 0.033  | 0.030  | 0.028  | 0.032  | 0.032  | 0.025  | 0.018  | 0.016  | 0.026  | 0.038  |
| -0.027               | -0.021 | -0.014 | -0.033 | -0.023 | -0.022 | -0.028 | -0.026 | -0.026 | -0.026 | -0.030 | -0.019 | -0.020 | -0.033 | -0.017 | -0.009 |
| -0.034               | -0.020 | -0.013 | -0.032 | -0.016 | -0.016 | -0.020 | -0.030 | 0.000  | -0.025 | -0.009 | -0.021 | -0.024 | -0.029 | -0.012 | -0.009 |

table 4 Continued

| NY                   | OH     | OK     | OR     | PA     | RI     | SC     | SD     | TN     | TX     | UT     | VA     | VT     | WA     | WI     | WV     | WY     |
|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 2.106                | 2.997  | 1.573  | 0.884  | 2.134  | 0.044  | 0.700  | 1.906  | 1.262  | 4.036  | 0.369  | 1.194  | 0.285  | 1.080  | 3.433  | 0.393  | 0.413  |
| 2.061                | 2.975  | 1.557  | 0.861  | 2.091  | 0.043  | 0.692  | 1.917  | 1.254  | 3.987  | 0.364  | 1.182  | 0.281  | 1.059  | 3.373  | 0.386  | 0.402  |
| 2.024                | 2.937  | 1.543  | 0.843  | 2.053  | 0.042  | 0.687  | 1.886  | 1.253  | 3.967  | 0.361  | 1.175  | 0.276  | 1.048  | 3.330  | 0.380  | 0.399  |
| 1.991                | 2.928  | 1.537  | 0.839  | 2.012  | 0.042  | 0.691  | 1.908  | 1.266  | 3.993  | 0.364  | 1.177  | 0.272  | 1.054  | 3.321  | 0.375  | 0.402  |
| 1.995                | 2.954  | 1.541  | 0.845  | 2.009  | 0.041  | 0.700  | 1.935  | 1.295  | 4.032  | 0.368  | 1.157  | 0.270  | 1.064  | 3.305  | 0.373  | 0.410  |
| 1.988                | 2.963  | 1.562  | 0.851  | 2.007  | 0.041  | 0.712  | 1.917  | 1.327  | 4.095  | 0.372  | 1.173  | 0.268  | 1.078  | 3.292  | 0.372  | 0.414  |
| 2.007                | 3.027  | 1.588  | 0.854  | 2.023  | 0.041  | 0.731  | 1.951  | 1.364  | 4.234  | 0.383  | 1.190  | 0.266  | 1.085  | 3.313  | 0.372  | 0.417  |
| 2.050                | 3.138  | 1.609  | 0.863  | 2.031  | 0.041  | 0.749  | 1.986  | 1.412  | 4.387  | 0.389  | 1.198  | 0.271  | 1.107  | 3.373  | 0.370  | 0.422  |
| 2.095                | 3.215  | 1.657  | 0.872  | 2.102  | 0.041  | 0.777  | 2.047  | 1.459  | 4.558  | 0.406  | 1.234  | 0.274  | 1.132  | 3.432  | 0.380  | 0.440  |
| 2.096                | 3.267  | 1.704  | 0.871  | 2.105  | 0.040  | 0.772  | 2.090  | 1.509  | 4.670  | 0.408  | 1.243  | 0.275  | 1.140  | 3.461  | 0.379  | 0.443  |
| 2.090                | 3.277  | 1.727  | 0.864  | 2.108  | 0.039  | 0.776  | 2.088  | 1.503  | 4.779  | 0.411  | 1.254  | 0.271  | 1.131  | 3.453  | 0.378  | 0.447  |
| 2.109                | 3.338  | 1.714  | 0.864  | 2.128  | 0.038  | 0.782  | 2.089  | 1.564  | 4.831  | 0.414  | 1.260  | 0.274  | 1.133  | 3.475  | 0.374  | 0.451  |
| 2.109                | 3.410  | 1.725  | 0.860  | 2.131  | 0.037  | 0.795  | 2.094  | 1.565  | 4.900  | 0.414  | 1.264  | 0.275  | 1.146  | 3.516  | 0.374  | 0.461  |
| 2.113                | 3.454  | 1.740  | 0.865  | 2.140  | 0.037  | 0.800  | 2.109  | 1.590  | 5.102  | 0.416  | 1.280  | 0.275  | 1.143  | 3.522  | 0.373  | 0.463  |
| 2.201                | 3.565  | 1.851  | 0.897  | 2.240  | 0.036  | 0.833  | 2.180  | 1.657  | 5.402  | 0.429  | 1.329  | 0.283  | 1.180  | 3.618  | 0.385  | 0.477  |
| 2.305                | 3.727  | 1.953  | 0.938  | 2.349  | 0.037  | 0.863  | 2.182  | 1.737  | 5.617  | 0.448  | 1.375  | 0.292  | 1.249  | 3.739  | 0.397  | 0.498  |
| 2.369                | 3.841  | 1.988  | 0.975  | 2.421  | 0.037  | 0.884  | 2.215  | 1.772  | 5.728  | 0.458  | 1.407  | 0.300  | 1.289  | 3.836  | 0.402  | 0.507  |
| 2.428                | 3.978  | 2.008  | 1.006  | 2.508  | 0.037  | 0.905  | 2.147  | 1.839  | 5.896  | 0.472  | 1.437  | 0.311  | 1.317  | 3.863  | 0.408  | 0.521  |
| 2.460                | 4.057  | 2.066  | 1.029  | 2.585  | 0.037  | 0.928  | 2.271  | 1.878  | 5.974  | 0.485  | 1.470  | 0.316  | 1.337  | 4.057  | 0.415  | 0.513  |
| 2.518                | 4.199  | 2.079  | 1.072  | 2.690  | 0.037  | 0.957  | 2.256  | 1.942  | 6.058  | 0.498  | 1.528  | 0.326  | 1.394  | 4.177  | 0.424  | 0.530  |
| 2.600                | 4.395  | 2.170  | 1.113  | 2.806  | 0.038  | 1.008  | 2.386  | 2.008  | 6.202  | 0.517  | 1.604  | 0.337  | 1.463  | 4.361  | 0.435  | 0.551  |
| 2.620                | 4.330  | 2.114  | 1.151  | 2.844  | 0.038  | 0.986  | 2.338  | 2.005  | 6.138  | 0.527  | 1.603  | 0.340  | 1.464  | 4.458  | 0.444  | 0.550  |
| 2.610                | 4.278  | 2.094  | 1.156  | 2.871  | 0.037  | 0.988  | 2.276  | 2.016  | 6.025  | 0.531  | 1.620  | 0.344  | 1.486  | 4.419  | 0.445  | 0.558  |
| 2.557                | 4.176  | 2.043  | 1.114  | 2.813  | 0.035  | 0.964  | 2.256  | 1.985  | 6.012  | 0.519  | 1.576  | 0.339  | 1.436  | 4.376  | 0.433  | 0.553  |
| 2.475                | 3.977  | 1.989  | 1.100  | 2.720  | 0.034  | 0.912  | 2.191  | 1.914  | 5.760  | 0.497  | 1.535  | 0.329  | 1.425  | 4.248  | 0.422  | 0.533  |
| 2.403                | 3.938  | 1.953  | 1.077  | 2.690  | 0.033  | 0.882  | 2.169  | 1.883  | 5.617  | 0.483  | 1.507  | 0.320  | 1.384  | 4.216  | 0.414  | 0.516  |
| 2.306                | 3.744  | 1.868  | 1.038  | 2.590  | 0.030  | 0.838  | 1.992  | 1.815  | 5.410  | 0.466  | 1.461  | 0.310  | 1.333  | 4.016  | 0.396  | 0.487  |
| 2.193                | 3.560  | 1.804  | 1.002  | 2.484  | 0.029  | 0.785  | 1.901  | 1.732  | 5.163  | 0.451  | 1.398  | 0.298  | 1.281  | 3.865  | 0.384  | 0.476  |
| 2.102                | 3.415  | 1.743  | 0.992  | 2.418  | 0.028  | 0.757  | 1.855  | 1.702  | 5.104  | 0.447  | 1.368  | 0.290  | 1.269  | 3.758  | 0.375  | 0.470  |
| 2.027                | 3.293  | 1.717  | 0.986  | 2.356  | 0.027  | 0.732  | 1.789  | 1.672  | 4.966  | 0.437  | 1.347  | 0.284  | 1.258  | 3.671  | 0.368  | 0.460  |
| 1.995                | 3.260  | 1.719  | 0.993  | 2.336  | 0.027  | 0.713  | 1.772  | 1.665  | 4.927  | 0.430  | 1.349  | 0.282  | 1.253  | 3.713  | 0.368  | 0.438  |
| 1.969                | 3.225  | 1.725  | 1.013  | 2.315  | 0.026  | 0.692  | 1.794  | 1.648  | 4.903  | 0.434  | 1.346  | 0.278  | 1.277  | 3.741  | 0.368  | 0.439  |
| 1.918                | 3.107  | 1.675  | 1.005  | 2.266  | 0.026  | 0.666  | 1.779  | 1.621  | 4.859  | 0.431  | 1.321  | 0.273  | 1.267  | 3.695  | 0.356  | 0.442  |
| 1.874                | 3.065  | 1.652  | 1.004  | 2.244  | 0.025  | 0.647  | 1.776  | 1.599  | 4.857  | 0.429  | 1.308  | 0.272  | 1.262  | 3.634  | 0.352  | 0.445  |
| 1.837                | 2.955  | 1.621  | 1.015  | 2.203  | 0.025  | 0.627  | 1.753  | 1.581  | 4.839  | 0.427  | 1.286  | 0.267  | 1.269  | 3.588  | 0.346  | 0.446  |
| 1.805                | 2.918  | 1.637  | 1.023  | 2.177  | 0.024  | 0.618  | 1.760  | 1.570  | 4.817  | 0.426  | 1.285  | 0.263  | 1.255  | 3.608  | 0.343  | 0.435  |
| 1.769                | 2.838  | 1.620  | 1.029  | 2.137  | 0.024  | 0.601  | 1.713  | 1.551  | 4.749  | 0.424  | 1.277  | 0.260  | 1.246  | 3.564  | 0.337  | 0.441  |
| annual growth rates: |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| -0.005               | -0.002 | 0.001  | 0.004  | 0.000  | -0.018 | -0.004 | -0.003 | 0.006  | 0.005  | 0.004  | 0.002  | -0.003 | 0.004  | 0.001  | -0.004 | 0.002  |
| -0.008               | 0.002  | 0.002  | -0.006 | -0.009 | -0.013 | 0.007  | 0.004  | 0.013  | 0.008  | 0.006  | -0.001 | -0.011 | 0.001  | -0.006 | -0.009 | 0.002  |
| 0.015                | 0.025  | 0.023  | 0.007  | 0.013  | -0.009 | 0.018  | 0.023  | 0.034  | 0.033  | 0.021  | 0.015  | 0.011  | 0.017  | 0.015  | 0.006  | 0.019  |
| 0.002                | 0.014  | 0.005  | -0.002 | 0.004  | -0.021 | 0.009  | 0.002  | 0.013  | 0.022  | 0.005  | 0.007  | 0.001  | 0.001  | 0.004  | -0.004 | 0.011  |
| 0.029                | 0.033  | 0.030  | 0.036  | 0.038  | 0.003  | 0.030  | 0.011  | 0.033  | 0.029  | 0.030  | 0.029  | 0.028  | 0.033  | 0.028  | 0.022  | 0.022  |
| -0.022               | -0.024 | -0.019 | -0.008 | -0.013 | -0.031 | -0.027 | -0.023 | -0.015 | -0.020 | -0.013 | -0.013 | -0.014 | -0.010 | -0.013 | -0.014 | -0.014 |
| -0.019               | -0.021 | -0.008 | 0.006  | -0.014 | -0.022 | -0.028 | -0.006 | -0.011 | -0.006 | -0.004 | -0.008 | -0.013 | -0.001 | -0.004 | -0.012 | -0.006 |

Table 5. Land Input Relative to 1996 Level for Alabama

| Year                         | AL     | AR     | AZ     | CA     | CO     | CT     | DE     | FL     | GA     | IA     | ID     | IL     | IN     | KS     | KY     |  |
|------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--|
| 1960                         | 1.808  | 1.514  | 2.489  | 19.122 | 1.607  | 0.146  | 0.154  | 3.793  | 2.271  | 2.895  | 1.138  | 3.582  | 2.754  | 3.392  | 1.728  |  |
| 1961                         | 1.731  | 1.508  | 2.458  | 18.761 | 1.580  | 0.133  | 0.146  | 3.680  | 2.178  | 2.654  | 1.141  | 3.309  | 2.529  | 3.224  | 1.658  |  |
| 1962                         | 1.679  | 1.502  | 2.430  | 18.362 | 1.536  | 0.133  | 0.146  | 3.627  | 2.050  | 2.625  | 1.123  | 3.289  | 2.483  | 3.147  | 1.643  |  |
| 1963                         | 1.667  | 1.508  | 2.413  | 18.093 | 1.530  | 0.119  | 0.148  | 3.501  | 1.980  | 2.678  | 1.129  | 3.349  | 2.489  | 3.187  | 1.648  |  |
| 1964                         | 1.635  | 1.512  | 2.394  | 17.830 | 1.536  | 0.106  | 0.147  | 3.492  | 1.898  | 2.579  | 1.140  | 3.314  | 2.434  | 3.143  | 1.630  |  |
| 1965                         | 1.604  | 1.519  | 2.403  | 17.702 | 1.539  | 0.106  | 0.148  | 3.440  | 1.852  | 2.587  | 1.141  | 3.293  | 2.385  | 3.125  | 1.616  |  |
| 1966                         | 1.536  | 1.479  | 2.369  | 17.521 | 1.560  | 0.093  | 0.128  | 3.390  | 1.801  | 2.498  | 1.146  | 3.246  | 2.340  | 3.103  | 1.595  |  |
| 1967                         | 1.524  | 1.476  | 2.359  | 17.541 | 1.610  | 0.093  | 0.131  | 3.372  | 1.825  | 2.711  | 1.171  | 3.372  | 2.403  | 3.277  | 1.596  |  |
| 1968                         | 1.488  | 1.502  | 2.338  | 17.448 | 1.613  | 0.093  | 0.129  | 3.288  | 1.746  | 2.552  | 1.175  | 3.241  | 2.291  | 3.214  | 1.555  |  |
| 1969                         | 1.490  | 1.528  | 2.315  | 17.179 | 1.570  | 0.079  | 0.127  | 3.217  | 1.713  | 2.537  | 1.158  | 3.174  | 2.217  | 3.072  | 1.505  |  |
| 1970                         | 1.470  | 1.530  | 2.308  | 17.012 | 1.557  | 0.079  | 0.128  | 3.172  | 1.685  | 2.564  | 1.160  | 3.169  | 2.234  | 3.020  | 1.497  |  |
| 1971                         | 1.511  | 1.512  | 2.295  | 16.992 | 1.586  | 0.080  | 0.131  | 3.183  | 1.718  | 2.659  | 1.172  | 3.181  | 2.336  | 3.072  | 1.538  |  |
| 1972                         | 1.496  | 1.530  | 2.286  | 16.718 | 1.541  | 0.066  | 0.128  | 3.141  | 1.684  | 2.514  | 1.152  | 3.055  | 2.218  | 2.933  | 1.505  |  |
| 1973                         | 1.534  | 1.529  | 2.280  | 16.702 | 1.576  | 0.066  | 0.133  | 3.129  | 1.727  | 2.785  | 1.181  | 3.352  | 2.415  | 3.234  | 1.534  |  |
| 1974                         | 1.546  | 1.532  | 2.276  | 16.646 | 1.600  | 0.066  | 0.134  | 3.095  | 1.747  | 2.867  | 1.203  | 3.403  | 2.452  | 3.305  | 1.527  |  |
| 1975                         | 1.419  | 1.498  | 2.221  | 16.435 | 1.547  | 0.066  | 0.134  | 3.051  | 1.542  | 2.850  | 1.214  | 3.390  | 2.439  | 3.283  | 1.440  |  |
| 1976                         | 1.387  | 1.498  | 2.214  | 16.524 | 1.570  | 0.066  | 0.134  | 3.008  | 1.542  | 2.833  | 1.233  | 3.378  | 2.425  | 3.275  | 1.430  |  |
| 1977                         | 1.355  | 1.464  | 2.188  | 16.633 | 1.573  | 0.066  | 0.134  | 2.986  | 1.543  | 2.824  | 1.252  | 3.366  | 2.412  | 3.261  | 1.431  |  |
| 1978                         | 1.320  | 1.461  | 2.187  | 16.715 | 1.566  | 0.066  | 0.133  | 2.937  | 1.528  | 2.720  | 1.250  | 3.280  | 2.361  | 3.094  | 1.434  |  |
| 1979                         | 1.323  | 1.453  | 2.142  | 16.768 | 1.553  | 0.066  | 0.133  | 2.917  | 1.536  | 2.785  | 1.262  | 3.332  | 2.396  | 3.102  | 1.428  |  |
| 1980                         | 1.295  | 1.455  | 2.111  | 16.896 | 1.557  | 0.066  | 0.134  | 2.921  | 1.543  | 2.825  | 1.271  | 3.355  | 2.399  | 3.254  | 1.421  |  |
| 1981                         | 1.264  | 1.437  | 2.084  | 16.986 | 1.541  | 0.066  | 0.134  | 2.877  | 1.492  | 2.818  | 1.265  | 3.356  | 2.399  | 3.255  | 1.420  |  |
| 1982                         | 1.253  | 1.406  | 2.056  | 16.991 | 1.521  | 0.066  | 0.134  | 2.854  | 1.437  | 2.775  | 1.255  | 3.315  | 2.380  | 3.187  | 1.408  |  |
| 1983                         | 1.192  | 1.297  | 2.040  | 16.323 | 1.440  | 0.065  | 0.125  | 2.739  | 1.318  | 2.269  | 1.201  | 2.803  | 1.977  | 2.870  | 1.337  |  |
| 1984                         | 1.204  | 1.361  | 2.047  | 16.309 | 1.453  | 0.066  | 0.133  | 2.702  | 1.369  | 2.730  | 1.199  | 3.258  | 2.293  | 3.017  | 1.402  |  |
| 1985                         | 1.181  | 1.328  | 2.042  | 15.952 | 1.437  | 0.066  | 0.132  | 2.633  | 1.363  | 2.710  | 1.174  | 3.224  | 2.268  | 3.009  | 1.399  |  |
| 1986                         | 1.147  | 1.298  | 2.020  | 15.552 | 1.397  | 0.066  | 0.111  | 2.582  | 1.318  | 2.599  | 1.129  | 3.092  | 2.184  | 2.895  | 1.382  |  |
| 1987                         | 1.075  | 1.267  | 1.999  | 15.103 | 1.341  | 0.053  | 0.108  | 2.515  | 1.228  | 2.350  | 1.055  | 2.875  | 2.017  | 2.784  | 1.335  |  |
| 1988                         | 1.054  | 1.283  | 1.972  | 14.963 | 1.321  | 0.053  | 0.109  | 2.459  | 1.223  | 2.405  | 1.042  | 2.954  | 2.082  | 2.754  | 1.321  |  |
| 1989                         | 1.065  | 1.299  | 1.953  | 14.971 | 1.324  | 0.053  | 0.113  | 2.397  | 1.193  | 2.542  | 1.069  | 3.140  | 2.200  | 2.856  | 1.325  |  |
| 1990                         | 1.012  | 1.288  | 1.953  | 14.755 | 1.307  | 0.053  | 0.113  | 2.331  | 1.178  | 2.531  | 1.067  | 3.129  | 2.187  | 2.875  | 1.314  |  |
| 1991                         | 0.991  | 1.289  | 1.954  | 14.383 | 1.288  | 0.053  | 0.113  | 2.246  | 1.134  | 2.568  | 1.040  | 3.159  | 2.167  | 2.824  | 1.319  |  |
| 1992                         | 0.973  | 1.303  | 1.954  | 14.143 | 1.313  | 0.053  | 0.114  | 2.244  | 1.138  | 2.585  | 1.053  | 3.177  | 2.187  | 2.913  | 1.321  |  |
| 1993                         | 0.993  | 1.278  | 1.926  | 14.330 | 1.315  | 0.053  | 0.113  | 2.198  | 1.128  | 2.472  | 1.053  | 3.061  | 2.147  | 2.926  | 1.316  |  |
| 1994                         | 1.018  | 1.276  | 1.924  | 14.340 | 1.313  | 0.053  | 0.115  | 2.202  | 1.139  | 2.609  | 1.056  | 3.193  | 2.216  | 2.958  | 1.326  |  |
| 1995                         | 1.028  | 1.271  | 1.933  | 14.502 | 1.315  | 0.053  | 0.114  | 2.215  | 1.151  | 2.547  | 1.058  | 3.116  | 2.161  | 2.959  | 1.319  |  |
| 1996                         | 1.000  | 1.292  | 1.941  | 14.742 | 1.324  | 0.053  | 0.115  | 2.218  | 1.150  | 2.634  | 1.069  | 3.200  | 2.214  | 3.032  | 1.334  |  |
| Average annual growth rates: |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |  |
| 1960-96                      | -0.016 | -0.004 | -0.007 | -0.007 | -0.005 | -0.028 | -0.008 | -0.015 | -0.019 | -0.003 | -0.002 | -0.003 | -0.006 | -0.003 | -0.007 |  |
| 1960-66                      | -0.027 | -0.004 | -0.008 | -0.015 | -0.005 | -0.076 | -0.030 | -0.019 | -0.039 | -0.025 | 0.001  | -0.016 | -0.027 | -0.015 | -0.013 |  |
| 1966-69                      | -0.010 | 0.011  | -0.008 | -0.007 | 0.002  | -0.052 | -0.003 | -0.017 | -0.017 | 0.005  | 0.003  | -0.007 | -0.018 | -0.003 | -0.020 |  |
| 1969-73                      | 0.007  | 0.000  | -0.004 | -0.007 | 0.001  | -0.044 | 0.010  | -0.007 | 0.002  | 0.023  | 0.005  | 0.014  | 0.021  | 0.013  | 0.005  |  |
| 1973-79                      | -0.025 | -0.009 | -0.010 | 0.001  | -0.003 | 0.000  | 0.001  | -0.012 | -0.019 | 0.000  | 0.011  | -0.001 | -0.001 | -0.007 | -0.012 |  |
| 1979-89                      | -0.022 | -0.011 | -0.009 | -0.011 | -0.016 | -0.023 | -0.016 | -0.020 | -0.025 | -0.009 | -0.017 | -0.006 | -0.009 | -0.008 | -0.007 |  |
| 1989-96                      | -0.009 | -0.001 | -0.001 | -0.002 | 0.000  | 0.001  | 0.002  | -0.011 | -0.005 | 0.005  | 0.000  | 0.003  | 0.001  | 0.009  | 0.001  |  |

