United States Department of Agriculture

Technical Bulletin Number 1895

May 2001

Electronic Report from the Economic Research Service

www.ers.usda.gov

U.S. Agriculture, 1960-96
A Multilateral Comparison of Total Factor Productivity

V. Eldon Ball, Jean-Pierre Butault, and Richard Nehring

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.

Contents

Introduction 1

Methodology 2

Production Accounts 3
- Output 3
- Intermediate Input 5
- Capital Input 7
- Land Input 10
- Labor Input 11

Total Factor Productivity 12

Analysis of Differences in Productivity 17

Summary and Conclusion 18

References 21

Footnotes 23

Figures

Figure Number

1 Growth in crop output, by State, 1960-96 4
2 Growth in livestock output, by State, 1960-96 5
3 Growth in intermediate inputs, by State, 1960-96 6
4 Growth in capital input, by State, 1960-96 10
5 Growth in land input, by State, 1960-96 11
6 Growth in labor input, by State, 1960-96 12
7 Coefficients of variation of State Productivity 14
8 Growth in output, by State, 1960-96 15
9 Growth in inputs, by State, 1960-96 16
10 Growth in total factor productivity, by State, 1960-96 16
11 Productivity level and productivity growth, by State, 1960-96 20

Tables

Table Number

Tables 1-10 are available as Excel spreadsheets at http:\\www.ers.usda.gov\data\StateAgTFP/sfagtfpindex.htm

1 Crop Output Relative to 1996 Level for Alabama, by State, 1960-96 28
2 Livestock Output Relative to 1996 Level for Alabama, by State, 1960-96 31
3 Intermediate Input Relative to 1996 Level for Alabama, by State, 1960-96 34
4 Capital Input Relative to 1996 Level for Alabama, by State, 1960-96 37
5 Land Input Relative to 1996 Level for Alabama, by State, 1960-96 40
6 Labor Input Relative to 1996 Level for Alabama, by State, 1960-96 43
7 Total Output Relative to 1996 Level for Alabama, by State, 1960-96 46
8 Total Input Relative to 1996 Level for Alabama, by State, 1960-96 49
9 Total Factor Productivity Relative to 1996 Level for Alabama, by State, 1960-96 52
10 States Ranked by 1996 Level of Productivity 55
11 Regressions of total factor productivity growth on relative productivity level and growth in factor intensities, 1960-96 18

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.[1] 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.[2] 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,[3] and recognize that some farm production (e.g., breeding livestock) is both an investment good as well as an agricultural output.[4]

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.

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 $i, i = 1, \cdots, M$. The corresponding quantity vector is $x^i \geq 0_N$. The Fisher quantity index is defined as:

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

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:

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

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.