table 5 Continued

| LA                   | MA     | MD     | ME     | MI     | MN     | MO     | MS     | MT     | NC     | ND     | NE     | NH     | NJ     | NM     | NV     |
|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1.160                | 0.183  | 0.612  | 0.236  | 2.128  | 2.470  | 2.836  | 1.696  | 1.732  | 2.679  | 1.993  | 4.686  | 0.143  | 0.437  | 1.835  | 0.375  |
| 1.133                | 0.183  | 0.583  | 0.222  | 2.009  | 2.325  | 2.659  | 1.654  | 1.728  | 2.648  | 1.967  | 4.355  | 0.143  | 0.408  | 1.814  | 0.373  |
| 1.130                | 0.168  | 0.565  | 0.215  | 1.921  | 2.294  | 2.597  | 1.618  | 1.689  | 2.419  | 1.855  | 4.307  | 0.131  | 0.390  | 1.791  | 0.354  |
| 1.155                | 0.168  | 0.569  | 0.208  | 1.938  | 2.308  | 2.650  | 1.598  | 1.690  | 2.415  | 1.877  | 4.384  | 0.131  | 0.391  | 1.758  | 0.362  |
| 1.175                | 0.153  | 0.551  | 0.201  | 1.896  | 2.272  | 2.630  | 1.572  | 1.688  | 2.361  | 1.856  | 4.236  | 0.119  | 0.360  | 1.735  | 0.359  |
| 1.196                | 0.137  | 0.550  | 0.187  | 1.828  | 2.234  | 2.590  | 1.549  | 1.685  | 2.324  | 1.846  | 4.228  | 0.107  | 0.328  | 1.723  | 0.359  |
| 1.201                | 0.137  | 0.533  | 0.173  | 1.781  | 2.148  | 2.550  | 1.476  | 1.684  | 2.282  | 1.864  | 4.130  | 0.107  | 0.326  | 1.707  | 0.359  |
| 1.204                | 0.137  | 0.524  | 0.160  | 1.817  | 2.283  | 2.646  | 1.470  | 1.713  | 2.288  | 1.952  | 4.481  | 0.095  | 0.304  | 1.719  | 0.359  |
| 1.234                | 0.122  | 0.502  | 0.153  | 1.748  | 2.179  | 2.582  | 1.492  | 1.710  | 2.236  | 1.942  | 4.295  | 0.083  | 0.301  | 1.699  | 0.359  |
| 1.243                | 0.122  | 0.479  | 0.139  | 1.627  | 2.102  | 2.527  | 1.521  | 1.668  | 2.184  | 1.795  | 4.245  | 0.083  | 0.295  | 1.672  | 0.366  |
| 1.244                | 0.122  | 0.478  | 0.132  | 1.595  | 2.111  | 2.512  | 1.501  | 1.629  | 2.154  | 1.758  | 4.235  | 0.083  | 0.295  | 1.665  | 0.366  |
| 1.246                | 0.107  | 0.489  | 0.125  | 1.677  | 2.209  | 2.609  | 1.501  | 1.626  | 2.183  | 1.861  | 4.385  | 0.083  | 0.311  | 1.673  | 0.366  |
| 1.251                | 0.107  | 0.462  | 0.118  | 1.600  | 2.077  | 2.537  | 1.492  | 1.543  | 2.082  | 1.654  | 4.179  | 0.071  | 0.275  | 1.659  | 0.366  |
| 1.247                | 0.107  | 0.480  | 0.118  | 1.658  | 2.268  | 2.676  | 1.497  | 1.572  | 2.104  | 1.828  | 4.582  | 0.071  | 0.288  | 1.676  | 0.365  |
| 1.250                | 0.107  | 0.485  | 0.118  | 1.658  | 2.328  | 2.711  | 1.487  | 1.631  | 2.073  | 1.965  | 4.742  | 0.071  | 0.292  | 1.682  | 0.366  |
| 1.111                | 0.107  | 0.485  | 0.111  | 1.627  | 2.296  | 2.676  | 1.399  | 1.622  | 1.877  | 1.995  | 4.716  | 0.059  | 0.291  | 1.676  | 0.366  |
| 1.100                | 0.107  | 0.469  | 0.111  | 1.611  | 2.288  | 2.632  | 1.383  | 1.630  | 1.864  | 1.983  | 4.710  | 0.059  | 0.291  | 1.677  | 0.365  |
| 1.069                | 0.107  | 0.436  | 0.111  | 1.614  | 2.287  | 2.613  | 1.357  | 1.636  | 1.835  | 1.976  | 4.694  | 0.059  | 0.290  | 1.680  | 0.363  |
| 1.091                | 0.107  | 0.430  | 0.111  | 1.572  | 2.203  | 2.557  | 1.331  | 1.610  | 1.793  | 1.878  | 4.474  | 0.059  | 0.287  | 1.678  | 0.364  |
| 1.080                | 0.107  | 0.434  | 0.111  | 1.587  | 2.265  | 2.577  | 1.330  | 1.620  | 1.785  | 1.902  | 4.534  | 0.059  | 0.289  | 1.669  | 0.363  |
| 1.080                | 0.107  | 0.452  | 0.111  | 1.611  | 2.305  | 2.577  | 1.322  | 1.650  | 1.791  | 1.972  | 4.668  | 0.059  | 0.289  | 1.669  | 0.361  |
| 1.079                | 0.107  | 0.451  | 0.111  | 1.611  | 2.314  | 2.576  | 1.322  | 1.652  | 1.745  | 1.951  | 4.663  | 0.059  | 0.289  | 1.659  | 0.358  |
| 1.081                | 0.107  | 0.450  | 0.111  | 1.599  | 2.281  | 2.552  | 1.309  | 1.618  | 1.696  | 1.863  | 4.541  | 0.059  | 0.289  | 1.618  | 0.357  |
| 1.020                | 0.107  | 0.404  | 0.110  | 1.394  | 1.922  | 2.354  | 1.247  | 1.560  | 1.557  | 1.613  | 3.918  | 0.059  | 0.273  | 1.595  | 0.356  |
| 1.041                | 0.107  | 0.431  | 0.104  | 1.568  | 2.235  | 2.501  | 1.274  | 1.576  | 1.674  | 1.745  | 4.455  | 0.059  | 0.287  | 1.594  | 0.357  |
| 1.021                | 0.107  | 0.413  | 0.104  | 1.554  | 2.211  | 2.475  | 1.263  | 1.573  | 1.636  | 1.727  | 4.433  | 0.059  | 0.287  | 1.567  | 0.358  |
| 1.003                | 0.107  | 0.390  | 0.104  | 1.481  | 2.111  | 2.412  | 1.239  | 1.567  | 1.607  | 1.713  | 4.279  | 0.059  | 0.254  | 1.539  | 0.357  |
| 0.932                | 0.107  | 0.378  | 0.103  | 1.386  | 1.954  | 2.300  | 1.175  | 1.528  | 1.543  | 1.639  | 4.063  | 0.059  | 0.248  | 1.522  | 0.357  |
| 0.923                | 0.107  | 0.362  | 0.102  | 1.378  | 1.974  | 2.282  | 1.140  | 1.491  | 1.442  | 1.592  | 4.069  | 0.059  | 0.247  | 1.515  | 0.356  |
| 0.928                | 0.107  | 0.360  | 0.101  | 1.416  | 2.087  | 2.331  | 1.127  | 1.501  | 1.447  | 1.689  | 4.239  | 0.059  | 0.250  | 1.516  | 0.358  |
| 0.907                | 0.107  | 0.360  | 0.101  | 1.420  | 2.090  | 2.324  | 1.096  | 1.486  | 1.403  | 1.667  | 4.218  | 0.059  | 0.251  | 1.511  | 0.357  |
| 0.898                | 0.107  | 0.361  | 0.094  | 1.431  | 2.098  | 2.326  | 1.062  | 1.469  | 1.401  | 1.615  | 4.249  | 0.059  | 0.253  | 1.503  | 0.356  |
| 0.886                | 0.107  | 0.347  | 0.094  | 1.452  | 2.118  | 2.329  | 1.063  | 1.478  | 1.392  | 1.702  | 4.304  | 0.059  | 0.253  | 1.502  | 0.356  |
| 0.864                | 0.092  | 0.344  | 0.094  | 1.404  | 2.011  | 2.283  | 1.056  | 1.480  | 1.357  | 1.711  | 4.229  | 0.047  | 0.252  | 1.495  | 0.355  |
| 0.853                | 0.092  | 0.349  | 0.094  | 1.440  | 2.138  | 2.320  | 1.061  | 1.479  | 1.367  | 1.729  | 4.380  | 0.047  | 0.255  | 1.499  | 0.351  |
| 0.870                | 0.092  | 0.349  | 0.095  | 1.422  | 2.119  | 2.313  | 1.087  | 1.478  | 1.363  | 1.739  | 4.311  | 0.047  | 0.254  | 1.492  | 0.350  |
| 0.916                | 0.092  | 0.354  | 0.088  | 1.462  | 2.176  | 2.334  | 1.074  | 1.517  | 1.385  | 1.768  | 4.417  | 0.048  | 0.258  | 1.492  | 0.350  |
| annual growth rates: |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| -0.007               | -0.019 | -0.015 | -0.027 | -0.010 | -0.004 | -0.005 | -0.013 | -0.004 | -0.018 | -0.003 | -0.002 | -0.031 | -0.015 | -0.006 | -0.002 |
| 0.006                | -0.048 | -0.023 | -0.051 | -0.030 | -0.023 | -0.018 | -0.023 | -0.005 | -0.027 | -0.011 | -0.021 | -0.048 | -0.049 | -0.012 | -0.007 |
| 0.011                | -0.040 | -0.036 | -0.075 | -0.030 | -0.007 | -0.003 | 0.010  | -0.003 | -0.015 | -0.013 | 0.009  | -0.084 | -0.034 | -0.007 | 0.007  |
| 0.001                | -0.033 | 0.001  | -0.040 | 0.005  | 0.019  | 0.014  | -0.004 | -0.015 | -0.009 | 0.005  | 0.019  | -0.038 | -0.006 | 0.001  | -0.001 |
| -0.024               | 0.000  | -0.017 | -0.010 | -0.007 | 0.000  | -0.006 | -0.020 | 0.005  | -0.027 | 0.007  | -0.002 | -0.030 | 0.001  | -0.001 | -0.001 |
| -0.015               | 0.000  | -0.019 | -0.009 | -0.011 | -0.008 | -0.010 | -0.017 | -0.008 | -0.021 | -0.012 | -0.007 | 0.000  | -0.014 | -0.010 | -0.001 |
| -0.002               | -0.022 | -0.002 | -0.020 | 0.005  | 0.006  | 0.000  | -0.007 | 0.001  | -0.006 | 0.007  | 0.006  | -0.031 | 0.004  | -0.002 | -0.003 |

table 5 Continued

| NY                   | OH     | OK     | OR     | PA     | RI    | SC     | SD     | TN     | TX     | UT     | VA     | VT     | WA     | WI     | WV     | WY     |
|----------------------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1.105                | 2.204  | 3.965  | 1.424  | 1.662  | 0.021 | 1.144  | 1.599  | 2.199  | 12.819 | 0.736  | 1.802  | 0.206  | 1.206  | 1.459  | 1.117  | 1.340  |
| 1.040                | 2.055  | 3.905  | 1.434  | 1.610  | 0.021 | 1.097  | 1.544  | 2.114  | 12.366 | 0.733  | 1.729  | 0.200  | 1.193  | 1.410  | 1.102  | 1.340  |
| 1.032                | 2.025  | 3.780  | 1.413  | 1.563  | 0.021 | 1.057  | 1.526  | 2.059  | 12.096 | 0.724  | 1.672  | 0.193  | 1.160  | 1.396  | 1.083  | 1.330  |
| 1.013                | 2.048  | 3.802  | 1.437  | 1.544  | 0.021 | 1.022  | 1.533  | 2.036  | 12.080 | 0.718  | 1.656  | 0.187  | 1.165  | 1.379  | 1.067  | 1.329  |
| 0.998                | 2.013  | 3.802  | 1.434  | 1.510  | 0.021 | 1.009  | 1.523  | 2.020  | 11.914 | 0.712  | 1.632  | 0.180  | 1.125  | 1.357  | 1.035  | 1.329  |
| 0.978                | 1.965  | 3.784  | 1.438  | 1.474  | 0.021 | 0.988  | 1.501  | 1.985  | 11.775 | 0.716  | 1.599  | 0.167  | 1.119  | 1.342  | 1.020  | 1.331  |
| 0.946                | 1.927  | 3.756  | 1.436  | 1.435  | 0.021 | 0.951  | 1.481  | 1.950  | 11.374 | 0.714  | 1.571  | 0.161  | 1.131  | 1.326  | 0.955  | 1.331  |
| 0.913                | 2.001  | 3.860  | 1.444  | 1.439  | 0.021 | 0.949  | 1.545  | 1.956  | 11.611 | 0.719  | 1.563  | 0.148  | 1.156  | 1.338  | 0.927  | 1.334  |
| 0.871                | 1.947  | 3.839  | 1.428  | 1.390  | 0.021 | 0.923  | 1.499  | 1.932  | 11.436 | 0.720  | 1.544  | 0.142  | 1.158  | 1.303  | 0.896  | 1.332  |
| 0.836                | 1.897  | 3.713  | 1.397  | 1.335  | 0.021 | 0.904  | 1.469  | 1.916  | 11.358 | 0.720  | 1.502  | 0.135  | 1.124  | 1.280  | 0.881  | 1.326  |
| 0.834                | 1.890  | 3.647  | 1.373  | 1.320  | 0.021 | 0.892  | 1.461  | 1.902  | 11.281 | 0.708  | 1.478  | 0.129  | 1.106  | 1.269  | 0.866  | 1.325  |
| 0.836                | 1.960  | 3.712  | 1.368  | 1.359  | 0.021 | 0.910  | 1.507  | 1.968  | 11.359 | 0.707  | 1.478  | 0.122  | 1.114  | 1.293  | 0.855  | 1.330  |
| 0.844                | 1.899  | 3.593  | 1.342  | 1.324  | 0.021 | 0.879  | 1.446  | 1.928  | 11.160 | 0.707  | 1.438  | 0.122  | 1.089  | 1.261  | 0.838  | 1.328  |
| 0.880                | 2.015  | 3.816  | 1.353  | 1.350  | 0.021 | 0.885  | 1.531  | 1.957  | 11.484 | 0.707  | 1.436  | 0.116  | 1.126  | 1.296  | 0.842  | 1.330  |
| 0.902                | 2.039  | 3.857  | 1.351  | 1.366  | 0.021 | 0.886  | 1.580  | 1.958  | 11.565 | 0.709  | 1.422  | 0.116  | 1.137  | 1.306  | 0.845  | 1.335  |
| 0.817                | 1.977  | 3.709  | 1.292  | 1.324  | 0.021 | 0.783  | 1.576  | 1.828  | 11.418 | 0.697  | 1.357  | 0.116  | 1.136  | 1.285  | 0.740  | 1.324  |
| 0.786                | 1.952  | 3.686  | 1.296  | 1.281  | 0.021 | 0.772  | 1.568  | 1.815  | 11.393 | 0.704  | 1.345  | 0.116  | 1.147  | 1.271  | 0.722  | 1.322  |
| 0.770                | 1.938  | 3.652  | 1.299  | 1.253  | 0.021 | 0.760  | 1.564  | 1.803  | 11.360 | 0.714  | 1.333  | 0.116  | 1.158  | 1.257  | 0.704  | 1.316  |
| 0.746                | 1.903  | 3.551  | 1.292  | 1.229  | 0.021 | 0.743  | 1.515  | 1.799  | 11.214 | 0.718  | 1.313  | 0.116  | 1.151  | 1.224  | 0.685  | 1.317  |
| 0.734                | 1.914  | 3.519  | 1.304  | 1.233  | 0.021 | 0.745  | 1.525  | 1.788  | 11.193 | 0.707  | 1.317  | 0.110  | 1.182  | 1.228  | 0.702  | 1.313  |
| 0.723                | 1.910  | 3.608  | 1.321  | 1.239  | 0.021 | 0.737  | 1.556  | 1.778  | 11.257 | 0.709  | 1.321  | 0.110  | 1.212  | 1.237  | 0.720  | 1.309  |
| 0.747                | 1.897  | 3.545  | 1.337  | 1.226  | 0.021 | 0.725  | 1.544  | 1.766  | 11.201 | 0.698  | 1.321  | 0.116  | 1.235  | 1.238  | 0.772  | 1.306  |
| 0.729                | 1.874  | 3.435  | 1.341  | 1.210  | 0.021 | 0.687  | 1.515  | 1.749  | 11.091 | 0.692  | 1.319  | 0.110  | 1.230  | 1.224  | 0.737  | 1.299  |
| 0.699                | 1.637  | 3.102  | 1.296  | 1.145  | 0.021 | 0.613  | 1.366  | 1.686  | 10.671 | 0.682  | 1.271  | 0.109  | 1.169  | 1.100  | 0.681  | 1.298  |
| 0.719                | 1.830  | 3.209  | 1.285  | 1.193  | 0.021 | 0.632  | 1.482  | 1.740  | 10.972 | 0.674  | 1.302  | 0.110  | 1.171  | 1.186  | 0.651  | 1.296  |
| 0.693                | 1.818  | 3.222  | 1.262  | 1.188  | 0.021 | 0.618  | 1.470  | 1.737  | 10.864 | 0.665  | 1.273  | 0.103  | 1.163  | 1.174  | 0.617  | 1.299  |
| 0.670                | 1.772  | 3.181  | 1.226  | 1.148  | 0.021 | 0.594  | 1.437  | 1.667  | 10.660 | 0.652  | 1.232  | 0.103  | 1.134  | 1.137  | 0.633  | 1.300  |
| 0.641                | 1.674  | 3.113  | 1.182  | 1.115  | 0.021 | 0.549  | 1.385  | 1.579  | 10.429 | 0.641  | 1.184  | 0.096  | 1.087  | 1.089  | 0.632  | 1.299  |
| 0.631                | 1.684  | 3.106  | 1.164  | 1.101  | 0.021 | 0.538  | 1.376  | 1.573  | 10.270 | 0.639  | 1.178  | 0.096  | 1.061  | 1.083  | 0.631  | 1.292  |
| 0.619                | 1.756  | 3.247  | 1.185  | 1.097  | 0.021 | 0.551  | 1.419  | 1.591  | 10.386 | 0.639  | 1.181  | 0.097  | 1.083  | 1.097  | 0.633  | 1.292  |
| 0.620                | 1.769  | 3.271  | 1.178  | 1.085  | 0.021 | 0.539  | 1.405  | 1.565  | 10.338 | 0.635  | 1.168  | 0.096  | 1.078  | 1.095  | 0.633  | 1.288  |
| 0.616                | 1.773  | 3.143  | 1.172  | 1.088  | 0.021 | 0.539  | 1.398  | 1.568  | 10.219 | 0.632  | 1.157  | 0.097  | 1.071  | 1.098  | 0.633  | 1.280  |
| 0.609                | 1.756  | 3.374  | 1.162  | 1.082  | 0.021 | 0.544  | 1.428  | 1.598  | 10.183 | 0.633  | 1.146  | 0.097  | 1.088  | 1.091  | 0.633  | 1.281  |
| 0.593                | 1.707  | 3.373  | 1.157  | 1.064  | 0.021 | 0.536  | 1.381  | 1.527  | 10.161 | 0.628  | 1.130  | 0.090  | 1.088  | 1.051  | 0.633  | 1.278  |
| 0.588                | 1.747  | 3.391  | 1.156  | 1.057  | 0.021 | 0.533  | 1.432  | 1.519  | 10.115 | 0.622  | 1.136  | 0.090  | 1.076  | 1.069  | 0.634  | 1.269  |
| 0.572                | 1.729  | 3.402  | 1.158  | 1.041  | 0.021 | 0.537  | 1.426  | 1.530  | 10.162 | 0.621  | 1.136  | 0.090  | 1.075  | 1.062  | 0.633  | 1.272  |
| 0.583                | 1.759  | 3.470  | 1.168  | 1.049  | 0.021 | 0.548  | 1.455  | 1.518  | 10.156 | 0.620  | 1.145  | 0.090  | 1.094  | 1.081  | 0.635  | 1.275  |
| annual growth rates: |        |        |        |        |       |        |        |        |        |        |        |        |        |        |        |        |
| -0.018               | -0.006 | -0.004 | -0.006 | -0.013 | 0.000 | -0.020 | -0.003 | -0.010 | -0.006 | -0.005 | -0.013 | -0.023 | -0.003 | -0.008 | -0.016 | -0.001 |
| -0.026               | -0.022 | -0.009 | 0.001  | -0.024 | 0.000 | -0.031 | -0.013 | -0.020 | -0.020 | -0.005 | -0.023 | -0.041 | -0.011 | -0.016 | -0.026 | -0.001 |
| -0.041               | -0.005 | -0.004 | -0.009 | -0.024 | 0.000 | -0.017 | -0.003 | -0.006 | 0.000  | 0.003  | -0.015 | -0.058 | -0.002 | -0.012 | -0.027 | -0.001 |
| 0.013                | 0.015  | 0.007  | -0.008 | 0.003  | 0.000 | -0.005 | 0.010  | 0.005  | 0.003  | -0.004 | -0.011 | -0.038 | 0.000  | 0.003  | -0.011 | 0.001  |
| -0.030               | -0.009 | -0.013 | -0.006 | -0.015 | 0.000 | -0.029 | -0.001 | -0.015 | -0.004 | 0.000  | -0.014 | -0.009 | 0.008  | -0.009 | -0.030 | -0.002 |
| -0.017               | -0.009 | -0.008 | -0.010 | -0.012 | 0.000 | -0.030 | -0.007 | -0.012 | -0.007 | -0.010 | -0.011 | -0.013 | -0.009 | -0.011 | -0.010 | -0.002 |
| -0.009               | 0.000  | 0.009  | -0.002 | -0.006 | 0.000 | -0.001 | 0.003  | -0.007 | -0.003 | -0.004 | -0.004 | -0.010 | 0.002  | -0.002 | 0.000  | -0.002 |

Table 6. Labor Input Relative to 1996 Level for Alabama

| Year                         | AL     | AR     | AZ     | CA     | CO     | CT     | DE     | FL     | GA     | IA     | ID     | IL     | IN     | KS     | KY     |
|------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1960                         | 3.364  | 4.653  | 0.968  | 12.129 | 2.233  | 0.806  | 0.387  | 2.720  | 4.127  | 10.665 | 2.546  | 8.396  | 7.025  | 5.781  | 5.753  |
| 1961                         | 3.146  | 4.298  | 0.869  | 11.587 | 2.129  | 0.740  | 0.361  | 2.611  | 3.864  | 10.245 | 2.530  | 7.967  | 6.631  | 5.420  | 5.592  |
| 1962                         | 2.984  | 4.165  | 0.814  | 11.054 | 2.124  | 0.753  | 0.359  | 2.649  | 3.614  | 10.102 | 2.521  | 7.942  | 6.430  | 5.299  | 5.419  |
| 1963                         | 2.949  | 4.029  | 0.798  | 10.390 | 1.946  | 0.695  | 0.334  | 2.583  | 3.886  | 9.736  | 2.494  | 7.590  | 6.109  | 5.111  | 5.457  |
| 1964                         | 2.861  | 3.577  | 0.829  | 9.895  | 1.803  | 0.676  | 0.296  | 2.635  | 3.541  | 9.122  | 2.495  | 7.032  | 5.670  | 4.998  | 5.259  |
| 1965                         | 2.824  | 3.475  | 0.826  | 10.198 | 1.760  | 0.669  | 0.311  | 2.802  | 3.496  | 9.030  | 2.503  | 6.810  | 5.437  | 4.933  | 5.115  |
| 1966                         | 2.641  | 2.871  | 0.799  | 10.091 | 1.837  | 0.601  | 0.272  | 2.779  | 2.881  | 8.816  | 2.364  | 6.179  | 5.024  | 4.789  | 4.694  |
| 1967                         | 2.664  | 3.113  | 0.819  | 8.596  | 1.906  | 0.481  | 0.220  | 3.051  | 2.920  | 8.288  | 2.092  | 6.027  | 4.266  | 4.470  | 4.773  |
| 1968                         | 2.647  | 3.118  | 0.811  | 9.029  | 2.009  | 0.477  | 0.203  | 2.826  | 2.891  | 7.806  | 1.907  | 5.551  | 3.957  | 4.198  | 4.114  |
| 1969                         | 2.526  | 3.332  | 0.837  | 8.857  | 1.994  | 0.446  | 0.218  | 2.723  | 2.641  | 7.766  | 1.934  | 5.325  | 3.766  | 3.887  | 3.803  |
| 1970                         | 2.215  | 2.971  | 0.803  | 9.524  | 2.005  | 0.425  | 0.228  | 3.144  | 2.651  | 7.404  | 1.887  | 5.077  | 3.858  | 3.806  | 3.592  |
| 1971                         | 2.126  | 3.014  | 0.784  | 8.876  | 1.903  | 0.405  | 0.207  | 3.127  | 2.671  | 7.317  | 1.812  | 5.115  | 4.123  | 3.860  | 3.565  |
| 1972                         | 2.100  | 2.969  | 0.792  | 9.265  | 1.807  | 0.467  | 0.204  | 3.011  | 2.648  | 7.403  | 1.834  | 5.205  | 4.302  | 3.839  | 3.550  |
| 1973                         | 2.201  | 2.980  | 0.809  | 9.485  | 1.989  | 0.479  | 0.214  | 3.107  | 2.854  | 7.385  | 1.822  | 5.361  | 4.561  | 4.027  | 3.403  |
| 1974                         | 1.808  | 2.706  | 0.741  | 9.776  | 2.427  | 0.401  | 0.228  | 2.522  | 2.373  | 7.076  | 1.693  | 5.050  | 3.831  | 3.761  | 3.095  |
| 1975                         | 1.795  | 2.446  | 0.782  | 10.877 | 2.240  | 0.431  | 0.236  | 2.401  | 2.132  | 7.757  | 1.526  | 5.233  | 4.048  | 3.608  | 3.078  |
| 1976                         | 1.879  | 2.453  | 0.741  | 10.254 | 1.982  | 0.451  | 0.229  | 2.637  | 2.260  | 8.005  | 1.978  | 5.516  | 3.650  | 3.936  | 3.103  |
| 1977                         | 1.819  | 2.470  | 0.830  | 9.527  | 1.885  | 0.471  | 0.216  | 2.631  | 1.979  | 7.668  | 1.797  | 5.605  | 3.879  | 3.905  | 3.130  |
| 1978                         | 1.800  | 2.327  | 1.112  | 7.843  | 1.816  | 0.419  | 0.203  | 2.678  | 1.905  | 8.131  | 1.905  | 5.094  | 3.270  | 3.726  | 3.203  |
| 1979                         | 1.756  | 2.006  | 0.922  | 9.098  | 1.669  | 0.384  | 0.200  | 2.837  | 2.374  | 8.324  | 1.744  | 5.794  | 3.393  | 4.365  | 2.463  |
| 1980                         | 1.913  | 2.360  | 1.074  | 8.681  | 1.939  | 0.411  | 0.197  | 2.668  | 2.463  | 8.063  | 1.774  | 4.822  | 3.587  | 4.695  | 2.843  |
| 1981                         | 2.317  | 2.367  | 0.988  | 8.502  | 2.127  | 0.432  | 0.165  | 2.528  | 2.817  | 5.968  | 1.806  | 5.224  | 3.482  | 4.905  | 2.979  |
| 1982                         | 1.442  | 1.784  | 1.134  | 8.279  | 1.684  | 0.333  | 0.239  | 2.676  | 2.081  | 7.165  | 2.419  | 4.133  | 3.179  | 4.461  | 3.018  |
| 1983                         | 1.090  | 2.296  | 1.097  | 8.487  | 1.728  | 0.402  | 0.194  | 2.562  | 2.055  | 6.835  | 1.727  | 4.151  | 3.557  | 4.494  | 2.634  |
| 1984                         | 1.338  | 2.049  | 1.111  | 8.144  | 1.729  | 0.437  | 0.287  | 2.403  | 2.032  | 6.677  | 1.744  | 4.304  | 3.164  | 3.385  | 2.540  |
| 1985                         | 1.340  | 2.148  | 1.015  | 7.931  | 2.153  | 0.376  | 0.192  | 2.318  | 1.794  | 6.139  | 1.718  | 4.134  | 3.182  | 3.728  | 2.235  |
| 1986                         | 1.039  | 1.775  | 0.922  | 7.441  | 1.856  | 0.308  | 0.198  | 2.336  | 1.579  | 6.259  | 1.651  | 3.904  | 3.240  | 3.319  | 2.156  |
| 1987                         | 1.245  | 1.702  | 1.079  | 7.694  | 2.230  | 0.315  | 0.186  | 2.356  | 1.406  | 6.213  | 1.526  | 3.428  | 3.034  | 3.182  | 2.192  |
| 1988                         | 1.230  | 1.794  | 1.031  | 8.175  | 1.875  | 0.303  | 0.189  | 2.561  | 1.395  | 6.341  | 1.611  | 3.873  | 3.156  | 2.841  | 2.296  |
| 1989                         | 1.309  | 1.733  | 0.983  | 8.668  | 1.951  | 0.323  | 0.198  | 2.423  | 1.684  | 5.923  | 1.763  | 4.006  | 3.077  | 3.013  | 2.598  |
| 1990                         | 1.349  | 1.708  | 1.015  | 7.936  | 1.746  | 0.317  | 0.159  | 2.286  | 1.548  | 6.090  | 1.708  | 3.477  | 2.705  | 3.230  | 2.718  |
| 1991                         | 1.422  | 1.764  | 0.957  | 8.709  | 1.385  | 0.339  | 0.136  | 2.500  | 1.662  | 5.430  | 1.331  | 3.630  | 2.554  | 2.756  | 2.335  |
| 1992                         | 1.748  | 1.697  | 1.037  | 7.603  | 1.287  | 0.373  | 0.163  | 2.711  | 1.625  | 5.276  | 1.267  | 3.300  | 2.443  | 2.653  | 2.328  |
| 1993                         | 1.354  | 1.609  | 0.835  | 7.781  | 1.260  | 0.376  | 0.139  | 2.530  | 1.523  | 4.496  | 1.175  | 3.180  | 2.616  | 2.691  | 2.271  |
| 1994                         | 1.041  | 1.513  | 0.926  | 8.051  | 1.226  | 0.396  | 0.168  | 2.565  | 1.498  | 4.467  | 1.197  | 3.331  | 2.284  | 2.585  | 2.073  |
| 1995                         | 1.184  | 1.990  | 0.768  | 8.766  | 1.231  | 0.345  | 0.154  | 2.482  | 1.433  | 5.209  | 1.364  | 3.495  | 2.296  | 3.123  | 2.227  |
| 1996                         | 1.000  | 1.792  | 0.652  | 9.243  | 1.394  | 0.300  | 0.131  | 2.314  | 1.437  | 4.350  | 1.276  | 3.063  | 2.196  | 2.852  | 2.188  |
| Average annual growth rates: |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 1960-96                      | -0.034 | -0.027 | -0.011 | -0.008 | -0.013 | -0.027 | -0.030 | -0.004 | -0.029 | -0.025 | -0.019 | -0.028 | -0.032 | -0.020 | -0.027 |
| 1960-66                      | -0.040 | -0.080 | -0.032 | -0.031 | -0.033 | -0.049 | -0.059 | 0.004  | -0.060 | -0.032 | -0.012 | -0.051 | -0.056 | -0.031 | -0.034 |
| 1966-69                      | -0.015 | 0.050  | 0.016  | -0.043 | 0.027  | -0.100 | -0.074 | -0.007 | -0.029 | -0.042 | -0.067 | -0.050 | -0.096 | -0.070 | -0.070 |
| 1969-73                      | -0.034 | -0.028 | -0.009 | 0.017  | -0.001 | 0.018  | -0.005 | 0.033  | 0.019  | -0.013 | -0.015 | 0.002  | 0.048  | 0.009  | -0.028 |
| 1973-79                      | -0.038 | -0.066 | 0.022  | -0.007 | -0.029 | -0.037 | -0.011 | -0.015 | -0.031 | 0.020  | -0.007 | 0.013  | -0.049 | 0.013  | -0.054 |
| 1979-89                      | -0.029 | -0.015 | 0.006  | -0.005 | 0.016  | -0.017 | -0.001 | -0.016 | -0.034 | -0.034 | 0.001  | -0.037 | -0.010 | -0.037 | 0.005  |
| 1989-96                      | -0.038 | 0.005  | -0.059 | 0.009  | -0.048 | -0.010 | -0.059 | -0.007 | -0.023 | -0.044 | -0.046 | -0.038 | -0.048 | -0.008 | -0.025 |

table 6 Continued

| LA                   | MA     | MD     | ME     | MI     | MN     | MO     | MS     | MT     | NC     | ND     | NE     | NH     | NJ     | NM     | NV     |
|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 3.316                | 1.429  | 1.578  | 1.117  | 7.459  | 9.059  | 8.437  | 5.847  | 1.988  | 8.761  | 3.118  | 5.771  | 0.459  | 1.760  | 1.242  | 0.176  |
| 3.222                | 1.297  | 1.514  | 1.086  | 7.140  | 8.687  | 7.986  | 5.380  | 1.828  | 8.379  | 2.878  | 5.442  | 0.416  | 1.655  | 1.124  | 0.160  |
| 3.056                | 1.225  | 1.547  | 1.043  | 6.765  | 8.696  | 7.813  | 5.296  | 1.844  | 8.012  | 2.870  | 5.302  | 0.384  | 1.639  | 1.077  | 0.165  |
| 2.947                | 1.112  | 1.511  | 1.097  | 6.650  | 8.524  | 7.429  | 4.896  | 1.777  | 8.010  | 2.664  | 4.878  | 0.375  | 1.563  | 1.004  | 0.165  |
| 2.806                | 1.044  | 1.421  | 1.071  | 6.205  | 8.283  | 7.177  | 4.700  | 1.715  | 7.279  | 2.513  | 4.618  | 0.358  | 1.527  | 0.943  | 0.167  |
| 2.693                | 1.047  | 1.444  | 1.052  | 5.882  | 8.133  | 6.934  | 4.435  | 1.734  | 7.071  | 2.546  | 4.563  | 0.369  | 1.497  | 0.874  | 0.173  |
| 2.521                | 0.928  | 1.226  | 1.039  | 5.677  | 7.636  | 6.470  | 4.029  | 1.783  | 6.380  | 2.453  | 4.303  | 0.338  | 1.183  | 0.804  | 0.147  |
| 2.282                | 0.759  | 1.127  | 0.837  | 5.151  | 7.235  | 6.091  | 3.460  | 1.731  | 6.183  | 2.287  | 4.067  | 0.285  | 1.038  | 0.768  | 0.185  |
| 2.167                | 0.741  | 1.077  | 0.767  | 4.713  | 6.745  | 5.609  | 3.496  | 1.603  | 5.780  | 2.183  | 3.909  | 0.281  | 0.971  | 0.817  | 0.180  |
| 1.940                | 0.653  | 1.030  | 0.753  | 4.481  | 6.610  | 5.530  | 3.109  | 1.640  | 5.384  | 2.146  | 3.817  | 0.253  | 0.921  | 0.744  | 0.161  |
| 1.693                | 0.613  | 1.029  | 0.720  | 4.559  | 6.158  | 5.733  | 3.245  | 1.545  | 5.365  | 1.981  | 3.729  | 0.240  | 0.884  | 0.710  | 0.169  |
| 1.736                | 0.627  | 1.026  | 0.639  | 4.153  | 6.237  | 5.647  | 2.986  | 1.628  | 5.118  | 2.019  | 3.797  | 0.197  | 0.868  | 0.700  | 0.160  |
| 1.808                | 0.620  | 1.005  | 0.679  | 3.907  | 6.079  | 5.431  | 2.747  | 1.617  | 4.551  | 2.091  | 4.009  | 0.175  | 0.868  | 0.641  | 0.184  |
| 1.690                | 0.666  | 1.057  | 0.732  | 3.969  | 6.716  | 5.625  | 2.626  | 1.629  | 4.474  | 2.014  | 4.105  | 0.182  | 0.849  | 0.725  | 0.182  |
| 1.717                | 0.511  | 1.026  | 0.580  | 3.417  | 7.064  | 5.241  | 2.179  | 1.695  | 3.765  | 2.170  | 4.634  | 0.170  | 0.867  | 0.671  | 0.210  |
| 1.441                | 0.541  | 0.967  | 0.585  | 3.087  | 7.066  | 5.518  | 1.647  | 1.396  | 3.224  | 1.983  | 4.679  | 0.172  | 0.885  | 0.734  | 0.220  |
| 1.666                | 0.588  | 0.989  | 0.609  | 3.322  | 7.583  | 5.233  | 2.066  | 1.544  | 3.580  | 1.992  | 4.871  | 0.192  | 1.001  | 0.803  | 0.237  |
| 1.402                | 0.590  | 0.951  | 0.647  | 3.057  | 7.339  | 4.490  | 1.921  | 1.568  | 3.310  | 2.428  | 4.241  | 0.200  | 0.986  | 0.794  | 0.205  |
| 1.422                | 0.565  | 0.923  | 0.675  | 2.904  | 7.176  | 4.249  | 1.808  | 1.563  | 3.236  | 2.384  | 4.669  | 0.217  | 0.988  | 0.780  | 0.229  |
| 1.335                | 0.513  | 1.005  | 0.624  | 3.119  | 6.558  | 4.572  | 1.486  | 1.620  | 3.687  | 2.578  | 4.582  | 0.193  | 1.009  | 0.961  | 0.210  |
| 1.499                | 0.544  | 1.101  | 0.694  | 3.135  | 7.702  | 4.114  | 1.921  | 1.767  | 3.615  | 1.952  | 4.843  | 0.217  | 1.048  | 0.746  | 0.217  |
| 1.678                | 0.562  | 1.259  | 0.728  | 2.933  | 7.123  | 3.721  | 1.751  | 1.801  | 3.779  | 2.013  | 4.563  | 0.234  | 1.052  | 0.810  | 0.228  |
| 1.434                | 0.591  | 0.980  | 0.522  | 3.247  | 7.177  | 5.130  | 1.662  | 1.830  | 3.789  | 2.226  | 4.522  | 0.202  | 0.939  | 0.887  | 0.153  |
| 1.153                | 0.544  | 0.938  | 0.534  | 3.381  | 6.169  | 4.393  | 1.400  | 1.459  | 2.547  | 1.979  | 4.011  | 0.154  | 0.887  | 0.775  | 0.161  |
| 0.975                | 0.530  | 0.802  | 0.498  | 3.453  | 6.957  | 4.421  | 1.350  | 1.839  | 3.013  | 2.308  | 4.374  | 0.185  | 0.860  | 1.045  | 0.178  |
| 1.222                | 0.485  | 0.722  | 0.505  | 3.137  | 6.943  | 4.324  | 1.514  | 1.663  | 2.554  | 2.111  | 4.554  | 0.183  | 0.962  | 0.756  | 0.173  |
| 0.967                | 0.389  | 0.619  | 0.457  | 2.572  | 5.990  | 3.399  | 1.169  | 1.441  | 2.071  | 1.974  | 4.076  | 0.174  | 0.978  | 0.687  | 0.168  |
| 1.050                | 0.346  | 0.637  | 0.413  | 2.666  | 6.376  | 4.191  | 1.287  | 1.238  | 1.989  | 1.952  | 3.834  | 0.147  | 0.911  | 0.898  | 0.136  |
| 1.283                | 0.308  | 0.590  | 0.337  | 2.858  | 5.542  | 4.280  | 1.432  | 1.399  | 2.088  | 2.089  | 3.792  | 0.115  | 0.956  | 0.813  | 0.112  |
| 1.137                | 0.291  | 0.705  | 0.333  | 2.813  | 5.525  | 3.527  | 1.385  | 1.555  | 2.227  | 2.006  | 3.842  | 0.121  | 0.770  | 0.856  | 0.126  |
| 0.989                | 0.299  | 0.759  | 0.364  | 2.825  | 5.255  | 3.388  | 1.314  | 1.394  | 2.365  | 1.901  | 3.971  | 0.153  | 0.710  | 0.848  | 0.146  |
| 0.886                | 0.339  | 0.672  | 0.349  | 3.160  | 4.890  | 3.633  | 1.320  | 1.536  | 2.504  | 1.977  | 3.659  | 0.123  | 0.616  | 0.871  | 0.146  |
| 1.186                | 0.392  | 0.784  | 0.381  | 2.632  | 4.699  | 3.397  | 1.235  | 1.456  | 2.457  | 1.810  | 3.151  | 0.139  | 0.752  | 0.873  | 0.159  |
| 1.120                | 0.389  | 0.661  | 0.372  | 2.513  | 4.603  | 3.147  | 1.265  | 1.254  | 2.107  | 1.750  | 2.631  | 0.105  | 0.682  | 0.873  | 0.149  |
| 0.933                | 0.413  | 0.615  | 0.400  | 2.400  | 4.450  | 3.189  | 1.159  | 1.388  | 2.107  | 1.663  | 3.115  | 0.111  | 0.822  | 0.814  | 0.144  |
| 1.077                | 0.323  | 0.662  | 0.392  | 2.664  | 4.301  | 3.698  | 1.238  | 1.198  | 2.354  | 1.630  | 3.117  | 0.168  | 0.805  | 0.668  | 0.163  |
| 0.904                | 0.278  | 0.605  | 0.333  | 2.220  | 4.276  | 3.683  | 1.316  | 1.396  | 2.309  | 2.013  | 3.277  | 0.141  | 0.657  | 0.626  | 0.164  |
| annual growth rates: |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| -0.036               | -0.045 | -0.027 | -0.034 | -0.034 | -0.021 | -0.023 | -0.041 | -0.010 | -0.037 | -0.012 | -0.016 | -0.033 | -0.027 | -0.019 | -0.002 |
| -0.046               | -0.072 | -0.042 | -0.012 | -0.045 | -0.028 | -0.044 | -0.062 | -0.018 | -0.053 | -0.040 | -0.049 | -0.051 | -0.066 | -0.072 | -0.031 |
| -0.087               | -0.117 | -0.058 | -0.107 | -0.079 | -0.048 | -0.052 | -0.086 | -0.028 | -0.057 | -0.045 | -0.040 | -0.096 | -0.083 | -0.026 | 0.031  |
| -0.034               | 0.005  | 0.007  | -0.007 | -0.030 | 0.004  | 0.004  | -0.042 | -0.002 | -0.046 | -0.016 | 0.018  | -0.083 | -0.020 | -0.006 | 0.031  |
| -0.039               | -0.043 | -0.009 | -0.027 | -0.040 | -0.004 | -0.035 | -0.095 | -0.001 | -0.032 | 0.041  | 0.018  | 0.010  | 0.029  | 0.047  | 0.024  |
| -0.016               | -0.057 | -0.035 | -0.063 | -0.010 | -0.017 | -0.026 | -0.007 | -0.004 | -0.050 | -0.025 | -0.018 | -0.047 | -0.027 | -0.012 | -0.051 |
| -0.033               | -0.006 | -0.022 | 0.000  | -0.034 | -0.037 | 0.006  | -0.007 | -0.015 | 0.005  | 0.001  | -0.023 | 0.022  | -0.023 | -0.045 | 0.038  |