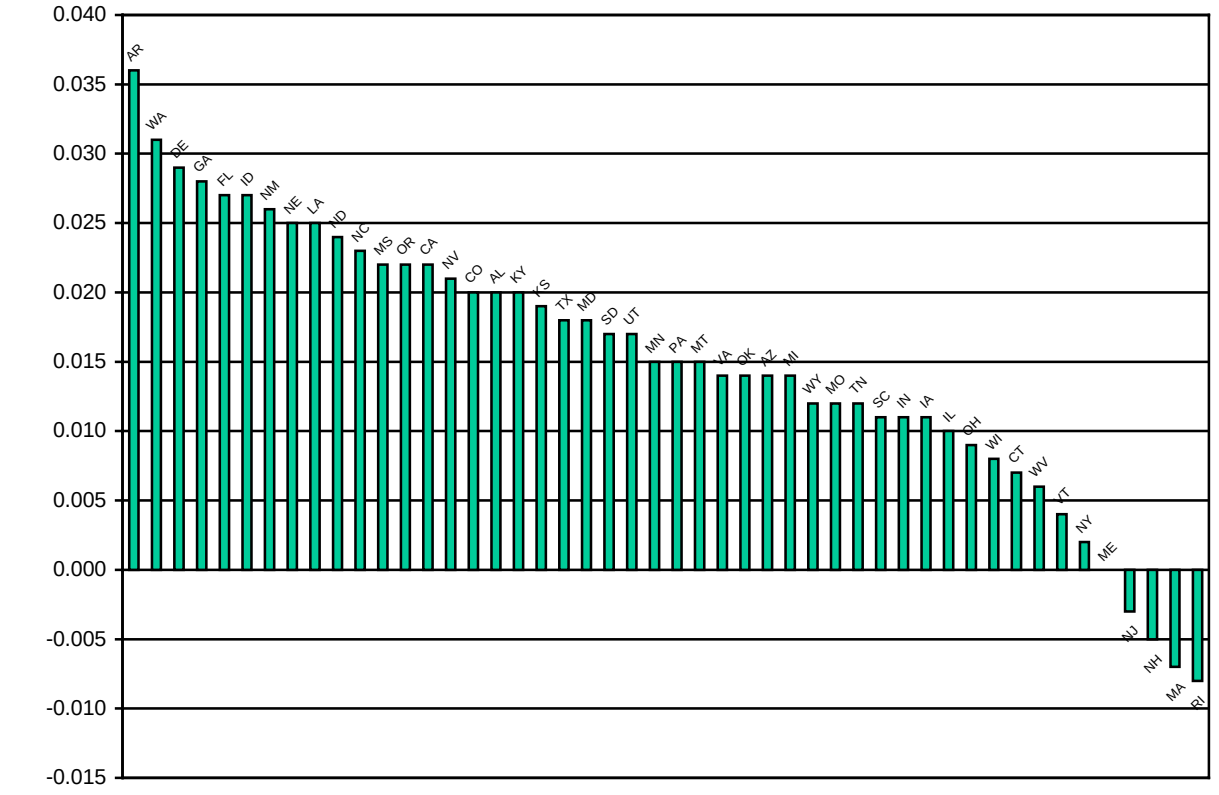
Output

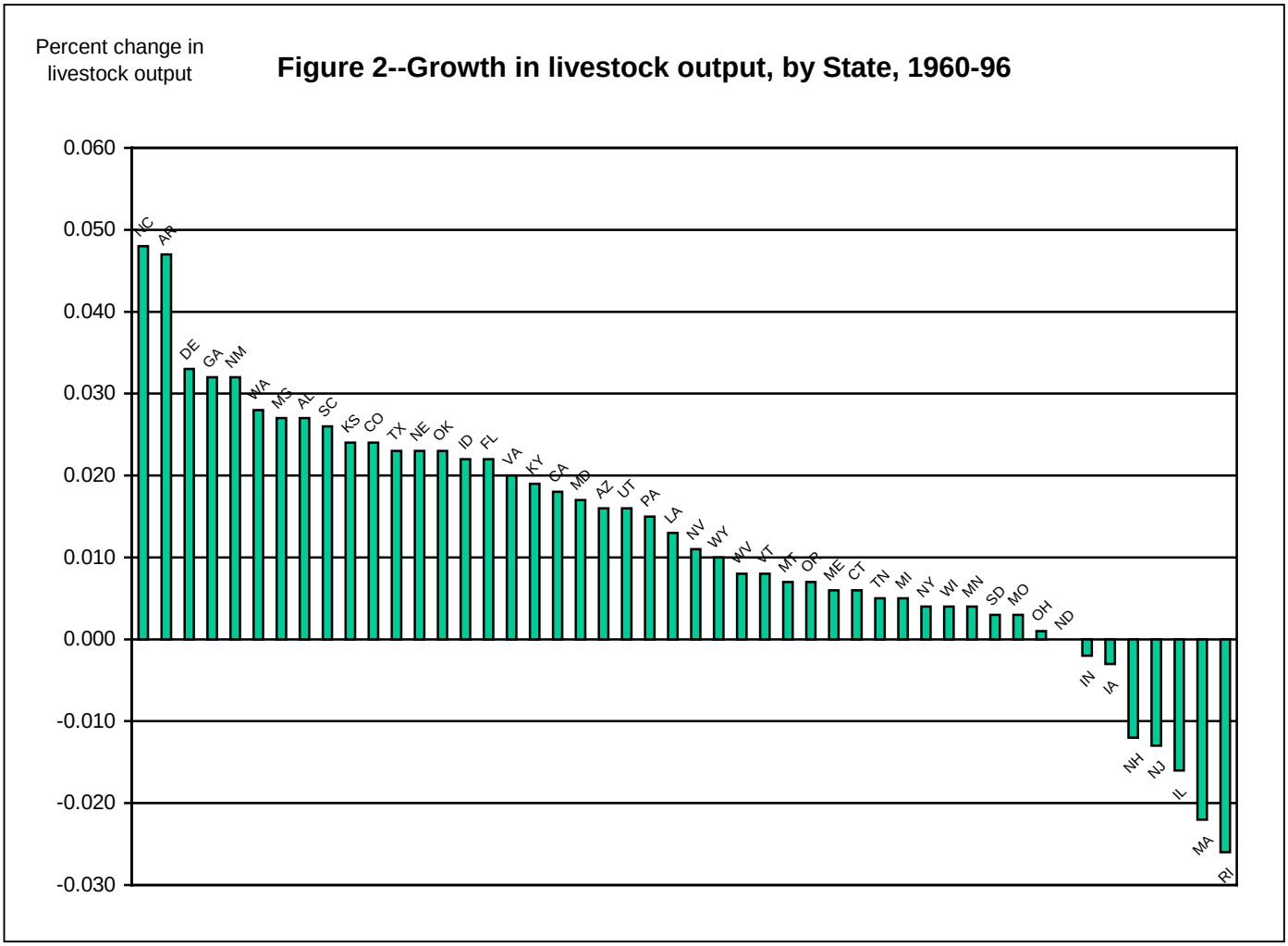
The development of a measure of output begins with disaggregated data for physical quantities and market prices of crops and livestock compiled for each State by ERS's Resource Economics Division.[5] The output quantity for each crop and livestock category consists of quantities of commodities sold off 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.[6]