table 6 Continued

| NY                   | OH     | OK     | OR     | PA     | RI     | SC     | SD     | TN     | TX     | UT     | VA     | VT     | WA     | WI     | WV     | WY     |
|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 5.757                | 8.527  | 4.348  | 3.086  | 6.438  | 0.162  | 3.661  | 3.321  | 5.460  | 13.520 | 0.978  | 4.887  | 1.149  | 3.580  | 10.336 | 2.025  | 0.864  |
| 5.571                | 8.019  | 4.189  | 2.979  | 6.034  | 0.144  | 3.631  | 3.118  | 5.098  | 12.931 | 0.944  | 4.723  | 1.049  | 3.396  | 9.785  | 1.870  | 0.834  |
| 5.396                | 7.756  | 3.960  | 3.025  | 5.616  | 0.125  | 3.510  | 3.092  | 4.763  | 12.652 | 0.939  | 4.437  | 0.976  | 3.287  | 9.558  | 1.758  | 0.792  |
| 5.055                | 7.357  | 3.785  | 2.871  | 5.319  | 0.098  | 3.228  | 2.990  | 4.780  | 11.790 | 0.874  | 4.189  | 0.913  | 3.251  | 9.256  | 1.550  | 0.824  |
| 4.720                | 6.969  | 3.401  | 2.861  | 5.074  | 0.085  | 2.981  | 2.820  | 4.628  | 10.847 | 0.844  | 4.040  | 0.891  | 3.168  | 8.573  | 1.431  | 0.816  |
| 4.667                | 6.711  | 3.340  | 2.719  | 4.819  | 0.093  | 2.786  | 2.741  | 4.313  | 10.143 | 0.805  | 3.854  | 0.895  | 2.970  | 8.781  | 1.401  | 0.785  |
| 4.293                | 6.309  | 3.359  | 2.323  | 4.511  | 0.086  | 2.265  | 2.719  | 4.313  | 9.241  | 0.747  | 3.489  | 0.835  | 2.842  | 8.173  | 1.202  | 0.744  |
| 4.037                | 5.981  | 3.610  | 2.171  | 4.444  | 0.085  | 2.186  | 2.612  | 3.676  | 9.201  | 0.703  | 3.342  | 0.677  | 2.485  | 7.569  | 1.193  | 0.721  |
| 3.887                | 5.435  | 3.427  | 2.010  | 4.196  | 0.088  | 2.125  | 2.526  | 3.510  | 9.051  | 0.667  | 3.253  | 0.619  | 2.443  | 7.479  | 1.129  | 0.690  |
| 3.872                | 5.160  | 3.409  | 2.012  | 3.996  | 0.070  | 2.001  | 2.516  | 3.249  | 9.287  | 0.658  | 3.131  | 0.590  | 2.482  | 7.291  | 1.083  | 0.664  |
| 3.717                | 4.865  | 3.502  | 1.925  | 3.946  | 0.066  | 2.069  | 2.350  | 3.286  | 9.066  | 0.614  | 2.972  | 0.545  | 2.686  | 7.000  | 1.071  | 0.645  |
| 3.719                | 5.018  | 3.472  | 1.855  | 3.805  | 0.062  | 1.963  | 2.311  | 3.277  | 8.270  | 0.593  | 2.894  | 0.529  | 2.525  | 6.862  | 1.055  | 0.636  |
| 3.630                | 4.924  | 3.583  | 1.625  | 3.736  | 0.064  | 1.942  | 2.208  | 3.395  | 8.767  | 0.562  | 2.805  | 0.511  | 2.406  | 6.617  | 1.007  | 0.659  |
| 3.788                | 5.175  | 3.603  | 1.688  | 4.095  | 0.059  | 1.803  | 2.455  | 3.308  | 8.329  | 0.582  | 2.807  | 0.524  | 2.439  | 6.571  | 1.066  | 0.681  |
| 3.696                | 4.450  | 2.760  | 1.478  | 4.543  | 0.063  | 1.542  | 2.714  | 2.491  | 7.428  | 0.618  | 2.274  | 0.450  | 2.452  | 6.759  | 1.073  | 0.672  |
| 3.776                | 4.324  | 2.860  | 1.736  | 4.555  | 0.063  | 1.614  | 2.610  | 2.375  | 7.314  | 0.662  | 2.329  | 0.467  | 2.500  | 6.942  | 0.970  | 0.700  |
| 4.015                | 4.436  | 2.748  | 1.624  | 4.338  | 0.078  | 1.437  | 2.463  | 2.698  | 7.175  | 0.675  | 2.135  | 0.515  | 2.737  | 6.830  | 0.906  | 0.680  |
| 3.542                | 4.876  | 2.394  | 1.804  | 4.450  | 0.075  | 1.285  | 2.729  | 2.349  | 7.338  | 0.675  | 1.674  | 0.509  | 2.278  | 7.781  | 1.073  | 0.592  |
| 3.710                | 4.765  | 2.593  | 1.831  | 4.074  | 0.067  | 1.277  | 2.468  | 2.416  | 7.740  | 0.747  | 2.077  | 0.527  | 2.246  | 7.597  | 0.752  | 0.600  |
| 3.734                | 3.987  | 2.407  | 1.907  | 3.810  | 0.062  | 1.185  | 2.665  | 2.190  | 7.500  | 0.715  | 1.867  | 0.485  | 2.482  | 7.928  | 0.641  | 0.674  |
| 4.084                | 4.680  | 2.216  | 1.942  | 4.534  | 0.065  | 1.129  | 2.719  | 2.357  | 7.589  | 0.730  | 2.035  | 0.582  | 2.618  | 7.679  | 0.696  | 0.632  |
| 4.106                | 3.138  | 2.602  | 2.454  | 4.104  | 0.066  | 1.200  | 2.986  | 2.329  | 7.053  | 0.498  | 2.270  | 0.632  | 2.553  | 7.600  | 0.671  | 0.699  |
| 3.477                | 4.395  | 1.994  | 2.212  | 4.531  | 0.049  | 0.932  | 2.394  | 2.518  | 7.248  | 0.709  | 2.364  | 0.424  | 2.229  | 7.545  | 0.911  | 0.755  |
| 3.562                | 5.066  | 1.874  | 2.074  | 4.449  | 0.068  | 0.841  | 3.023  | 3.355  | 6.470  | 0.489  | 1.659  | 0.543  | 2.391  | 7.154  | 0.806  | 0.715  |
| 4.735                | 3.254  | 2.443  | 1.852  | 3.973  | 0.066  | 1.048  | 2.390  | 2.519  | 7.207  | 0.598  | 1.942  | 0.642  | 2.382  | 7.182  | 0.677  | 0.681  |
| 3.613                | 3.724  | 2.240  | 1.728  | 3.484  | 0.065  | 0.790  | 2.530  | 2.183  | 7.150  | 0.578  | 1.793  | 0.587  | 2.011  | 6.872  | 0.490  | 0.659  |
| 3.223                | 3.917  | 2.084  | 1.645  | 3.420  | 0.057  | 0.677  | 2.027  | 1.701  | 6.514  | 0.420  | 1.568  | 0.480  | 1.952  | 6.580  | 0.500  | 0.593  |
| 2.887                | 3.361  | 1.830  | 1.676  | 3.404  | 0.044  | 0.601  | 2.271  | 1.388  | 6.532  | 0.397  | 1.436  | 0.488  | 2.173  | 6.089  | 0.598  | 0.642  |
| 2.803                | 3.350  | 2.270  | 1.848  | 3.548  | 0.033  | 0.824  | 2.180  | 1.626  | 7.161  | 0.446  | 1.069  | 0.476  | 2.000  | 5.989  | 0.530  | 0.568  |
| 2.924                | 4.033  | 2.175  | 2.098  | 3.732  | 0.033  | 0.911  | 2.251  | 1.949  | 6.396  | 0.456  | 1.232  | 0.466  | 2.492  | 5.886  | 0.653  | 0.540  |
| 2.619                | 3.924  | 2.460  | 2.117  | 3.588  | 0.032  | 1.027  | 2.025  | 2.018  | 6.698  | 0.523  | 1.636  | 0.427  | 2.658  | 6.164  | 0.572  | 0.542  |
| 2.518                | 3.835  | 2.410  | 2.029  | 3.878  | 0.043  | 0.930  | 2.143  | 2.089  | 6.695  | 0.546  | 1.770  | 0.299  | 2.713  | 5.293  | 0.643  | 0.679  |
| 2.462                | 3.304  | 2.456  | 1.849  | 3.519  | 0.047  | 0.722  | 1.710  | 2.313  | 6.676  | 0.577  | 1.605  | 0.257  | 2.080  | 4.887  | 0.787  | 0.553  |
| 2.577                | 3.430  | 2.440  | 1.729  | 3.393  | 0.047  | 0.689  | 1.640  | 2.076  | 6.733  | 0.453  | 1.377  | 0.256  | 2.249  | 4.638  | 0.797  | 0.620  |
| 2.426                | 3.340  | 2.278  | 1.944  | 3.080  | 0.053  | 0.535  | 1.803  | 1.680  | 6.632  | 0.530  | 1.316  | 0.275  | 2.570  | 4.722  | 0.697  | 0.662  |
| 2.555                | 3.885  | 2.543  | 2.293  | 3.023  | 0.034  | 0.722  | 1.955  | 2.054  | 7.025  | 0.524  | 1.731  | 0.461  | 2.319  | 4.732  | 0.687  | 0.828  |
| 2.478                | 3.706  | 2.628  | 2.585  | 3.104  | 0.029  | 0.651  | 1.882  | 1.940  | 7.653  | 0.578  | 1.637  | 0.389  | 2.658  | 4.150  | 0.797  | 0.683  |
| annual growth rates: |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| -0.023               | -0.023 | -0.014 | -0.005 | -0.020 | -0.048 | -0.048 | -0.016 | -0.029 | -0.016 | -0.015 | -0.030 | -0.030 | -0.008 | -0.025 | -0.026 | -0.007 |
| -0.049               | -0.050 | -0.043 | -0.047 | -0.059 | -0.105 | -0.080 | -0.033 | -0.039 | -0.063 | -0.045 | -0.056 | -0.053 | -0.038 | -0.039 | -0.087 | -0.025 |
| -0.034               | -0.067 | 0.005  | -0.048 | -0.040 | -0.070 | -0.041 | -0.026 | -0.094 | 0.002  | -0.043 | -0.036 | -0.116 | -0.045 | -0.038 | -0.035 | -0.038 |
| -0.005               | 0.001  | 0.014  | -0.044 | 0.006  | -0.040 | -0.026 | -0.006 | 0.004  | -0.027 | -0.031 | -0.027 | -0.030 | -0.004 | -0.026 | -0.004 | 0.006  |
| -0.002               | -0.043 | -0.067 | 0.020  | -0.012 | 0.006  | -0.070 | 0.014  | -0.069 | -0.017 | 0.035  | -0.068 | -0.013 | 0.003  | 0.031  | -0.085 | -0.002 |
| -0.024               | 0.001  | -0.010 | 0.010  | -0.002 | -0.064 | -0.026 | -0.017 | -0.012 | -0.016 | -0.045 | -0.042 | -0.004 | 0.000  | -0.030 | 0.002  | -0.022 |
| -0.024               | -0.012 | 0.027  | 0.030  | -0.026 | -0.017 | -0.048 | -0.026 | -0.001 | 0.026  | 0.034  | 0.041  | -0.026 | 0.009  | -0.050 | 0.028  | 0.034  |

Table 7. Total Output Relative to 1996 Level for Alabama

| Year                         | AL    | AR    | AZ    | CA    | CO    | CT     | DE    | FL    | GA    | IA     | ID    | IL     | IN     | KS     | KY     |
|------------------------------|-------|-------|-------|-------|-------|--------|-------|-------|-------|--------|-------|--------|--------|--------|--------|
| 1960                         | 0.481 | 0.549 | 0.445 | 3.349 | 0.780 | 0.119  | 0.083 | 0.802 | 0.731 | 3.326  | 0.504 | 2.224  | 1.346  | 1.614  | 0.742  |
| 1961                         | 0.488 | 0.594 | 0.470 | 3.403 | 0.808 | 0.119  | 0.081 | 0.882 | 0.776 | 3.411  | 0.539 | 2.268  | 1.335  | 1.666  | 0.805  |
| 1962                         | 0.487 | 0.616 | 0.489 | 3.561 | 0.813 | 0.116  | 0.081 | 0.989 | 0.776 | 3.476  | 0.567 | 2.318  | 1.375  | 1.580  | 0.808  |
| 1963                         | 0.547 | 0.651 | 0.505 | 3.625 | 0.795 | 0.117  | 0.086 | 0.850 | 0.869 | 3.711  | 0.594 | 2.415  | 1.443  | 1.584  | 0.861  |
| 1964                         | 0.561 | 0.698 | 0.473 | 3.723 | 0.795 | 0.117  | 0.087 | 0.854 | 0.888 | 3.766  | 0.598 | 2.317  | 1.335  | 1.568  | 0.929  |
| 1965                         | 0.590 | 0.755 | 0.506 | 3.730 | 0.825 | 0.116  | 0.096 | 0.980 | 0.924 | 3.675  | 0.593 | 2.501  | 1.400  | 1.663  | 0.838  |
| 1966                         | 0.566 | 0.731 | 0.500 | 3.897 | 0.916 | 0.117  | 0.088 | 1.048 | 0.908 | 3.932  | 0.583 | 2.358  | 1.331  | 1.651  | 0.810  |
| 1967                         | 0.579 | 0.755 | 0.508 | 3.693 | 0.967 | 0.112  | 0.105 | 1.208 | 1.039 | 4.128  | 0.651 | 2.664  | 1.390  | 1.745  | 0.953  |
| 1968                         | 0.592 | 0.826 | 0.546 | 4.033 | 0.991 | 0.106  | 0.091 | 1.084 | 0.971 | 4.089  | 0.661 | 2.518  | 1.391  | 1.859  | 0.876  |
| 1969                         | 0.623 | 0.857 | 0.608 | 4.093 | 1.119 | 0.103  | 0.109 | 1.231 | 0.996 | 3.973  | 0.668 | 2.513  | 1.430  | 2.041  | 0.916  |
| 1970                         | 0.619 | 0.887 | 0.577 | 4.087 | 1.217 | 0.100  | 0.106 | 1.215 | 1.053 | 3.949  | 0.691 | 2.268  | 1.369  | 2.033  | 0.899  |
| 1971                         | 0.690 | 0.919 | 0.582 | 4.192 | 1.332 | 0.101  | 0.102 | 1.254 | 1.157 | 4.221  | 0.731 | 2.639  | 1.590  | 2.315  | 0.922  |
| 1972                         | 0.681 | 0.930 | 0.628 | 4.295 | 1.355 | 0.097  | 0.107 | 1.327 | 1.127 | 4.254  | 0.728 | 2.623  | 1.527  | 2.491  | 0.944  |
| 1973                         | 0.683 | 0.978 | 0.663 | 4.522 | 1.264 | 0.093  | 0.120 | 1.458 | 1.149 | 4.216  | 0.748 | 2.604  | 1.593  | 2.500  | 0.907  |
| 1974                         | 0.690 | 0.909 | 0.639 | 4.728 | 1.155 | 0.091  | 0.118 | 1.507 | 1.261 | 3.709  | 0.740 | 2.239  | 1.338  | 2.070  | 0.977  |
| 1975                         | 0.741 | 1.084 | 0.608 | 4.946 | 1.180 | 0.097  | 0.117 | 1.599 | 1.241 | 3.884  | 0.731 | 2.900  | 1.575  | 2.153  | 0.916  |
| 1976                         | 0.759 | 1.043 | 0.620 | 5.069 | 1.223 | 0.095  | 0.126 | 1.664 | 1.237 | 4.046  | 0.792 | 2.799  | 1.723  | 2.282  | 1.032  |
| 1977                         | 0.732 | 1.138 | 0.626 | 5.082 | 1.329 | 0.100  | 0.119 | 1.628 | 1.104 | 4.257  | 0.764 | 2.945  | 1.730  | 2.525  | 1.187  |
| 1978                         | 0.760 | 1.168 | 0.702 | 5.094 | 1.400 | 0.099  | 0.131 | 1.685 | 1.219 | 4.659  | 0.868 | 2.876  | 1.745  | 2.363  | 1.074  |
| 1979                         | 0.824 | 1.255 | 0.664 | 5.469 | 1.354 | 0.094  | 0.143 | 1.710 | 1.412 | 4.769  | 0.919 | 3.246  | 1.819  | 2.615  | 1.084  |
| 1980                         | 0.736 | 1.075 | 0.668 | 5.608 | 1.360 | 0.097  | 0.127 | 1.884 | 1.207 | 4.742  | 0.954 | 2.812  | 1.794  | 2.379  | 1.088  |
| 1981                         | 0.907 | 1.342 | 0.704 | 5.750 | 1.268 | 0.099  | 0.141 | 1.801 | 1.423 | 5.020  | 0.989 | 3.268  | 1.815  | 2.431  | 1.261  |
| 1982                         | 0.863 | 1.266 | 0.697 | 6.019 | 1.285 | 0.109  | 0.150 | 1.777 | 1.445 | 4.639  | 1.022 | 3.229  | 1.963  | 2.618  | 1.307  |
| 1983                         | 0.767 | 1.077 | 0.654 | 5.475 | 1.305 | 0.100  | 0.153 | 1.809 | 1.325 | 3.550  | 0.989 | 2.187  | 1.461  | 2.405  | 1.122  |
| 1984                         | 0.821 | 1.297 | 0.676 | 5.947 | 1.364 | 0.104  | 0.163 | 1.727 | 1.421 | 4.253  | 0.992 | 2.866  | 1.891  | 2.580  | 1.281  |
| 1985                         | 0.863 | 1.304 | 0.666 | 6.022 | 1.432 | 0.107  | 0.170 | 1.730 | 1.433 | 4.647  | 0.958 | 3.363  | 2.042  | 2.778  | 1.371  |
| 1986                         | 0.804 | 1.271 | 0.682 | 5.945 | 1.413 | 0.112  | 0.165 | 1.844 | 1.261 | 4.640  | 0.982 | 3.134  | 1.913  | 2.792  | 1.196  |
| 1987                         | 0.853 | 1.405 | 0.707 | 6.517 | 1.438 | 0.120  | 0.173 | 1.833 | 1.313 | 4.374  | 1.023 | 2.920  | 1.959  | 2.781  | 1.130  |
| 1988                         | 0.864 | 1.488 | 0.629 | 5.900 | 1.430 | 0.117  | 0.183 | 2.005 | 1.383 | 3.720  | 1.014 | 2.286  | 1.543  | 2.604  | 1.073  |
| 1989                         | 0.872 | 1.528 | 0.700 | 6.639 | 1.376 | 0.108  | 0.191 | 1.979 | 1.474 | 4.487  | 1.047 | 3.209  | 1.990  | 2.490  | 1.285  |
| 1990                         | 0.911 | 1.595 | 0.626 | 6.806 | 1.425 | 0.122  | 0.201 | 1.914 | 1.408 | 4.655  | 1.118 | 3.166  | 2.027  | 2.920  | 1.262  |
| 1991                         | 0.998 | 1.633 | 0.651 | 6.360 | 1.426 | 0.119  | 0.209 | 1.968 | 1.560 | 4.508  | 0.987 | 2.970  | 1.807  | 2.742  | 1.310  |
| 1992                         | 0.988 | 1.826 | 0.677 | 6.793 | 1.474 | 0.135  | 0.217 | 2.063 | 1.646 | 5.204  | 1.137 | 3.617  | 2.270  | 3.033  | 1.396  |
| 1993                         | 0.923 | 1.707 | 0.668 | 6.922 | 1.562 | 0.130  | 0.211 | 2.186 | 1.580 | 3.854  | 1.190 | 3.248  | 2.192  | 2.870  | 1.373  |
| 1994                         | 1.000 | 1.910 | 0.675 | 7.331 | 1.561 | 0.136  | 0.230 | 2.221 | 1.865 | 5.360  | 1.230 | 3.725  | 2.353  | 3.245  | 1.389  |
| 1995                         | 0.970 | 1.800 | 0.677 | 7.151 | 1.607 | 0.146  | 0.222 | 2.170 | 1.872 | 4.618  | 1.274 | 2.959  | 1.990  | 2.878  | 1.369  |
| 1996                         | 1.000 | 1.998 | 0.732 | 7.397 | 1.629 | 0.151  | 0.235 | 2.110 | 2.032 | 4.887  | 1.317 | 3.244  | 2.009  | 3.227  | 1.523  |
| Average annual growth rates: |       |       |       |       |       |        |       |       |       |        |       |        |        |        |        |
| 1960-96                      | 0.020 | 0.036 | 0.014 | 0.022 | 0.020 | 0.007  | 0.029 | 0.027 | 0.028 | 0.011  | 0.027 | 0.010  | 0.011  | 0.019  | 0.020  |
| 1960-66                      | 0.027 | 0.048 | 0.019 | 0.025 | 0.027 | -0.003 | 0.011 | 0.044 | 0.036 | 0.028  | 0.024 | 0.010  | -0.002 | 0.004  | 0.015  |
| 1966-69                      | 0.032 | 0.053 | 0.065 | 0.016 | 0.067 | -0.041 | 0.069 | 0.054 | 0.031 | 0.003  | 0.045 | 0.021  | 0.024  | 0.071  | 0.041  |
| 1969-73                      | 0.023 | 0.033 | 0.022 | 0.025 | 0.030 | -0.026 | 0.024 | 0.042 | 0.036 | 0.015  | 0.028 | 0.009  | 0.027  | 0.051  | -0.002 |
| 1973-79                      | 0.031 | 0.041 | 0.000 | 0.032 | 0.011 | 0.002  | 0.030 | 0.027 | 0.034 | 0.021  | 0.034 | 0.037  | 0.022  | 0.007  | 0.030  |
| 1979-89                      | 0.006 | 0.020 | 0.005 | 0.019 | 0.002 | 0.014  | 0.029 | 0.015 | 0.004 | -0.006 | 0.013 | -0.001 | 0.009  | -0.005 | 0.017  |
| 1989-96                      | 0.020 | 0.038 | 0.007 | 0.015 | 0.024 | 0.048  | 0.030 | 0.009 | 0.046 | 0.012  | 0.033 | 0.002  | 0.001  | 0.037  | 0.024  |

table 7 Continued

| LA                   | MA     | MD    | ME     | MI     | MN    | MO     | MS     | MT    | NC    | ND     | NE    | NH     | NJ     | NM     | NV    |
|----------------------|--------|-------|--------|--------|-------|--------|--------|-------|-------|--------|-------|--------|--------|--------|-------|
| 0.341                | 0.152  | 0.235 | 0.182  | 0.861  | 1.911 | 1.318  | 0.564  | 0.423 | 1.019 | 0.613  | 1.573 | 0.057  | 0.282  | 0.262  | 0.064 |
| 0.358                | 0.150  | 0.237 | 0.196  | 0.907  | 1.972 | 1.347  | 0.608  | 0.362 | 1.040 | 0.465  | 1.530 | 0.059  | 0.269  | 0.274  | 0.059 |
| 0.370                | 0.149  | 0.239 | 0.199  | 0.923  | 1.855 | 1.304  | 0.621  | 0.443 | 1.092 | 0.755  | 1.616 | 0.060  | 0.266  | 0.291  | 0.065 |
| 0.425                | 0.147  | 0.239 | 0.206  | 0.927  | 2.021 | 1.395  | 0.714  | 0.479 | 1.119 | 0.693  | 1.653 | 0.058  | 0.252  | 0.298  | 0.068 |
| 0.420                | 0.143  | 0.243 | 0.205  | 0.984  | 1.902 | 1.356  | 0.745  | 0.493 | 1.172 | 0.734  | 1.625 | 0.056  | 0.241  | 0.264  | 0.070 |
| 0.434                | 0.139  | 0.264 | 0.199  | 0.911  | 1.886 | 1.416  | 0.721  | 0.521 | 1.056 | 0.807  | 1.656 | 0.054  | 0.242  | 0.290  | 0.076 |
| 0.451                | 0.137  | 0.243 | 0.199  | 0.892  | 1.995 | 1.395  | 0.707  | 0.525 | 1.069 | 0.740  | 1.932 | 0.055  | 0.217  | 0.325  | 0.074 |
| 0.493                | 0.130  | 0.272 | 0.200  | 0.874  | 2.041 | 1.459  | 0.702  | 0.538 | 1.186 | 0.746  | 1.942 | 0.054  | 0.218  | 0.342  | 0.078 |
| 0.531                | 0.125  | 0.265 | 0.201  | 0.887  | 2.106 | 1.566  | 0.765  | 0.566 | 1.079 | 0.832  | 1.953 | 0.052  | 0.207  | 0.350  | 0.077 |
| 0.477                | 0.120  | 0.283 | 0.201  | 0.884  | 2.040 | 1.432  | 0.755  | 0.548 | 1.151 | 0.842  | 2.080 | 0.049  | 0.199  | 0.365  | 0.086 |
| 0.519                | 0.122  | 0.286 | 0.202  | 0.915  | 2.084 | 1.464  | 0.786  | 0.540 | 1.214 | 0.725  | 2.093 | 0.047  | 0.196  | 0.389  | 0.086 |
| 0.527                | 0.123  | 0.285 | 0.203  | 0.901  | 2.278 | 1.662  | 0.822  | 0.572 | 1.208 | 0.987  | 2.281 | 0.049  | 0.195  | 0.375  | 0.093 |
| 0.550                | 0.115  | 0.275 | 0.206  | 0.938  | 2.235 | 1.631  | 0.800  | 0.565 | 1.200 | 0.890  | 2.392 | 0.046  | 0.172  | 0.422  | 0.093 |
| 0.509                | 0.114  | 0.286 | 0.202  | 0.943  | 2.499 | 1.652  | 0.825  | 0.547 | 1.309 | 0.933  | 2.435 | 0.046  | 0.179  | 0.455  | 0.099 |
| 0.525                | 0.114  | 0.298 | 0.189  | 0.891  | 2.097 | 1.425  | 0.747  | 0.556 | 1.294 | 0.823  | 2.063 | 0.045  | 0.189  | 0.352  | 0.096 |
| 0.555                | 0.119  | 0.306 | 0.205  | 1.006  | 2.179 | 1.496  | 0.762  | 0.619 | 1.331 | 0.967  | 2.229 | 0.047  | 0.180  | 0.404  | 0.099 |
| 0.609                | 0.117  | 0.312 | 0.208  | 0.961  | 2.058 | 1.450  | 0.808  | 0.640 | 1.382 | 0.997  | 2.305 | 0.046  | 0.187  | 0.398  | 0.100 |
| 0.585                | 0.116  | 0.301 | 0.206  | 1.074  | 2.724 | 1.716  | 0.841  | 0.568 | 1.259 | 0.971  | 2.614 | 0.046  | 0.184  | 0.463  | 0.100 |
| 0.606                | 0.115  | 0.339 | 0.212  | 1.081  | 2.723 | 1.660  | 0.821  | 0.637 | 1.408 | 1.155  | 2.713 | 0.046  | 0.190  | 0.433  | 0.099 |
| 0.645                | 0.104  | 0.350 | 0.211  | 1.153  | 2.778 | 1.831  | 0.877  | 0.562 | 1.378 | 1.114  | 3.050 | 0.046  | 0.184  | 0.438  | 0.107 |
| 0.573                | 0.104  | 0.335 | 0.193  | 1.203  | 2.861 | 1.557  | 0.753  | 0.585 | 1.408 | 0.916  | 2.864 | 0.044  | 0.179  | 0.424  | 0.114 |
| 0.649                | 0.112  | 0.376 | 0.190  | 1.258  | 3.066 | 1.838  | 0.906  | 0.712 | 1.556 | 1.364  | 3.132 | 0.046  | 0.190  | 0.403  | 0.112 |
| 0.703                | 0.110  | 0.376 | 0.196  | 1.324  | 3.069 | 1.727  | 0.979  | 0.733 | 1.526 | 1.329  | 3.117 | 0.046  | 0.196  | 0.434  | 0.116 |
| 0.610                | 0.112  | 0.359 | 0.180  | 1.215  | 2.576 | 1.421  | 0.810  | 0.683 | 1.337 | 1.175  | 2.686 | 0.047  | 0.182  | 0.428  | 0.121 |
| 0.665                | 0.115  | 0.398 | 0.172  | 1.330  | 3.001 | 1.556  | 0.907  | 0.581 | 1.494 | 1.276  | 3.078 | 0.046  | 0.190  | 0.466  | 0.128 |
| 0.616                | 0.118  | 0.409 | 0.171  | 1.454  | 3.113 | 1.831  | 0.959  | 0.414 | 1.482 | 1.374  | 3.436 | 0.046  | 0.216  | 0.499  | 0.118 |
| 0.596                | 0.120  | 0.371 | 0.174  | 1.350  | 3.021 | 1.714  | 0.781  | 0.648 | 1.404 | 1.382  | 3.370 | 0.045  | 0.207  | 0.471  | 0.116 |
| 0.595                | 0.117  | 0.377 | 0.162  | 1.289  | 2.953 | 1.693  | 0.895  | 0.673 | 1.459 | 1.287  | 3.383 | 0.046  | 0.214  | 0.481  | 0.117 |
| 0.717                | 0.116  | 0.362 | 0.162  | 1.163  | 2.394 | 1.526  | 0.921  | 0.464 | 1.571 | 0.684  | 3.383 | 0.045  | 0.209  | 0.506  | 0.109 |
| 0.599                | 0.119  | 0.378 | 0.147  | 1.353  | 2.986 | 1.658  | 0.871  | 0.652 | 1.649 | 0.987  | 3.518 | 0.042  | 0.200  | 0.523  | 0.117 |
| 0.678                | 0.115  | 0.403 | 0.162  | 1.440  | 3.077 | 1.629  | 0.930  | 0.657 | 1.735 | 1.271  | 3.695 | 0.044  | 0.203  | 0.507  | 0.121 |
| 0.639                | 0.131  | 0.400 | 0.156  | 1.455  | 3.054 | 1.672  | 0.987  | 0.729 | 1.859 | 1.247  | 3.642 | 0.045  | 0.221  | 0.536  | 0.115 |
| 0.768                | 0.124  | 0.424 | 0.170  | 1.485  | 3.211 | 1.923  | 1.157  | 0.657 | 1.975 | 1.555  | 3.823 | 0.051  | 0.227  | 0.548  | 0.106 |
| 0.688                | 0.127  | 0.402 | 0.164  | 1.517  | 2.465 | 1.680  | 1.035  | 0.757 | 2.000 | 1.185  | 3.558 | 0.046  | 0.223  | 0.563  | 0.120 |
| 0.770                | 0.118  | 0.422 | 0.159  | 1.575  | 3.330 | 1.931  | 1.148  | 0.705 | 2.201 | 1.342  | 3.830 | 0.048  | 0.242  | 0.610  | 0.126 |
| 0.736                | 0.110  | 0.411 | 0.172  | 1.584  | 3.166 | 1.738  | 1.167  | 0.772 | 2.260 | 1.216  | 3.511 | 0.049  | 0.244  | 0.570  | 0.130 |
| 0.827                | 0.118  | 0.441 | 0.185  | 1.412  | 3.328 | 2.036  | 1.258  | 0.725 | 2.334 | 1.455  | 3.919 | 0.049  | 0.253  | 0.669  | 0.137 |
| annual growth rates: |        |       |        |        |       |        |        |       |       |        |       |        |        |        |       |
| 0.025                | -0.007 | 0.018 | 0.000  | 0.014  | 0.015 | 0.012  | 0.022  | 0.015 | 0.023 | 0.024  | 0.025 | -0.005 | -0.003 | 0.026  | 0.021 |
| 0.047                | -0.017 | 0.006 | 0.015  | 0.006  | 0.007 | 0.009  | 0.038  | 0.036 | 0.008 | 0.031  | 0.034 | -0.005 | -0.043 | 0.036  | 0.026 |
| 0.019                | -0.045 | 0.052 | 0.002  | -0.003 | 0.007 | 0.009  | 0.022  | 0.014 | 0.025 | 0.043  | 0.024 | -0.044 | -0.030 | 0.039  | 0.050 |
| 0.016                | -0.013 | 0.002 | 0.002  | 0.016  | 0.051 | 0.036  | 0.022  | 0.000 | 0.032 | 0.026  | 0.039 | -0.014 | -0.027 | 0.055  | 0.033 |
| 0.040                | -0.015 | 0.033 | 0.007  | 0.034  | 0.018 | 0.017  | 0.010  | 0.005 | 0.008 | 0.029  | 0.038 | 0.000  | 0.005  | -0.007 | 0.013 |
| -0.007               | 0.013  | 0.008 | -0.036 | 0.016  | 0.007 | -0.010 | -0.001 | 0.015 | 0.018 | -0.012 | 0.014 | -0.009 | 0.008  | 0.018  | 0.009 |
| 0.046                | -0.001 | 0.022 | 0.032  | 0.006  | 0.016 | 0.029  | 0.053  | 0.015 | 0.050 | 0.055  | 0.015 | 0.021  | 0.034  | 0.035  | 0.022 |

table 7 Continued

| NY                   | OH     | OK     | OR    | PA     | RI     | SC    | SD    | TN     | TX    | UT    | VA     | VT     | WA    | WI     | WV     | WY     |
|----------------------|--------|--------|-------|--------|--------|-------|-------|--------|-------|-------|--------|--------|-------|--------|--------|--------|
| 1.042                | 1.179  | 0.817  | 0.461 | 0.926  | 0.018  | 0.377 | 0.930 | 0.586  | 2.418 | 0.205 | 0.523  | 0.152  | 0.620 | 1.787  | 0.133  | 0.212  |
| 1.070                | 1.176  | 0.799  | 0.472 | 0.941  | 0.018  | 0.388 | 0.890 | 0.608  | 2.438 | 0.205 | 0.536  | 0.158  | 0.628 | 1.842  | 0.130  | 0.209  |
| 1.047                | 1.185  | 0.713  | 0.496 | 0.883  | 0.018  | 0.408 | 0.978 | 0.594  | 2.411 | 0.215 | 0.541  | 0.157  | 0.663 | 1.890  | 0.124  | 0.219  |
| 1.073                | 1.219  | 0.742  | 0.503 | 0.906  | 0.018  | 0.408 | 1.024 | 0.630  | 2.579 | 0.216 | 0.474  | 0.157  | 0.701 | 1.833  | 0.119  | 0.248  |
| 1.062                | 1.189  | 0.797  | 0.515 | 0.915  | 0.018  | 0.408 | 0.972 | 0.666  | 2.464 | 0.216 | 0.519  | 0.155  | 0.724 | 1.865  | 0.120  | 0.245  |
| 1.081                | 1.199  | 0.935  | 0.529 | 0.929  | 0.017  | 0.413 | 1.025 | 0.651  | 2.642 | 0.219 | 0.516  | 0.152  | 0.726 | 1.867  | 0.116  | 0.242  |
| 1.067                | 1.261  | 0.860  | 0.528 | 0.869  | 0.017  | 0.380 | 1.041 | 0.609  | 2.687 | 0.223 | 0.483  | 0.149  | 0.770 | 1.874  | 0.103  | 0.246  |
| 1.088                | 1.217  | 0.866  | 0.538 | 0.956  | 0.016  | 0.423 | 1.145 | 0.625  | 2.610 | 0.235 | 0.521  | 0.145  | 0.808 | 1.896  | 0.115  | 0.282  |
| 1.048                | 1.258  | 0.947  | 0.513 | 0.929  | 0.015  | 0.371 | 1.159 | 0.618  | 2.803 | 0.230 | 0.520  | 0.142  | 0.779 | 1.943  | 0.113  | 0.278  |
| 1.038                | 1.206  | 0.984  | 0.551 | 0.957  | 0.014  | 0.409 | 1.108 | 0.636  | 2.841 | 0.230 | 0.538  | 0.144  | 0.778 | 1.863  | 0.110  | 0.267  |
| 1.056                | 1.233  | 1.019  | 0.547 | 0.978  | 0.015  | 0.404 | 1.082 | 0.645  | 2.932 | 0.236 | 0.540  | 0.146  | 0.797 | 1.919  | 0.111  | 0.270  |
| 1.060                | 1.372  | 1.013  | 0.565 | 0.990  | 0.014  | 0.450 | 1.213 | 0.678  | 2.911 | 0.237 | 0.543  | 0.151  | 0.847 | 2.037  | 0.116  | 0.294  |
| 0.966                | 1.301  | 1.122  | 0.566 | 0.933  | 0.012  | 0.421 | 1.228 | 0.680  | 3.340 | 0.229 | 0.550  | 0.148  | 0.877 | 1.982  | 0.114  | 0.289  |
| 0.975                | 1.189  | 1.314  | 0.597 | 0.957  | 0.013  | 0.429 | 1.272 | 0.688  | 3.763 | 0.232 | 0.566  | 0.145  | 0.851 | 1.887  | 0.115  | 0.279  |
| 1.032                | 1.266  | 1.216  | 0.607 | 1.008  | 0.012  | 0.455 | 1.151 | 0.648  | 3.289 | 0.237 | 0.583  | 0.144  | 0.928 | 1.923  | 0.118  | 0.282  |
| 1.047                | 1.411  | 1.249  | 0.629 | 1.035  | 0.015  | 0.486 | 1.108 | 0.715  | 3.612 | 0.241 | 0.587  | 0.148  | 1.040 | 1.981  | 0.119  | 0.291  |
| 1.034                | 1.489  | 1.151  | 0.652 | 1.071  | 0.013  | 0.443 | 0.856 | 0.755  | 3.642 | 0.244 | 0.573  | 0.156  | 1.086 | 1.897  | 0.109  | 0.313  |
| 1.032                | 1.520  | 1.320  | 0.634 | 1.105  | 0.013  | 0.423 | 1.220 | 0.766  | 3.804 | 0.236 | 0.546  | 0.152  | 0.997 | 2.252  | 0.109  | 0.287  |
| 1.069                | 1.472  | 1.142  | 0.652 | 1.155  | 0.013  | 0.462 | 1.266 | 0.778  | 3.626 | 0.251 | 0.614  | 0.159  | 1.135 | 2.271  | 0.115  | 0.315  |
| 1.137                | 1.609  | 1.392  | 0.723 | 1.195  | 0.013  | 0.487 | 1.288 | 0.807  | 3.926 | 0.251 | 0.652  | 0.157  | 1.127 | 2.368  | 0.120  | 0.301  |
| 1.187                | 1.605  | 1.321  | 0.772 | 1.227  | 0.013  | 0.423 | 1.225 | 0.733  | 3.475 | 0.256 | 0.619  | 0.157  | 1.183 | 2.429  | 0.125  | 0.297  |
| 1.181                | 1.423  | 1.302  | 0.812 | 1.335  | 0.012  | 0.512 | 1.340 | 0.876  | 3.932 | 0.287 | 0.703  | 0.161  | 1.281 | 2.511  | 0.120  | 0.316  |
| 1.187                | 1.603  | 1.421  | 0.770 | 1.340  | 0.015  | 0.506 | 1.429 | 0.896  | 4.168 | 0.286 | 0.697  | 0.170  | 1.250 | 2.548  | 0.120  | 0.307  |
| 1.170                | 1.340  | 1.235  | 0.770 | 1.301  | 0.016  | 0.401 | 1.314 | 0.727  | 3.568 | 0.274 | 0.630  | 0.170  | 1.304 | 2.354  | 0.131  | 0.310  |
| 1.178                | 1.664  | 1.277  | 0.811 | 1.397  | 0.016  | 0.493 | 1.517 | 0.905  | 3.647 | 0.266 | 0.739  | 0.160  | 1.306 | 2.525  | 0.138  | 0.307  |
| 1.217                | 1.840  | 1.306  | 0.788 | 1.475  | 0.020  | 0.474 | 1.524 | 0.949  | 3.951 | 0.274 | 0.727  | 0.165  | 1.235 | 2.585  | 0.139  | 0.302  |
| 1.174                | 1.748  | 1.334  | 0.817 | 1.477  | 0.018  | 0.402 | 1.483 | 0.838  | 3.809 | 0.286 | 0.679  | 0.163  | 1.245 | 2.575  | 0.137  | 0.321  |
| 1.158                | 1.669  | 1.293  | 0.847 | 1.465  | 0.018  | 0.440 | 1.533 | 0.848  | 3.756 | 0.297 | 0.700  | 0.163  | 1.339 | 2.563  | 0.136  | 0.317  |
| 1.105                | 1.409  | 1.359  | 0.894 | 1.411  | 0.018  | 0.465 | 1.229 | 0.809  | 3.889 | 0.309 | 0.726  | 0.158  | 1.454 | 2.183  | 0.123  | 0.306  |
| 1.115                | 1.612  | 1.378  | 0.909 | 1.470  | 0.016  | 0.496 | 1.414 | 0.798  | 3.970 | 0.300 | 0.774  | 0.157  | 1.438 | 2.495  | 0.133  | 0.293  |
| 1.116                | 1.794  | 1.382  | 0.943 | 1.487  | 0.015  | 0.454 | 1.605 | 0.793  | 4.074 | 0.307 | 0.784  | 0.161  | 1.586 | 2.587  | 0.145  | 0.300  |
| 1.133                | 1.563  | 1.326  | 0.932 | 1.429  | 0.015  | 0.481 | 1.605 | 0.797  | 4.424 | 0.309 | 0.782  | 0.159  | 1.518 | 2.615  | 0.140  | 0.371  |
| 1.099                | 1.815  | 1.364  | 0.901 | 1.562  | 0.017  | 0.516 | 1.661 | 0.918  | 4.551 | 0.333 | 0.831  | 0.171  | 1.575 | 2.434  | 0.152  | 0.317  |
| 1.086                | 1.683  | 1.348  | 0.982 | 1.507  | 0.015  | 0.471 | 1.405 | 0.847  | 4.696 | 0.332 | 0.774  | 0.170  | 1.748 | 2.318  | 0.164  | 0.339  |
| 1.101                | 1.873  | 1.472  | 0.976 | 1.547  | 0.015  | 0.556 | 1.705 | 0.900  | 4.763 | 0.345 | 0.831  | 0.171  | 1.756 | 2.557  | 0.171  | 0.304  |
| 1.112                | 1.712  | 1.342  | 1.000 | 1.536  | 0.014  | 0.533 | 1.481 | 0.869  | 4.725 | 0.356 | 0.840  | 0.172  | 1.843 | 2.463  | 0.176  | 0.339  |
| 1.120                | 1.629  | 1.368  | 1.028 | 1.596  | 0.014  | 0.564 | 1.745 | 0.888  | 4.569 | 0.373 | 0.876  | 0.176  | 1.859 | 2.391  | 0.166  | 0.328  |
| annual growth rates: |        |        |       |        |        |       |       |        |       |       |        |        |       |        |        |        |
| 0.002                | 0.009  | 0.014  | 0.022 | 0.015  | -0.008 | 0.011 | 0.017 | 0.012  | 0.018 | 0.017 | 0.014  | 0.004  | 0.031 | 0.008  | 0.006  | 0.012  |
| 0.004                | 0.011  | 0.009  | 0.023 | -0.011 | -0.016 | 0.001 | 0.019 | 0.007  | 0.018 | 0.014 | -0.013 | -0.003 | 0.036 | 0.008  | -0.043 | 0.024  |
| -0.009               | -0.015 | 0.045  | 0.014 | 0.032  | -0.053 | 0.024 | 0.021 | 0.014  | 0.019 | 0.010 | 0.036  | -0.013 | 0.003 | -0.002 | 0.023  | 0.028  |
| -0.015               | -0.003 | 0.072  | 0.020 | 0.000  | -0.030 | 0.012 | 0.034 | 0.020  | 0.070 | 0.002 | 0.013  | 0.002  | 0.023 | 0.003  | 0.011  | 0.011  |
| 0.026                | 0.050  | 0.010  | 0.032 | 0.037  | -0.001 | 0.021 | 0.002 | 0.026  | 0.007 | 0.013 | 0.024  | 0.013  | 0.047 | 0.038  | 0.007  | 0.013  |
| -0.002               | 0.000  | -0.001 | 0.023 | 0.021  | 0.021  | 0.002 | 0.009 | -0.001 | 0.001 | 0.018 | 0.017  | 0.000  | 0.024 | 0.005  | 0.010  | -0.003 |
| 0.001                | 0.002  | -0.001 | 0.018 | 0.012  | -0.015 | 0.018 | 0.030 | 0.015  | 0.020 | 0.031 | 0.018  | 0.016  | 0.037 | -0.006 | 0.032  | 0.016  |