Figure 1--Growth in 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.

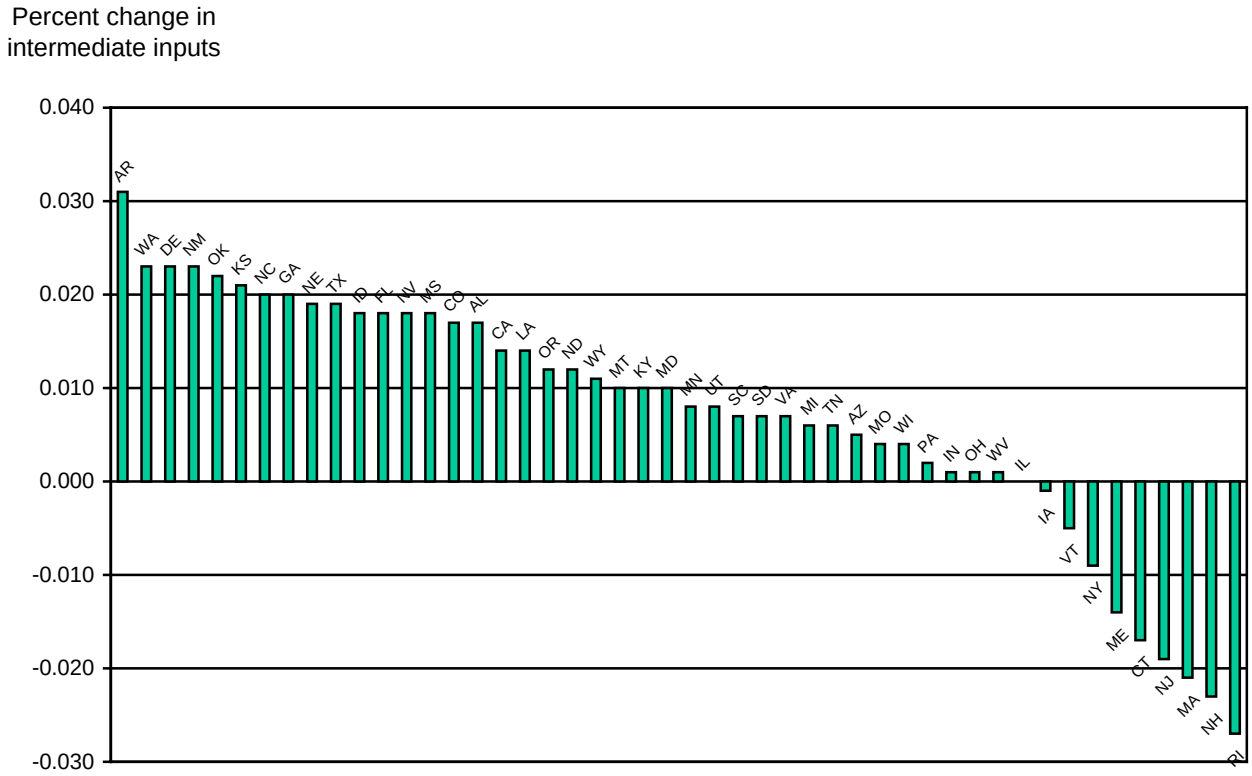
Inventories enter the measurement of output, intermediate input, and capital input. Beginning inventories of crops and livestock represent capital inputs and are treated as such in the discussion of capital later. Additions to these inventories represent deliveries to final demand and, therefore, are 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.[7] Price differences across pesticides are assumed due to differences in physical characteristics such as toxicity, persistence in the environment, and leaching potential.[8] 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.