Table 8. Total Input Relative to 1996 Level for Alabama

| Year                         | AL     | AR    | AZ     | CA     | CO     | CT     | DE     | FL     | GA     | IA     | ID     | IL     | IN     | KS     | KY     |
|------------------------------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1960                         | 0.941  | 1.135 | 0.801  | 5.471  | 1.192  | 0.216  | 0.139  | 1.145  | 1.306  | 4.671  | 0.961  | 3.712  | 2.637  | 2.536  | 1.494  |
| 1961                         | 0.914  | 1.143 | 0.787  | 5.334  | 1.195  | 0.198  | 0.125  | 1.124  | 1.273  | 4.568  | 0.966  | 3.565  | 2.504  | 2.646  | 1.460  |
| 1962                         | 0.947  | 1.162 | 0.853  | 5.431  | 1.252  | 0.195  | 0.126  | 1.177  | 1.283  | 4.640  | 0.965  | 3.616  | 2.467  | 2.564  | 1.465  |
| 1963                         | 0.947  | 1.194 | 0.827  | 5.383  | 1.225  | 0.186  | 0.130  | 1.169  | 1.316  | 4.658  | 0.986  | 3.556  | 2.427  | 2.644  | 1.495  |
| 1964                         | 0.964  | 1.195 | 0.818  | 5.252  | 1.194  | 0.184  | 0.130  | 1.199  | 1.331  | 4.690  | 1.000  | 3.528  | 2.395  | 2.509  | 1.473  |
| 1965                         | 1.000  | 1.222 | 0.851  | 5.397  | 1.242  | 0.177  | 0.131  | 1.226  | 1.365  | 4.624  | 0.997  | 3.460  | 2.309  | 2.521  | 1.442  |
| 1966                         | 1.025  | 1.219 | 0.834  | 5.294  | 1.304  | 0.167  | 0.132  | 1.272  | 1.349  | 4.826  | 0.991  | 3.539  | 2.378  | 2.626  | 1.443  |
| 1967                         | 1.038  | 1.291 | 0.861  | 5.166  | 1.379  | 0.151  | 0.127  | 1.375  | 1.372  | 4.894  | 0.958  | 3.547  | 2.232  | 2.607  | 1.454  |
| 1968                         | 1.037  | 1.329 | 0.887  | 5.241  | 1.358  | 0.147  | 0.114  | 1.335  | 1.361  | 4.783  | 0.951  | 3.500  | 2.142  | 2.607  | 1.401  |
| 1969                         | 1.052  | 1.396 | 0.955  | 5.235  | 1.479  | 0.140  | 0.122  | 1.355  | 1.367  | 4.777  | 0.961  | 3.409  | 2.110  | 2.690  | 1.353  |
| 1970                         | 1.043  | 1.388 | 0.917  | 5.306  | 1.550  | 0.135  | 0.123  | 1.413  | 1.359  | 4.757  | 0.979  | 3.358  | 2.145  | 2.712  | 1.340  |
| 1971                         | 1.029  | 1.400 | 0.943  | 5.298  | 1.674  | 0.130  | 0.113  | 1.409  | 1.341  | 4.713  | 0.982  | 3.283  | 2.186  | 2.784  | 1.319  |
| 1972                         | 1.027  | 1.400 | 0.989  | 5.312  | 1.722  | 0.134  | 0.110  | 1.423  | 1.342  | 4.738  | 0.988  | 3.344  | 2.245  | 2.993  | 1.362  |
| 1973                         | 1.058  | 1.412 | 0.998  | 5.391  | 1.556  | 0.133  | 0.120  | 1.437  | 1.397  | 4.730  | 1.025  | 3.441  | 2.354  | 2.975  | 1.330  |
| 1974                         | 1.030  | 1.415 | 0.923  | 5.567  | 1.502  | 0.130  | 0.128  | 1.427  | 1.373  | 4.694  | 1.016  | 3.527  | 2.302  | 2.745  | 1.330  |
| 1975                         | 0.985  | 1.311 | 0.912  | 5.747  | 1.453  | 0.130  | 0.120  | 1.386  | 1.292  | 4.820  | 0.983  | 3.512  | 2.315  | 2.711  | 1.306  |
| 1976                         | 1.045  | 1.426 | 0.929  | 5.861  | 1.500  | 0.132  | 0.126  | 1.405  | 1.380  | 5.120  | 1.045  | 3.764  | 2.373  | 2.965  | 1.322  |
| 1977                         | 1.008  | 1.434 | 0.954  | 5.616  | 1.571  | 0.133  | 0.127  | 1.410  | 1.312  | 5.026  | 1.047  | 3.813  | 2.411  | 3.020  | 1.354  |
| 1978                         | 1.088  | 1.511 | 1.087  | 5.788  | 1.742  | 0.132  | 0.151  | 1.558  | 1.384  | 5.212  | 1.184  | 3.771  | 2.433  | 3.351  | 1.436  |
| 1979                         | 1.136  | 1.528 | 0.973  | 6.042  | 1.669  | 0.131  | 0.156  | 1.688  | 1.547  | 5.336  | 1.224  | 3.980  | 2.509  | 3.426  | 1.348  |
| 1980                         | 1.147  | 1.575 | 0.998  | 5.858  | 1.701  | 0.136  | 0.157  | 1.680  | 1.567  | 5.424  | 1.232  | 3.958  | 2.572  | 3.462  | 1.420  |
| 1981                         | 1.144  | 1.540 | 0.955  | 5.899  | 1.589  | 0.134  | 0.154  | 1.611  | 1.557  | 5.117  | 1.225  | 3.905  | 2.488  | 3.277  | 1.393  |
| 1982                         | 1.037  | 1.434 | 0.972  | 5.877  | 1.609  | 0.123  | 0.158  | 1.602  | 1.395  | 5.140  | 1.259  | 3.762  | 2.455  | 3.312  | 1.381  |
| 1983                         | 1.002  | 1.465 | 0.967  | 5.760  | 1.602  | 0.130  | 0.159  | 1.584  | 1.397  | 4.707  | 1.174  | 3.497  | 2.370  | 3.268  | 1.319  |
| 1984                         | 1.039  | 1.493 | 0.968  | 5.804  | 1.583  | 0.129  | 0.178  | 1.531  | 1.400  | 4.625  | 1.148  | 3.483  | 2.305  | 3.125  | 1.275  |
| 1985                         | 1.012  | 1.463 | 0.925  | 5.552  | 1.593  | 0.122  | 0.162  | 1.482  | 1.331  | 4.485  | 1.116  | 3.423  | 2.276  | 3.120  | 1.240  |
| 1986                         | 0.970  | 1.430 | 0.890  | 5.440  | 1.570  | 0.116  | 0.157  | 1.476  | 1.282  | 4.409  | 1.075  | 3.319  | 2.251  | 3.128  | 1.241  |
| 1987                         | 1.031  | 1.499 | 0.906  | 5.386  | 1.567  | 0.109  | 0.168  | 1.493  | 1.274  | 4.312  | 1.033  | 3.096  | 2.169  | 3.021  | 1.206  |
| 1988                         | 1.014  | 1.527 | 0.867  | 5.486  | 1.557  | 0.104  | 0.169  | 1.453  | 1.245  | 4.225  | 1.063  | 3.104  | 2.130  | 2.941  | 1.257  |
| 1989                         | 1.016  | 1.618 | 0.842  | 5.702  | 1.493  | 0.106  | 0.176  | 1.432  | 1.292  | 4.161  | 1.086  | 3.096  | 2.089  | 2.935  | 1.275  |
| 1990                         | 1.044  | 1.702 | 0.822  | 5.570  | 1.470  | 0.108  | 0.168  | 1.410  | 1.257  | 4.360  | 1.037  | 3.053  | 2.093  | 3.072  | 1.339  |
| 1991                         | 1.026  | 1.736 | 0.816  | 5.865  | 1.372  | 0.108  | 0.167  | 1.420  | 1.260  | 4.207  | 0.976  | 3.121  | 2.068  | 2.863  | 1.297  |
| 1992                         | 1.056  | 1.689 | 0.821  | 5.537  | 1.388  | 0.111  | 0.169  | 1.441  | 1.257  | 4.161  | 0.993  | 3.079  | 2.047  | 2.967  | 1.287  |
| 1993                         | 1.034  | 1.726 | 0.793  | 5.890  | 1.416  | 0.111  | 0.165  | 1.473  | 1.317  | 3.941  | 0.949  | 3.049  | 2.106  | 2.944  | 1.302  |
| 1994                         | 0.983  | 1.740 | 0.819  | 6.090  | 1.460  | 0.114  | 0.177  | 1.449  | 1.324  | 3.857  | 1.045  | 3.068  | 2.037  | 2.980  | 1.246  |
| 1995                         | 1.048  | 1.722 | 0.825  | 6.738  | 1.517  | 0.110  | 0.194  | 1.509  | 1.437  | 3.894  | 1.113  | 3.030  | 1.996  | 3.144  | 1.285  |
| 1996                         | 1.000  | 1.688 | 0.792  | 6.452  | 1.504  | 0.100  | 0.196  | 1.403  | 1.453  | 3.761  | 1.082  | 2.967  | 1.931  | 3.127  | 1.290  |
| Average annual growth rates: |        |       |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 1960-96                      | 0.002  | 0.011 | 0.000  | 0.005  | 0.006  | -0.021 | 0.010  | 0.006  | 0.003  | -0.006 | 0.003  | -0.006 | -0.009 | 0.006  | -0.004 |
| 1960-66                      | 0.014  | 0.012 | 0.007  | -0.005 | 0.015  | -0.043 | -0.009 | 0.018  | 0.005  | 0.005  | 0.005  | -0.008 | -0.017 | 0.006  | -0.006 |
| 1966-69                      | 0.009  | 0.045 | 0.045  | -0.004 | 0.042  | -0.060 | -0.026 | 0.021  | 0.004  | -0.003 | -0.010 | -0.013 | -0.040 | 0.008  | -0.021 |
| 1969-73                      | 0.001  | 0.003 | 0.011  | 0.007  | 0.013  | -0.013 | -0.003 | 0.015  | 0.005  | -0.002 | 0.016  | 0.002  | 0.027  | 0.025  | -0.004 |
| 1973-79                      | 0.012  | 0.013 | -0.004 | 0.019  | 0.012  | -0.003 | 0.043  | 0.027  | 0.017  | 0.020  | 0.029  | 0.024  | 0.011  | 0.023  | 0.002  |
| 1979-89                      | -0.011 | 0.006 | -0.014 | -0.006 | -0.011 | -0.021 | 0.012  | -0.016 | -0.018 | -0.025 | -0.012 | -0.025 | -0.018 | -0.015 | -0.006 |
| 1989-96                      | -0.002 | 0.006 | -0.009 | 0.018  | 0.001  | -0.009 | 0.016  | -0.003 | 0.017  | -0.014 | -0.001 | -0.006 | -0.011 | 0.009  | 0.002  |

table 8 Continued

| LA                   | MA     | MD     | ME     | MI     | MN     | MO     | MS     | MT     | NC     | ND     | NE     | NH     | NJ     | NM     | NV     |
|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0.882                | 0.319  | 0.502  | 0.307  | 2.242  | 3.227  | 2.649  | 1.416  | 1.000  | 1.953  | 1.404  | 2.825  | 0.129  | 0.485  | 0.583  | 0.114  |
| 0.875                | 0.293  | 0.486  | 0.295  | 2.171  | 3.188  | 2.574  | 1.377  | 0.952  | 1.909  | 1.358  | 2.852  | 0.118  | 0.448  | 0.593  | 0.107  |
| 0.863                | 0.280  | 0.498  | 0.290  | 2.084  | 3.191  | 2.525  | 1.411  | 0.941  | 1.890  | 1.401  | 2.879  | 0.112  | 0.440  | 0.594  | 0.111  |
| 0.890                | 0.264  | 0.487  | 0.295  | 2.072  | 3.129  | 2.508  | 1.401  | 0.987  | 1.894  | 1.405  | 2.937  | 0.109  | 0.415  | 0.607  | 0.108  |
| 0.880                | 0.250  | 0.478  | 0.294  | 2.028  | 3.165  | 2.531  | 1.418  | 0.990  | 1.823  | 1.421  | 2.823  | 0.103  | 0.403  | 0.558  | 0.113  |
| 0.887                | 0.241  | 0.487  | 0.291  | 1.933  | 3.010  | 2.474  | 1.389  | 0.972  | 1.845  | 1.416  | 2.818  | 0.099  | 0.381  | 0.588  | 0.123  |
| 0.895                | 0.226  | 0.474  | 0.293  | 1.919  | 3.091  | 2.585  | 1.346  | 1.025  | 1.776  | 1.424  | 2.967  | 0.096  | 0.345  | 0.611  | 0.115  |
| 0.902                | 0.206  | 0.457  | 0.270  | 1.835  | 3.112  | 2.534  | 1.321  | 1.036  | 1.795  | 1.421  | 2.969  | 0.090  | 0.328  | 0.662  | 0.131  |
| 0.911                | 0.197  | 0.451  | 0.254  | 1.728  | 3.050  | 2.483  | 1.318  | 1.009  | 1.753  | 1.410  | 2.999  | 0.086  | 0.313  | 0.646  | 0.124  |
| 0.891                | 0.183  | 0.442  | 0.254  | 1.693  | 3.041  | 2.554  | 1.283  | 1.034  | 1.721  | 1.405  | 2.956  | 0.081  | 0.297  | 0.671  | 0.125  |
| 0.873                | 0.175  | 0.450  | 0.249  | 1.724  | 2.977  | 2.544  | 1.332  | 1.023  | 1.747  | 1.375  | 3.104  | 0.081  | 0.291  | 0.679  | 0.128  |
| 0.889                | 0.171  | 0.444  | 0.232  | 1.646  | 3.045  | 2.519  | 1.295  | 1.036  | 1.678  | 1.411  | 3.136  | 0.075  | 0.284  | 0.670  | 0.133  |
| 0.907                | 0.168  | 0.420  | 0.231  | 1.574  | 3.075  | 2.567  | 1.265  | 1.028  | 1.591  | 1.390  | 3.294  | 0.069  | 0.270  | 0.712  | 0.142  |
| 0.878                | 0.169  | 0.442  | 0.241  | 1.622  | 3.194  | 2.578  | 1.255  | 1.052  | 1.618  | 1.448  | 3.437  | 0.068  | 0.266  | 0.747  | 0.141  |
| 0.900                | 0.159  | 0.458  | 0.258  | 1.563  | 3.200  | 2.621  | 1.187  | 1.066  | 1.583  | 1.459  | 3.307  | 0.071  | 0.273  | 0.634  | 0.151  |
| 0.832                | 0.161  | 0.445  | 0.240  | 1.493  | 3.167  | 2.473  | 1.032  | 1.002  | 1.500  | 1.474  | 3.123  | 0.068  | 0.275  | 0.697  | 0.148  |
| 0.915                | 0.166  | 0.449  | 0.246  | 1.601  | 3.323  | 2.521  | 1.157  | 1.059  | 1.635  | 1.532  | 3.327  | 0.070  | 0.284  | 0.697  | 0.153  |
| 0.850                | 0.165  | 0.443  | 0.256  | 1.498  | 3.256  | 2.425  | 1.122  | 1.076  | 1.594  | 1.589  | 3.311  | 0.072  | 0.279  | 0.760  | 0.148  |
| 0.914                | 0.164  | 0.485  | 0.271  | 1.593  | 3.496  | 2.465  | 1.177  | 1.148  | 1.727  | 1.641  | 3.654  | 0.074  | 0.284  | 0.756  | 0.165  |
| 0.912                | 0.161  | 0.511  | 0.260  | 1.677  | 3.498  | 2.585  | 1.164  | 1.160  | 1.804  | 1.735  | 3.941  | 0.070  | 0.290  | 0.787  | 0.167  |
| 0.946                | 0.162  | 0.546  | 0.267  | 1.730  | 3.734  | 2.552  | 1.199  | 1.140  | 1.798  | 1.644  | 4.044  | 0.074  | 0.296  | 0.726  | 0.174  |
| 0.929                | 0.162  | 0.565  | 0.259  | 1.704  | 3.652  | 2.405  | 1.168  | 1.147  | 1.790  | 1.600  | 3.825  | 0.073  | 0.286  | 0.665  | 0.170  |
| 0.908                | 0.164  | 0.524  | 0.216  | 1.735  | 3.658  | 2.521  | 1.135  | 1.135  | 1.725  | 1.584  | 3.928  | 0.071  | 0.277  | 0.678  | 0.153  |
| 0.859                | 0.161  | 0.525  | 0.216  | 1.731  | 3.432  | 2.411  | 1.099  | 1.078  | 1.592  | 1.506  | 3.745  | 0.068  | 0.268  | 0.674  | 0.161  |
| 0.849                | 0.157  | 0.518  | 0.207  | 1.764  | 3.509  | 2.319  | 1.120  | 1.095  | 1.659  | 1.536  | 3.672  | 0.068  | 0.266  | 0.704  | 0.165  |
| 0.837                | 0.150  | 0.488  | 0.191  | 1.665  | 3.477  | 2.271  | 1.078  | 1.025  | 1.549  | 1.489  | 3.700  | 0.066  | 0.268  | 0.662  | 0.156  |
| 0.801                | 0.141  | 0.457  | 0.185  | 1.587  | 3.256  | 2.210  | 1.033  | 0.955  | 1.461  | 1.432  | 3.632  | 0.065  | 0.260  | 0.654  | 0.159  |
| 0.794                | 0.133  | 0.453  | 0.179  | 1.543  | 3.150  | 2.259  | 1.050  | 0.957  | 1.454  | 1.422  | 3.539  | 0.060  | 0.249  | 0.695  | 0.155  |
| 0.838                | 0.125  | 0.436  | 0.163  | 1.481  | 2.985  | 2.205  | 1.080  | 0.983  | 1.437  | 1.401  | 3.522  | 0.055  | 0.250  | 0.682  | 0.149  |
| 0.852                | 0.124  | 0.458  | 0.164  | 1.497  | 2.971  | 2.075  | 1.104  | 0.973  | 1.459  | 1.340  | 3.584  | 0.056  | 0.238  | 0.679  | 0.149  |
| 0.822                | 0.125  | 0.473  | 0.168  | 1.529  | 3.043  | 2.142  | 1.131  | 0.958  | 1.436  | 1.374  | 3.650  | 0.059  | 0.234  | 0.675  | 0.152  |
| 0.809                | 0.130  | 0.471  | 0.164  | 1.637  | 3.050  | 2.195  | 1.165  | 0.968  | 1.449  | 1.376  | 3.444  | 0.055  | 0.228  | 0.686  | 0.148  |
| 0.847                | 0.133  | 0.479  | 0.164  | 1.537  | 3.025  | 2.162  | 1.128  | 0.947  | 1.488  | 1.396  | 3.421  | 0.056  | 0.239  | 0.686  | 0.152  |
| 0.834                | 0.128  | 0.462  | 0.162  | 1.559  | 2.961  | 2.137  | 1.193  | 0.929  | 1.489  | 1.389  | 3.372  | 0.050  | 0.232  | 0.698  | 0.149  |
| 0.780                | 0.133  | 0.464  | 0.168  | 1.553  | 2.993  | 2.155  | 1.180  | 1.011  | 1.517  | 1.381  | 3.357  | 0.051  | 0.249  | 0.712  | 0.160  |
| 0.790                | 0.124  | 0.483  | 0.174  | 1.581  | 3.017  | 2.232  | 1.210  | 0.970  | 1.681  | 1.364  | 3.417  | 0.058  | 0.253  | 0.657  | 0.163  |
| 0.770                | 0.114  | 0.462  | 0.153  | 1.438  | 2.939  | 2.183  | 1.217  | 1.026  | 1.685  | 1.456  | 3.492  | 0.053  | 0.235  | 0.691  | 0.160  |
| annual growth rates: |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| -0.004               | -0.029 | -0.002 | -0.019 | -0.012 | -0.003 | -0.005 | -0.004 | 0.001  | -0.004 | 0.001  | 0.006  | -0.025 | -0.020 | 0.005  | 0.010  |
| 0.003                | -0.058 | -0.009 | -0.008 | -0.026 | -0.007 | -0.004 | -0.009 | 0.004  | -0.016 | 0.002  | 0.008  | -0.050 | -0.057 | 0.008  | 0.001  |
| -0.002               | -0.069 | -0.023 | -0.047 | -0.042 | -0.005 | -0.004 | -0.016 | 0.003  | -0.010 | -0.004 | -0.001 | -0.056 | -0.049 | 0.032  | 0.030  |
| -0.004               | -0.020 | 0.000  | -0.013 | -0.011 | 0.012  | 0.002  | -0.006 | 0.004  | -0.015 | 0.008  | 0.038  | -0.043 | -0.028 | 0.027  | 0.029  |
| 0.006                | -0.009 | 0.024  | 0.012  | 0.005  | 0.015  | 0.000  | -0.012 | 0.016  | 0.018  | 0.030  | 0.023  | 0.005  | 0.014  | 0.009  | 0.029  |
| -0.007               | -0.026 | -0.011 | -0.046 | -0.011 | -0.016 | -0.022 | -0.005 | -0.018 | -0.021 | -0.026 | -0.009 | -0.023 | -0.020 | -0.015 | -0.012 |
| -0.014               | -0.012 | 0.001  | -0.010 | -0.006 | -0.002 | 0.007  | 0.014  | 0.008  | 0.021  | 0.012  | -0.004 | -0.009 | -0.002 | 0.003  | 0.011  |

table 8 Continued

| NY                   | OH     | OK     | OR     | PA     | RI     | SC     | SD     | TN     | TX     | UT     | VA     | VT     | WA     | WI     | WV     | WY     |
|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1.727                | 2.563  | 1.666  | 0.963  | 1.854  | 0.043  | 0.826  | 1.517  | 1.514  | 5.062  | 0.427  | 1.237  | 0.271  | 1.118  | 2.612  | 0.537  | 0.473  |
| 1.656                | 2.491  | 1.649  | 0.947  | 1.758  | 0.039  | 0.816  | 1.515  | 1.435  | 5.061  | 0.416  | 1.191  | 0.252  | 1.081  | 2.548  | 0.506  | 0.461  |
| 1.638                | 2.404  | 1.629  | 0.969  | 1.672  | 0.036  | 0.793  | 1.535  | 1.413  | 5.106  | 0.412  | 1.176  | 0.249  | 1.082  | 2.508  | 0.492  | 0.470  |
| 1.567                | 2.340  | 1.637  | 0.961  | 1.593  | 0.032  | 0.760  | 1.602  | 1.441  | 5.086  | 0.406  | 1.129  | 0.237  | 1.094  | 2.458  | 0.457  | 0.490  |
| 1.558                | 2.286  | 1.592  | 0.948  | 1.567  | 0.029  | 0.750  | 1.569  | 1.440  | 4.881  | 0.397  | 1.067  | 0.232  | 1.075  | 2.372  | 0.439  | 0.493  |
| 1.484                | 2.232  | 1.624  | 0.938  | 1.532  | 0.029  | 0.720  | 1.548  | 1.395  | 4.935  | 0.380  | 1.071  | 0.229  | 1.066  | 2.363  | 0.423  | 0.495  |
| 1.464                | 2.218  | 1.676  | 0.878  | 1.502  | 0.028  | 0.674  | 1.574  | 1.430  | 4.989  | 0.399  | 1.058  | 0.218  | 1.048  | 2.401  | 0.391  | 0.489  |
| 1.459                | 2.175  | 1.707  | 0.878  | 1.461  | 0.027  | 0.680  | 1.619  | 1.395  | 5.037  | 0.380  | 1.032  | 0.203  | 1.033  | 2.387  | 0.386  | 0.522  |
| 1.423                | 2.064  | 1.722  | 0.828  | 1.478  | 0.027  | 0.685  | 1.592  | 1.342  | 5.056  | 0.373  | 1.032  | 0.190  | 1.001  | 2.367  | 0.382  | 0.529  |
| 1.412                | 2.035  | 1.779  | 0.832  | 1.443  | 0.024  | 0.676  | 1.618  | 1.312  | 5.322  | 0.379  | 1.033  | 0.189  | 1.003  | 2.391  | 0.369  | 0.516  |
| 1.387                | 1.991  | 1.807  | 0.819  | 1.431  | 0.023  | 0.690  | 1.597  | 1.331  | 5.209  | 0.372  | 1.014  | 0.181  | 1.043  | 2.378  | 0.366  | 0.512  |
| 1.366                | 2.034  | 1.846  | 0.808  | 1.426  | 0.021  | 0.678  | 1.620  | 1.325  | 5.349  | 0.365  | 0.991  | 0.180  | 1.022  | 2.356  | 0.358  | 0.524  |
| 1.340                | 2.014  | 1.913  | 0.767  | 1.376  | 0.021  | 0.682  | 1.580  | 1.363  | 5.743  | 0.359  | 0.980  | 0.178  | 1.020  | 2.368  | 0.354  | 0.543  |
| 1.336                | 2.059  | 2.021  | 0.788  | 1.424  | 0.020  | 0.670  | 1.725  | 1.358  | 5.840  | 0.354  | 1.001  | 0.170  | 1.032  | 2.344  | 0.365  | 0.538  |
| 1.447                | 2.015  | 1.890  | 0.757  | 1.535  | 0.022  | 0.704  | 1.659  | 1.259  | 5.417  | 0.372  | 0.991  | 0.179  | 1.071  | 2.427  | 0.373  | 0.518  |
| 1.417                | 1.999  | 1.804  | 0.757  | 1.556  | 0.021  | 0.614  | 1.599  | 1.222  | 5.383  | 0.383  | 0.976  | 0.177  | 1.013  | 2.445  | 0.357  | 0.526  |
| 1.464                | 2.111  | 1.779  | 0.795  | 1.580  | 0.022  | 0.631  | 1.509  | 1.315  | 5.633  | 0.385  | 0.946  | 0.185  | 1.097  | 2.515  | 0.348  | 0.554  |
| 1.415                | 2.148  | 1.819  | 0.832  | 1.615  | 0.022  | 0.606  | 1.577  | 1.269  | 5.592  | 0.393  | 0.889  | 0.187  | 1.045  | 2.531  | 0.358  | 0.528  |
| 1.456                | 2.160  | 1.868  | 0.892  | 1.607  | 0.021  | 0.639  | 1.702  | 1.306  | 6.026  | 0.436  | 0.998  | 0.191  | 1.188  | 2.708  | 0.330  | 0.581  |
| 1.483                | 2.150  | 1.989  | 0.966  | 1.615  | 0.021  | 0.655  | 1.743  | 1.315  | 6.172  | 0.425  | 1.035  | 0.196  | 1.236  | 2.831  | 0.331  | 0.591  |
| 1.564                | 2.289  | 2.004  | 0.940  | 1.751  | 0.022  | 0.658  | 1.744  | 1.342  | 6.007  | 0.432  | 1.079  | 0.209  | 1.233  | 2.921  | 0.338  | 0.576  |
| 1.556                | 2.105  | 1.882  | 1.012  | 1.701  | 0.021  | 0.639  | 1.722  | 1.313  | 5.834  | 0.413  | 1.069  | 0.212  | 1.280  | 2.920  | 0.338  | 0.553  |
| 1.425                | 2.152  | 1.761  | 0.964  | 1.704  | 0.020  | 0.578  | 1.709  | 1.319  | 5.941  | 0.421  | 1.052  | 0.198  | 1.251  | 2.832  | 0.353  | 0.562  |
| 1.495                | 2.148  | 1.691  | 0.941  | 1.752  | 0.021  | 0.554  | 1.746  | 1.394  | 5.627  | 0.403  | 0.983  | 0.209  | 1.232  | 2.878  | 0.343  | 0.575  |
| 1.523                | 2.011  | 1.742  | 0.927  | 1.650  | 0.020  | 0.568  | 1.655  | 1.305  | 5.794  | 0.401  | 0.996  | 0.205  | 1.252  | 2.814  | 0.326  | 0.561  |
| 1.369                | 2.019  | 1.717  | 0.901  | 1.595  | 0.020  | 0.529  | 1.673  | 1.272  | 5.610  | 0.392  | 0.964  | 0.193  | 1.170  | 2.778  | 0.300  | 0.555  |
| 1.295                | 2.024  | 1.709  | 0.861  | 1.572  | 0.019  | 0.501  | 1.525  | 1.178  | 5.549  | 0.372  | 0.923  | 0.189  | 1.143  | 2.634  | 0.291  | 0.513  |
| 1.237                | 1.924  | 1.708  | 0.854  | 1.549  | 0.018  | 0.480  | 1.562  | 1.119  | 5.538  | 0.375  | 0.893  | 0.181  | 1.138  | 2.582  | 0.300  | 0.550  |
| 1.188                | 1.851  | 1.796  | 0.876  | 1.529  | 0.016  | 0.493  | 1.516  | 1.142  | 5.638  | 0.379  | 0.859  | 0.167  | 1.161  | 2.398  | 0.285  | 0.546  |
| 1.188                | 1.891  | 1.805  | 0.939  | 1.573  | 0.016  | 0.526  | 1.435  | 1.134  | 5.375  | 0.365  | 0.862  | 0.171  | 1.229  | 2.337  | 0.294  | 0.525  |
| 1.169                | 1.924  | 1.852  | 0.936  | 1.578  | 0.016  | 0.519  | 1.476  | 1.145  | 5.650  | 0.367  | 0.910  | 0.174  | 1.260  | 2.518  | 0.297  | 0.474  |
| 1.168                | 1.937  | 1.849  | 0.922  | 1.586  | 0.017  | 0.509  | 1.455  | 1.140  | 5.648  | 0.366  | 0.922  | 0.162  | 1.325  | 2.420  | 0.304  | 0.574  |
| 1.110                | 1.826  | 1.830  | 0.920  | 1.497  | 0.017  | 0.477  | 1.376  | 1.185  | 5.591  | 0.379  | 0.909  | 0.153  | 1.251  | 2.303  | 0.307  | 0.499  |
| 1.094                | 1.870  | 1.833  | 0.883  | 1.486  | 0.017  | 0.492  | 1.360  | 1.159  | 5.742  | 0.359  | 0.897  | 0.152  | 1.336  | 2.197  | 0.335  | 0.506  |
| 1.108                | 1.833  | 1.899  | 0.927  | 1.461  | 0.018  | 0.469  | 1.391  | 1.075  | 5.599  | 0.394  | 0.882  | 0.154  | 1.388  | 2.272  | 0.330  | 0.525  |
| 1.131                | 1.914  | 1.983  | 1.034  | 1.471  | 0.017  | 0.522  | 1.477  | 1.163  | 6.074  | 0.398  | 0.956  | 0.173  | 1.456  | 2.287  | 0.328  | 0.551  |
| 1.074                | 1.843  | 1.959  | 1.038  | 1.436  | 0.016  | 0.513  | 1.439  | 1.146  | 5.875  | 0.408  | 0.956  | 0.159  | 1.445  | 2.102  | 0.342  | 0.521  |
| annual growth rates: |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| -0.013               | -0.009 | 0.004  | 0.002  | -0.007 | -0.027 | -0.013 | -0.001 | -0.008 | 0.004  | -0.001 | -0.007 | -0.015 | 0.007  | -0.006 | -0.013 | 0.003  |
| -0.028               | -0.024 | 0.001  | -0.015 | -0.035 | -0.073 | -0.034 | 0.006  | -0.010 | -0.002 | -0.011 | -0.026 | -0.036 | -0.011 | -0.014 | -0.053 | 0.006  |
| -0.012               | -0.029 | 0.020  | -0.018 | -0.013 | -0.054 | 0.001  | 0.009  | -0.029 | 0.022  | -0.016 | -0.008 | -0.048 | -0.015 | -0.001 | -0.019 | 0.018  |
| -0.014               | 0.003  | 0.032  | -0.014 | -0.003 | -0.044 | -0.002 | 0.016  | 0.009  | 0.023  | -0.017 | -0.008 | -0.026 | 0.007  | -0.005 | -0.003 | 0.010  |
| 0.017                | 0.007  | -0.003 | 0.034  | 0.021  | 0.009  | -0.004 | 0.002  | -0.005 | 0.009  | 0.030  | 0.006  | 0.023  | 0.030  | 0.031  | -0.017 | 0.016  |
| -0.022               | -0.013 | -0.010 | -0.003 | -0.003 | -0.028 | -0.022 | -0.019 | -0.015 | -0.014 | -0.015 | -0.018 | -0.013 | -0.001 | -0.019 | -0.012 | -0.012 |
| -0.014               | -0.004 | 0.012  | 0.014  | -0.013 | 0.004  | -0.004 | 0.000  | 0.001  | 0.013  | 0.016  | 0.015  | -0.010 | 0.023  | -0.015 | 0.021  | -0.001 |

Table 9. Total Factor Productivity Relative to 1996 Level for Alabama

| Year                         | AL    | AR    | AZ    | CA     | CO    | CT     | DE     | FL    | GA    | IA    | ID    | IL    | IN    | KS     | KY    |
|------------------------------|-------|-------|-------|--------|-------|--------|--------|-------|-------|-------|-------|-------|-------|--------|-------|
| 1960                         | 0.511 | 0.484 | 0.556 | 0.612  | 0.654 | 0.549  | 0.595  | 0.701 | 0.560 | 0.712 | 0.525 | 0.599 | 0.510 | 0.636  | 0.496 |
| 1961                         | 0.534 | 0.520 | 0.597 | 0.638  | 0.676 | 0.600  | 0.645  | 0.784 | 0.609 | 0.747 | 0.558 | 0.636 | 0.533 | 0.630  | 0.552 |
| 1962                         | 0.514 | 0.530 | 0.573 | 0.656  | 0.649 | 0.595  | 0.640  | 0.840 | 0.605 | 0.749 | 0.587 | 0.641 | 0.557 | 0.616  | 0.552 |
| 1963                         | 0.578 | 0.545 | 0.610 | 0.673  | 0.649 | 0.632  | 0.663  | 0.727 | 0.660 | 0.797 | 0.603 | 0.679 | 0.595 | 0.599  | 0.576 |
| 1964                         | 0.582 | 0.584 | 0.578 | 0.709  | 0.666 | 0.633  | 0.668  | 0.712 | 0.667 | 0.803 | 0.598 | 0.657 | 0.557 | 0.625  | 0.631 |
| 1965                         | 0.590 | 0.618 | 0.595 | 0.691  | 0.664 | 0.664  | 0.657  | 0.732 | 0.799 | 0.677 | 0.795 | 0.595 | 0.723 | 0.606  | 0.660 |
| 1966                         | 0.552 | 0.600 | 0.599 | 0.736  | 0.703 | 0.698  | 0.671  | 0.824 | 0.673 | 0.815 | 0.588 | 0.666 | 0.560 | 0.629  | 0.561 |
| 1967                         | 0.557 | 0.584 | 0.590 | 0.715  | 0.701 | 0.741  | 0.824  | 0.879 | 0.757 | 0.844 | 0.679 | 0.751 | 0.623 | 0.670  | 0.655 |
| 1968                         | 0.570 | 0.622 | 0.616 | 0.769  | 0.730 | 0.720  | 0.796  | 0.812 | 0.713 | 0.855 | 0.694 | 0.719 | 0.650 | 0.713  | 0.625 |
| 1969                         | 0.593 | 0.614 | 0.637 | 0.782  | 0.757 | 0.738  | 0.892  | 0.909 | 0.729 | 0.832 | 0.695 | 0.737 | 0.678 | 0.759  | 0.677 |
| 1970                         | 0.594 | 0.639 | 0.629 | 0.770  | 0.785 | 0.735  | 0.861  | 0.860 | 0.775 | 0.830 | 0.706 | 0.675 | 0.639 | 0.750  | 0.671 |
| 1971                         | 0.671 | 0.656 | 0.617 | 0.791  | 0.795 | 0.778  | 0.903  | 0.890 | 0.863 | 0.896 | 0.744 | 0.804 | 0.727 | 0.832  | 0.699 |
| 1972                         | 0.663 | 0.664 | 0.635 | 0.808  | 0.787 | 0.723  | 0.979  | 0.933 | 0.840 | 0.898 | 0.737 | 0.784 | 0.680 | 0.832  | 0.693 |
| 1973                         | 0.646 | 0.693 | 0.665 | 0.839  | 0.813 | 0.699  | 0.996  | 1.015 | 0.822 | 0.891 | 0.729 | 0.757 | 0.677 | 0.840  | 0.682 |
| 1974                         | 0.670 | 0.643 | 0.692 | 0.849  | 0.769 | 0.696  | 0.919  | 1.056 | 0.918 | 0.790 | 0.728 | 0.635 | 0.581 | 0.754  | 0.734 |
| 1975                         | 0.752 | 0.827 | 0.667 | 0.861  | 0.812 | 0.742  | 0.973  | 1.154 | 0.960 | 0.806 | 0.744 | 0.826 | 0.681 | 0.794  | 0.701 |
| 1976                         | 0.726 | 0.732 | 0.668 | 0.865  | 0.816 | 0.719  | 1.001  | 1.184 | 0.896 | 0.790 | 0.758 | 0.743 | 0.726 | 0.769  | 0.781 |
| 1977                         | 0.727 | 0.794 | 0.656 | 0.905  | 0.846 | 0.753  | 0.932  | 1.154 | 0.841 | 0.847 | 0.730 | 0.772 | 0.717 | 0.836  | 0.877 |
| 1978                         | 0.698 | 0.773 | 0.646 | 0.880  | 0.804 | 0.750  | 0.868  | 1.082 | 0.881 | 0.894 | 0.733 | 0.762 | 0.717 | 0.705  | 0.748 |
| 1979                         | 0.725 | 0.821 | 0.682 | 0.905  | 0.811 | 0.720  | 0.920  | 1.012 | 0.912 | 0.894 | 0.751 | 0.816 | 0.725 | 0.764  | 0.804 |
| 1980                         | 0.642 | 0.683 | 0.670 | 0.957  | 0.800 | 0.718  | 0.807  | 1.122 | 0.770 | 0.874 | 0.775 | 0.711 | 0.698 | 0.687  | 0.766 |
| 1981                         | 0.793 | 0.871 | 0.737 | 0.975  | 0.798 | 0.743  | 0.919  | 1.118 | 0.914 | 0.981 | 0.808 | 0.837 | 0.729 | 0.742  | 0.906 |
| 1982                         | 0.832 | 0.883 | 0.717 | 1.024  | 0.799 | 0.886  | 0.952  | 1.109 | 1.036 | 0.903 | 0.812 | 0.858 | 0.800 | 0.790  | 0.946 |
| 1983                         | 0.766 | 0.735 | 0.677 | 0.951  | 0.814 | 0.768  | 0.960  | 1.142 | 0.949 | 0.754 | 0.843 | 0.626 | 0.616 | 0.736  | 0.851 |
| 1984                         | 0.790 | 0.869 | 0.699 | 1.025  | 0.862 | 0.807  | 0.915  | 1.128 | 1.015 | 0.920 | 0.865 | 0.823 | 0.821 | 0.826  | 1.005 |
| 1985                         | 0.854 | 0.891 | 0.721 | 1.085  | 0.899 | 0.881  | 1.044  | 1.168 | 1.077 | 1.036 | 0.859 | 0.983 | 0.897 | 0.890  | 1.106 |
| 1986                         | 0.829 | 0.888 | 0.766 | 1.093  | 0.900 | 0.965  | 1.053  | 1.249 | 0.984 | 1.052 | 0.914 | 0.944 | 0.850 | 0.893  | 0.963 |
| 1987                         | 0.827 | 0.938 | 0.781 | 1.210  | 0.917 | 1.101  | 1.031  | 1.228 | 1.030 | 1.014 | 0.990 | 0.943 | 0.903 | 0.921  | 0.937 |
| 1988                         | 0.852 | 0.974 | 0.725 | 1.075  | 0.918 | 1.119  | 1.079  | 1.380 | 1.110 | 0.880 | 0.954 | 0.737 | 0.724 | 0.885  | 0.854 |
| 1989                         | 0.858 | 0.944 | 0.831 | 1.164  | 0.922 | 1.015  | 1.086  | 1.381 | 1.141 | 1.078 | 0.964 | 1.037 | 0.953 | 0.848  | 1.008 |
| 1990                         | 0.873 | 0.937 | 0.762 | 1.222  | 0.970 | 1.129  | 1.198  | 1.357 | 1.120 | 1.068 | 1.078 | 1.037 | 0.968 | 0.950  | 0.943 |
| 1991                         | 0.973 | 0.940 | 0.799 | 1.084  | 1.039 | 1.107  | 1.248  | 1.386 | 1.238 | 1.071 | 1.012 | 0.952 | 0.874 | 0.958  | 1.010 |
| 1992                         | 0.935 | 1.081 | 0.825 | 1.227  | 1.062 | 1.215  | 1.288  | 1.431 | 1.309 | 1.251 | 1.145 | 1.175 | 1.109 | 1.022  | 1.085 |
| 1993                         | 0.893 | 0.989 | 0.842 | 1.175  | 1.103 | 1.171  | 1.278  | 1.484 | 1.200 | 0.978 | 1.254 | 1.065 | 1.041 | 0.975  | 1.055 |
| 1994                         | 1.017 | 1.098 | 0.824 | 1.204  | 1.069 | 1.190  | 1.297  | 1.532 | 1.409 | 1.390 | 1.177 | 1.214 | 1.155 | 1.089  | 1.115 |
| 1995                         | 0.925 | 1.045 | 0.821 | 1.061  | 1.059 | 1.327  | 1.146  | 1.438 | 1.302 | 1.186 | 1.145 | 0.976 | 0.997 | 0.915  | 1.066 |
| 1996                         | 1.000 | 1.184 | 0.925 | 1.146  | 1.083 | 1.509  | 1.197  | 1.504 | 1.398 | 1.299 | 1.218 | 1.093 | 1.040 | 1.032  | 1.181 |
| Average annual growth rates: |       |       |       |        |       |        |        |       |       |       |       |       |       |        |       |
| 1960-96                      | 0.019 | 0.025 | 0.014 | 0.017  | 0.014 | 0.028  | 0.019  | 0.021 | 0.025 | 0.017 | 0.023 | 0.017 | 0.020 | 0.013  | 0.024 |
| 1960-66                      | 0.013 | 0.036 | 0.013 | 0.031  | 0.012 | 0.040  | 0.020  | 0.027 | 0.031 | 0.022 | 0.019 | 0.018 | 0.015 | -0.002 | 0.020 |
| 1966-69                      | 0.023 | 0.008 | 0.020 | 0.020  | 0.025 | 0.019  | 0.095  | 0.033 | 0.026 | 0.007 | 0.055 | 0.034 | 0.064 | 0.063  | 0.063 |
| 1969-73                      | 0.022 | 0.030 | 0.011 | 0.018  | 0.018 | -0.013 | 0.028  | 0.028 | 0.030 | 0.017 | 0.012 | 0.007 | 0.000 | 0.026  | 0.002 |
| 1973-79                      | 0.019 | 0.028 | 0.004 | 0.013  | 0.000 | 0.005  | -0.013 | 0.000 | 0.017 | 0.000 | 0.005 | 0.012 | 0.012 | -0.016 | 0.027 |
| 1979-89                      | 0.017 | 0.014 | 0.020 | 0.025  | 0.013 | 0.034  | 0.017  | 0.031 | 0.022 | 0.019 | 0.025 | 0.024 | 0.027 | 0.011  | 0.023 |
| 1989-96                      | 0.022 | 0.032 | 0.015 | -0.002 | 0.023 | 0.057  | 0.014  | 0.012 | 0.029 | 0.027 | 0.033 | 0.008 | 0.013 | 0.028  | 0.023 |

table 9 Continued

| LA                   | MA     | MD    | ME     | MI    | MN    | MO    | MS    | MT     | NC     | ND     | NE    | NH     | NJ     | NM     | NV     |
|----------------------|--------|-------|--------|-------|-------|-------|-------|--------|--------|--------|-------|--------|--------|--------|--------|
| 0.386                | 0.477  | 0.468 | 0.593  | 0.384 | 0.592 | 0.498 | 0.398 | 0.423  | 0.522  | 0.437  | 0.557 | 0.442  | 0.581  | 0.450  | 0.559  |
| 0.409                | 0.514  | 0.487 | 0.663  | 0.418 | 0.619 | 0.523 | 0.442 | 0.380  | 0.545  | 0.343  | 0.536 | 0.498  | 0.599  | 0.462  | 0.551  |
| 0.429                | 0.531  | 0.480 | 0.687  | 0.443 | 0.581 | 0.516 | 0.440 | 0.471  | 0.578  | 0.539  | 0.561 | 0.538  | 0.605  | 0.489  | 0.584  |
| 0.478                | 0.558  | 0.490 | 0.696  | 0.447 | 0.646 | 0.556 | 0.509 | 0.485  | 0.591  | 0.493  | 0.563 | 0.538  | 0.608  | 0.490  | 0.632  |
| 0.477                | 0.571  | 0.509 | 0.698  | 0.485 | 0.601 | 0.536 | 0.525 | 0.498  | 0.643  | 0.516  | 0.575 | 0.542  | 0.599  | 0.474  | 0.621  |
| 0.489                | 0.577  | 0.541 | 0.685  | 0.471 | 0.626 | 0.573 | 0.519 | 0.536  | 0.572  | 0.570  | 0.588 | 0.544  | 0.634  | 0.493  | 0.621  |
| 0.503                | 0.608  | 0.512 | 0.680  | 0.465 | 0.646 | 0.540 | 0.525 | 0.512  | 0.602  | 0.519  | 0.651 | 0.578  | 0.631  | 0.531  | 0.647  |
| 0.546                | 0.629  | 0.594 | 0.743  | 0.476 | 0.656 | 0.576 | 0.531 | 0.519  | 0.661  | 0.525  | 0.654 | 0.600  | 0.665  | 0.516  | 0.594  |
| 0.583                | 0.635  | 0.589 | 0.792  | 0.513 | 0.691 | 0.631 | 0.581 | 0.560  | 0.615  | 0.591  | 0.651 | 0.604  | 0.661  | 0.542  | 0.623  |
| 0.536                | 0.654  | 0.641 | 0.789  | 0.522 | 0.671 | 0.561 | 0.588 | 0.530  | 0.669  | 0.600  | 0.704 | 0.598  | 0.668  | 0.544  | 0.687  |
| 0.594                | 0.700  | 0.636 | 0.808  | 0.530 | 0.700 | 0.576 | 0.590 | 0.528  | 0.695  | 0.527  | 0.674 | 0.588  | 0.674  | 0.573  | 0.668  |
| 0.593                | 0.719  | 0.642 | 0.876  | 0.548 | 0.748 | 0.660 | 0.635 | 0.552  | 0.720  | 0.699  | 0.727 | 0.654  | 0.685  | 0.559  | 0.700  |
| 0.606                | 0.685  | 0.655 | 0.894  | 0.596 | 0.727 | 0.635 | 0.632 | 0.550  | 0.755  | 0.641  | 0.726 | 0.672  | 0.637  | 0.592  | 0.657  |
| 0.579                | 0.672  | 0.648 | 0.838  | 0.581 | 0.782 | 0.641 | 0.657 | 0.520  | 0.809  | 0.644  | 0.709 | 0.674  | 0.672  | 0.609  | 0.700  |
| 0.583                | 0.713  | 0.650 | 0.735  | 0.570 | 0.655 | 0.544 | 0.629 | 0.521  | 0.817  | 0.564  | 0.624 | 0.633  | 0.694  | 0.556  | 0.637  |
| 0.667                | 0.742  | 0.688 | 0.854  | 0.674 | 0.688 | 0.605 | 0.739 | 0.617  | 0.888  | 0.656  | 0.714 | 0.694  | 0.655  | 0.579  | 0.668  |
| 0.665                | 0.702  | 0.695 | 0.845  | 0.600 | 0.619 | 0.575 | 0.698 | 0.604  | 0.846  | 0.651  | 0.693 | 0.656  | 0.657  | 0.571  | 0.654  |
| 0.688                | 0.705  | 0.680 | 0.803  | 0.717 | 0.837 | 0.708 | 0.750 | 0.528  | 0.790  | 0.611  | 0.790 | 0.644  | 0.660  | 0.610  | 0.679  |
| 0.663                | 0.698  | 0.699 | 0.784  | 0.679 | 0.779 | 0.673 | 0.698 | 0.555  | 0.815  | 0.704  | 0.743 | 0.629  | 0.668  | 0.573  | 0.601  |
| 0.707                | 0.647  | 0.684 | 0.813  | 0.688 | 0.794 | 0.708 | 0.753 | 0.485  | 0.764  | 0.642  | 0.774 | 0.654  | 0.635  | 0.556  | 0.638  |
| 0.606                | 0.641  | 0.613 | 0.725  | 0.695 | 0.766 | 0.610 | 0.628 | 0.513  | 0.783  | 0.557  | 0.708 | 0.593  | 0.604  | 0.584  | 0.651  |
| 0.699                | 0.694  | 0.666 | 0.735  | 0.739 | 0.840 | 0.764 | 0.776 | 0.621  | 0.869  | 0.853  | 0.819 | 0.627  | 0.664  | 0.607  | 0.663  |
| 0.774                | 0.674  | 0.718 | 0.907  | 0.763 | 0.839 | 0.685 | 0.863 | 0.646  | 0.885  | 0.839  | 0.793 | 0.652  | 0.707  | 0.641  | 0.757  |
| 0.710                | 0.694  | 0.684 | 0.832  | 0.702 | 0.751 | 0.589 | 0.737 | 0.634  | 0.840  | 0.780  | 0.717 | 0.700  | 0.679  | 0.635  | 0.753  |
| 0.784                | 0.736  | 0.768 | 0.830  | 0.754 | 0.855 | 0.671 | 0.810 | 0.531  | 0.901  | 0.831  | 0.838 | 0.676  | 0.714  | 0.662  | 0.778  |
| 0.735                | 0.785  | 0.838 | 0.893  | 0.873 | 0.895 | 0.806 | 0.889 | 0.404  | 0.957  | 0.923  | 0.929 | 0.694  | 0.805  | 0.754  | 0.758  |
| 0.744                | 0.852  | 0.813 | 0.941  | 0.851 | 0.928 | 0.775 | 0.756 | 0.679  | 0.961  | 0.965  | 0.928 | 0.696  | 0.796  | 0.721  | 0.726  |
| 0.750                | 0.882  | 0.832 | 0.904  | 0.835 | 0.938 | 0.749 | 0.852 | 0.703  | 1.003  | 0.905  | 0.956 | 0.763  | 0.862  | 0.692  | 0.757  |
| 0.855                | 0.926  | 0.831 | 0.996  | 0.785 | 0.802 | 0.692 | 0.853 | 0.472  | 1.093  | 0.488  | 0.961 | 0.815  | 0.838  | 0.742  | 0.734  |
| 0.703                | 0.957  | 0.825 | 0.900  | 0.904 | 1.005 | 0.799 | 0.789 | 0.670  | 1.130  | 0.736  | 0.981 | 0.750  | 0.840  | 0.771  | 0.787  |
| 0.825                | 0.921  | 0.850 | 0.963  | 0.942 | 1.011 | 0.761 | 0.822 | 0.686  | 1.208  | 0.925  | 1.012 | 0.740  | 0.870  | 0.752  | 0.794  |
| 0.790                | 1.003  | 0.848 | 0.952  | 0.889 | 1.001 | 0.762 | 0.847 | 0.753  | 1.283  | 0.906  | 1.057 | 0.818  | 0.969  | 0.782  | 0.782  |
| 0.906                | 0.933  | 0.885 | 1.038  | 0.966 | 1.061 | 0.889 | 1.026 | 0.694  | 1.327  | 1.114  | 1.117 | 0.905  | 0.949  | 0.799  | 0.700  |
| 0.825                | 0.989  | 0.870 | 1.011  | 0.973 | 0.832 | 0.786 | 0.868 | 0.816  | 1.343  | 0.853  | 1.055 | 0.925  | 0.963  | 0.807  | 0.804  |
| 0.986                | 0.887  | 0.908 | 0.944  | 1.014 | 1.113 | 0.896 | 0.972 | 0.697  | 1.451  | 0.972  | 1.141 | 0.944  | 0.970  | 0.856  | 0.789  |
| 0.932                | 0.888  | 0.850 | 0.988  | 1.002 | 1.049 | 0.779 | 0.965 | 0.797  | 1.345  | 0.891  | 1.028 | 0.845  | 0.962  | 0.869  | 0.800  |
| 1.074                | 1.033  | 0.954 | 1.208  | 0.981 | 1.132 | 0.933 | 1.034 | 0.707  | 1.386  | 1.000  | 1.122 | 0.924  | 1.080  | 0.969  | 0.855  |
| annual growth rates: |        |       |        |       |       |       |       |        |        |        |       |        |        |        |        |
| 0.028                | 0.021  | 0.020 | 0.020  | 0.026 | 0.018 | 0.017 | 0.027 | 0.014  | 0.027  | 0.023  | 0.019 | 0.020  | 0.017  | 0.021  | 0.012  |
| 0.044                | 0.040  | 0.015 | 0.023  | 0.032 | 0.014 | 0.014 | 0.046 | 0.032  | 0.024  | 0.029  | 0.026 | 0.045  | 0.014  | 0.028  | 0.024  |
| 0.021                | 0.025  | 0.075 | 0.049  | 0.039 | 0.013 | 0.013 | 0.038 | 0.011  | 0.035  | 0.048  | 0.026 | 0.011  | 0.019  | 0.008  | 0.020  |
| 0.019                | 0.007  | 0.003 | 0.015  | 0.027 | 0.039 | 0.033 | 0.028 | -0.005 | 0.048  | 0.018  | 0.002 | 0.030  | 0.002  | 0.028  | 0.005  |
| 0.033                | -0.006 | 0.009 | -0.005 | 0.028 | 0.002 | 0.017 | 0.023 | -0.012 | -0.010 | -0.001 | 0.015 | -0.005 | -0.009 | -0.015 | -0.016 |
| -0.001               | 0.039  | 0.019 | 0.010  | 0.027 | 0.024 | 0.012 | 0.005 | 0.032  | 0.039  | 0.014  | 0.024 | 0.014  | 0.028  | 0.033  | 0.021  |
| 0.061                | 0.011  | 0.021 | 0.042  | 0.012 | 0.017 | 0.022 | 0.039 | 0.008  | 0.029  | 0.044  | 0.019 | 0.030  | 0.036  | 0.033  | 0.012  |

table 9 Continued

| NY                   | OH     | OK     | OR     | PA    | RI     | SC    | SD    | TN    | TX     | UT     | VA    | VT     | WA    | WI     | WV    | WY     |
|----------------------|--------|--------|--------|-------|--------|-------|-------|-------|--------|--------|-------|--------|-------|--------|-------|--------|
| 0.603                | 0.460  | 0.490  | 0.479  | 0.500 | 0.424  | 0.456 | 0.613 | 0.387 | 0.478  | 0.480  | 0.423 | 0.560  | 0.554 | 0.684  | 0.248 | 0.449  |
| 0.646                | 0.472  | 0.485  | 0.498  | 0.535 | 0.464  | 0.476 | 0.587 | 0.424 | 0.482  | 0.492  | 0.450 | 0.626  | 0.581 | 0.723  | 0.258 | 0.454  |
| 0.639                | 0.493  | 0.438  | 0.512  | 0.528 | 0.508  | 0.514 | 0.637 | 0.421 | 0.472  | 0.523  | 0.460 | 0.629  | 0.612 | 0.754  | 0.251 | 0.466  |
| 0.684                | 0.521  | 0.453  | 0.523  | 0.569 | 0.565  | 0.537 | 0.639 | 0.437 | 0.507  | 0.531  | 0.420 | 0.660  | 0.641 | 0.746  | 0.261 | 0.505  |
| 0.681                | 0.520  | 0.500  | 0.543  | 0.584 | 0.605  | 0.544 | 0.620 | 0.463 | 0.505  | 0.543  | 0.487 | 0.668  | 0.674 | 0.786  | 0.273 | 0.496  |
| 0.729                | 0.537  | 0.575  | 0.564  | 0.607 | 0.585  | 0.574 | 0.662 | 0.467 | 0.535  | 0.576  | 0.482 | 0.665  | 0.681 | 0.790  | 0.274 | 0.490  |
| 0.729                | 0.569  | 0.513  | 0.601  | 0.578 | 0.597  | 0.563 | 0.661 | 0.426 | 0.539  | 0.559  | 0.457 | 0.685  | 0.735 | 0.781  | 0.263 | 0.502  |
| 0.746                | 0.560  | 0.507  | 0.612  | 0.654 | 0.573  | 0.622 | 0.707 | 0.448 | 0.518  | 0.617  | 0.505 | 0.715  | 0.782 | 0.794  | 0.297 | 0.540  |
| 0.737                | 0.610  | 0.550  | 0.620  | 0.628 | 0.559  | 0.541 | 0.728 | 0.461 | 0.554  | 0.616  | 0.504 | 0.748  | 0.778 | 0.821  | 0.295 | 0.526  |
| 0.735                | 0.592  | 0.553  | 0.662  | 0.663 | 0.598  | 0.605 | 0.685 | 0.485 | 0.534  | 0.606  | 0.521 | 0.762  | 0.776 | 0.779  | 0.299 | 0.517  |
| 0.761                | 0.619  | 0.564  | 0.669  | 0.683 | 0.647  | 0.586 | 0.678 | 0.484 | 0.563  | 0.636  | 0.533 | 0.806  | 0.765 | 0.807  | 0.305 | 0.527  |
| 0.776                | 0.675  | 0.549  | 0.700  | 0.694 | 0.661  | 0.663 | 0.749 | 0.512 | 0.544  | 0.648  | 0.548 | 0.837  | 0.829 | 0.865  | 0.323 | 0.561  |
| 0.720                | 0.646  | 0.587  | 0.738  | 0.678 | 0.594  | 0.617 | 0.777 | 0.499 | 0.582  | 0.638  | 0.562 | 0.829  | 0.860 | 0.837  | 0.322 | 0.531  |
| 0.730                | 0.578  | 0.650  | 0.757  | 0.672 | 0.633  | 0.641 | 0.738 | 0.507 | 0.644  | 0.655  | 0.566 | 0.851  | 0.825 | 0.805  | 0.315 | 0.518  |
| 0.713                | 0.628  | 0.643  | 0.802  | 0.656 | 0.570  | 0.646 | 0.694 | 0.514 | 0.607  | 0.636  | 0.588 | 0.804  | 0.866 | 0.793  | 0.317 | 0.543  |
| 0.739                | 0.706  | 0.692  | 0.831  | 0.665 | 0.689  | 0.793 | 0.693 | 0.585 | 0.671  | 0.630  | 0.601 | 0.834  | 1.027 | 0.810  | 0.335 | 0.554  |
| 0.706                | 0.705  | 0.647  | 0.820  | 0.678 | 0.611  | 0.702 | 0.567 | 0.574 | 0.646  | 0.633  | 0.606 | 0.843  | 0.989 | 0.754  | 0.315 | 0.565  |
| 0.729                | 0.708  | 0.725  | 0.763  | 0.684 | 0.583  | 0.698 | 0.773 | 0.603 | 0.680  | 0.601  | 0.613 | 0.813  | 0.954 | 0.890  | 0.304 | 0.544  |
| 0.734                | 0.682  | 0.612  | 0.731  | 0.719 | 0.612  | 0.723 | 0.744 | 0.596 | 0.602  | 0.577  | 0.616 | 0.832  | 0.956 | 0.839  | 0.348 | 0.542  |
| 0.767                | 0.749  | 0.700  | 0.748  | 0.740 | 0.597  | 0.744 | 0.739 | 0.613 | 0.636  | 0.591  | 0.630 | 0.800  | 0.911 | 0.837  | 0.363 | 0.510  |
| 0.759                | 0.701  | 0.659  | 0.822  | 0.701 | 0.603  | 0.644 | 0.703 | 0.546 | 0.579  | 0.592  | 0.574 | 0.754  | 0.960 | 0.831  | 0.370 | 0.516  |
| 0.759                | 0.676  | 0.692  | 0.802  | 0.785 | 0.600  | 0.801 | 0.778 | 0.667 | 0.674  | 0.695  | 0.657 | 0.761  | 1.000 | 0.860  | 0.356 | 0.570  |
| 0.833                | 0.745  | 0.807  | 0.798  | 0.786 | 0.790  | 0.875 | 0.836 | 0.679 | 0.702  | 0.679  | 0.663 | 0.858  | 0.999 | 0.900  | 0.339 | 0.546  |
| 0.783                | 0.624  | 0.730  | 0.819  | 0.742 | 0.755  | 0.723 | 0.752 | 0.522 | 0.634  | 0.679  | 0.641 | 0.815  | 1.058 | 0.818  | 0.382 | 0.539  |
| 0.773                | 0.827  | 0.733  | 0.875  | 0.847 | 0.800  | 0.868 | 0.917 | 0.694 | 0.629  | 0.663  | 0.742 | 0.781  | 1.043 | 0.897  | 0.422 | 0.548  |
| 0.889                | 0.911  | 0.761  | 0.875  | 0.925 | 0.968  | 0.896 | 0.911 | 0.747 | 0.704  | 0.698  | 0.754 | 0.858  | 1.055 | 0.930  | 0.464 | 0.545  |
| 0.907                | 0.864  | 0.780  | 0.948  | 0.940 | 0.964  | 0.802 | 0.972 | 0.711 | 0.686  | 0.768  | 0.736 | 0.863  | 1.089 | 0.978  | 0.472 | 0.626  |
| 0.936                | 0.868  | 0.757  | 0.991  | 0.946 | 1.046  | 0.917 | 0.981 | 0.758 | 0.678  | 0.792  | 0.784 | 0.901  | 1.177 | 0.993  | 0.455 | 0.576  |
| 0.930                | 0.761  | 0.757  | 1.020  | 0.923 | 1.141  | 0.942 | 0.811 | 0.709 | 0.690  | 0.816  | 0.845 | 0.947  | 1.253 | 0.910  | 0.430 | 0.561  |
| 0.939                | 0.852  | 0.764  | 0.967  | 0.934 | 0.973  | 0.943 | 0.985 | 0.703 | 0.738  | 0.821  | 0.899 | 0.918  | 1.170 | 1.067  | 0.451 | 0.559  |
| 0.955                | 0.933  | 0.746  | 1.007  | 0.942 | 0.929  | 0.875 | 1.087 | 0.693 | 0.721  | 0.834  | 0.862 | 0.924  | 1.259 | 1.027  | 0.487 | 0.633  |
| 0.970                | 0.807  | 0.717  | 1.011  | 0.901 | 0.896  | 0.944 | 1.103 | 0.699 | 0.783  | 0.843  | 0.848 | 0.983  | 1.145 | 1.080  | 0.462 | 0.646  |
| 0.991                | 0.994  | 0.746  | 0.979  | 1.043 | 0.956  | 1.083 | 1.207 | 0.775 | 0.814  | 0.878  | 0.914 | 1.116  | 1.260 | 1.057  | 0.496 | 0.634  |
| 0.993                | 0.900  | 0.735  | 1.112  | 1.014 | 0.864  | 0.958 | 1.033 | 0.730 | 0.818  | 0.923  | 0.863 | 1.118  | 1.308 | 1.055  | 0.490 | 0.669  |
| 0.994                | 1.022  | 0.775  | 1.053  | 1.059 | 0.810  | 1.185 | 1.225 | 0.836 | 0.851  | 0.876  | 0.943 | 1.108  | 1.265 | 1.125  | 0.519 | 0.579  |
| 0.983                | 0.895  | 0.677  | 0.968  | 1.044 | 0.836  | 1.020 | 1.003 | 0.747 | 0.778  | 0.892  | 0.878 | 0.992  | 1.266 | 1.077  | 0.537 | 0.614  |
| 1.042                | 0.884  | 0.699  | 0.990  | 1.112 | 0.851  | 1.100 | 1.213 | 0.775 | 0.778  | 0.913  | 0.916 | 1.102  | 1.287 | 1.137  | 0.485 | 0.630  |
| annual growth rates: |        |        |        |       |        |       |       |       |        |        |       |        |       |        |       |        |
| 0.015                | 0.018  | 0.010  | 0.020  | 0.022 | 0.019  | 0.024 | 0.019 | 0.019 | 0.014  | 0.018  | 0.021 | 0.019  | 0.023 | 0.014  | 0.019 | 0.009  |
| 0.032                | 0.035  | 0.008  | 0.038  | 0.024 | 0.057  | 0.035 | 0.013 | 0.016 | 0.020  | 0.026  | 0.013 | 0.034  | 0.047 | 0.022  | 0.010 | 0.019  |
| 0.003                | 0.014  | 0.025  | 0.032  | 0.046 | 0.001  | 0.024 | 0.012 | 0.043 | -0.003 | 0.027  | 0.044 | 0.036  | 0.018 | -0.001 | 0.042 | 0.010  |
| -0.002               | -0.006 | 0.040  | 0.034  | 0.003 | 0.014  | 0.014 | 0.018 | 0.011 | 0.047  | 0.019  | 0.021 | 0.028  | 0.015 | 0.008  | 0.014 | 0.001  |
| 0.008                | 0.043  | 0.012  | -0.002 | 0.016 | -0.010 | 0.025 | 0.000 | 0.032 | -0.002 | -0.017 | 0.018 | -0.010 | 0.017 | 0.006  | 0.023 | -0.003 |
| 0.020                | 0.013  | 0.009  | 0.026  | 0.023 | 0.049  | 0.024 | 0.029 | 0.014 | 0.015  | 0.033  | 0.036 | 0.014  | 0.025 | 0.024  | 0.022 | 0.009  |
| 0.015                | 0.005  | -0.013 | 0.003  | 0.025 | -0.019 | 0.022 | 0.030 | 0.014 | 0.007  | 0.015  | 0.003 | 0.026  | 0.014 | 0.009  | 0.010 | 0.017  |

Table 10. States Ranked by 1996 Level of Productivity

| State | 1996 |       | 1960 |       | Average annual growth of productivity 1960-96 |        |
|-------|------|-------|------|-------|---|--------|
|       | Rank | Level | Rank | Level | Rank  | Growth |
| CT    | 1    | 1.509 | 20   | 0.549 | 2   | 0.0284 |
| FL    | 2    | 1.504 | 2    | 0.701 | 17  | 0.0212 |
| GA    | 3    | 1.398 | 14   | 0.560 | 6   | 0.0254 |
| NC    | 4    | 1.386 | 22   | 0.522 | 3   | 0.0271 |
| IA    | 5    | 1.299 | 1    | 0.712 | 37  | 0.0167 |
| WA    | 6    | 1.287 | 19   | 0.554 | 10  | 0.0234 |
| ID    | 7    | 1.218 | 21   | 0.525 | 11  | 0.0234 |
| SD    | 8    | 1.213 | 6    | 0.613 | 27  | 0.0190 |
| ME    | 9    | 1.208 | 11   | 0.593 | 22  | 0.0198 |
| DE    | 10   | 1.197 | 10   | 0.595 | 24  | 0.0194 |
| AR    | 11   | 1.184 | 29   | 0.484 | 7   | 0.0249 |
| KY    | 12   | 1.181 | 27   | 0.496 | 9   | 0.0241 |
| CA    | 13   | 1.146 | 7    | 0.612 | 35  | 0.0174 |
| WI    | 14   | 1.137 | 3    | 0.684 | 42  | 0.0141 |
| MN    | 15   | 1.132 | 12   | 0.592 | 32  | 0.0180 |
| NE    | 16   | 1.122 | 17   | 0.557 | 23  | 0.0195 |
| PA    | 17   | 1.112 | 25   | 0.500 | 13  | 0.0222 |
| VT    | 18   | 1.102 | 15   | 0.560 | 28  | 0.0188 |
| SC    | 19   | 1.100 | 36   | 0.456 | 8   | 0.0244 |
| IL    | 20   | 1.093 | 9    | 0.599 | 38  | 0.0167 |
| CO    | 21   | 1.083 | 4    | 0.654 | 43  | 0.0140 |
| NJ    | 22   | 1.080 | 13   | 0.581 | 36  | 0.0172 |
| LA    | 23   | 1.074 | 46   | 0.386 | 1   | 0.0284 |
| NY    | 24   | 1.042 | 8    | 0.603 | 39  | 0.0152 |
| IN    | 25   | 1.040 | 24   | 0.510 | 21  | 0.0198 |
| MS    | 26   | 1.034 | 44   | 0.398 | 4   | 0.0265 |
| MA    | 27   | 1.033 | 33   | 0.477 | 15  | 0.0215 |
| KS    | 28   | 1.032 | 5    | 0.636 | 45  | 0.0134 |
| AL    | 29   | 1.000 | 23   | 0.511 | 29  | 0.0186 |
| ND    | 30   | 1.000 | 40   | 0.437 | 12  | 0.0230 |
| OR    | 31   | 0.990 | 31   | 0.479 | 19  | 0.0202 |
| MI    | 32   | 0.981 | 47   | 0.384 | 5   | 0.0261 |
| NM    | 33   | 0.969 | 37   | 0.450 | 16  | 0.0213 |
| MD    | 34   | 0.954 | 34   | 0.468 | 20  | 0.0198 |
| MO    | 35   | 0.933 | 26   | 0.498 | 34  | 0.0174 |
| AZ    | 36   | 0.925 | 18   | 0.556 | 41  | 0.0142 |
| NH    | 37   | 0.924 | 39   | 0.442 | 18  | 0.0205 |
| VA    | 38   | 0.916 | 43   | 0.423 | 14  | 0.0215 |
| UT    | 39   | 0.913 | 30   | 0.480 | 33  | 0.0179 |
| OH    | 40   | 0.884 | 35   | 0.460 | 31  | 0.0181 |
| NV    | 41   | 0.855 | 16   | 0.559 | 46  | 0.0118 |
| RI    | 42   | 0.851 | 41   | 0.424 | 25  | 0.0193 |
| TX    | 43   | 0.778 | 32   | 0.478 | 44  | 0.0135 |
| TN    | 44   | 0.775 | 45   | 0.387 | 26  | 0.0193 |
| MT    | 45   | 0.707 | 42   | 0.423 | 40  | 0.0143 |
| OK    | 46   | 0.699 | 28   | 0.490 | 47  | 0.0098 |
| WY    | 47   | 0.630 | 38   | 0.449 | 48  | 0.0094 |
| WV    | 48   | 0.485 | 48   | 0.248 | 30  | 0.0186 |

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IV. Title.

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