Figure 3--Growth in intermediate inputs, by State, 1960-96



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:

$$K_t = \sum_{\tau=0}^{\infty} d_\tau \, I_{t-\tau} \, . \tag{3}$$

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 τ is equal to the decline in efficiency from age $\tau - 1$ to age τ :

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

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:

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

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:

$$K_t - K_{t-1} = I_t - R_t \, . \tag{6}$$

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 τ years of age is given by:

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

where L is the service life of the asset and β is a curvature or decay parameter.[9]

Little empirical evidence is available to suggest a precise value of β . 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 β should be restricted to the zero-one interval. Ultimately, the β 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.[10]

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 β . 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.[11] 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:

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

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:

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

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:

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

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

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

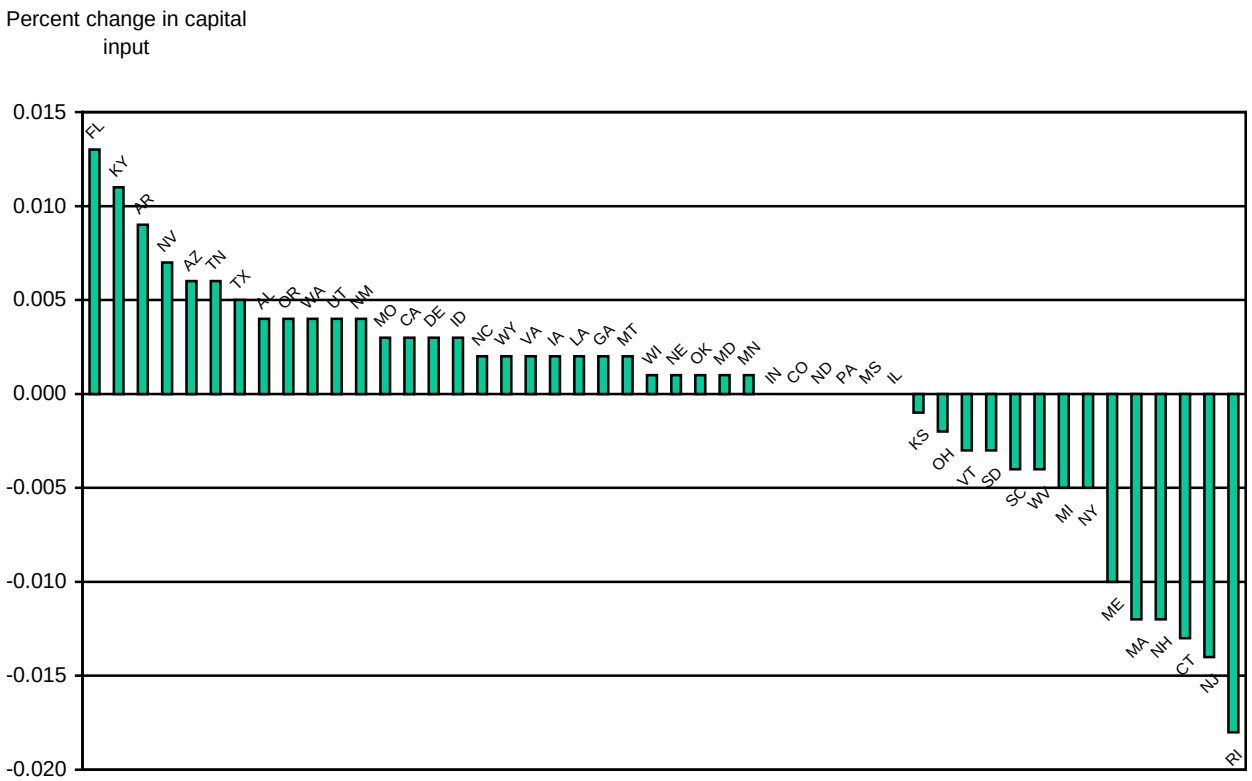
and

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

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.[12] An *ex ante* rate is obtained by expressing observed real rates as an ARIMA process.[13] 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

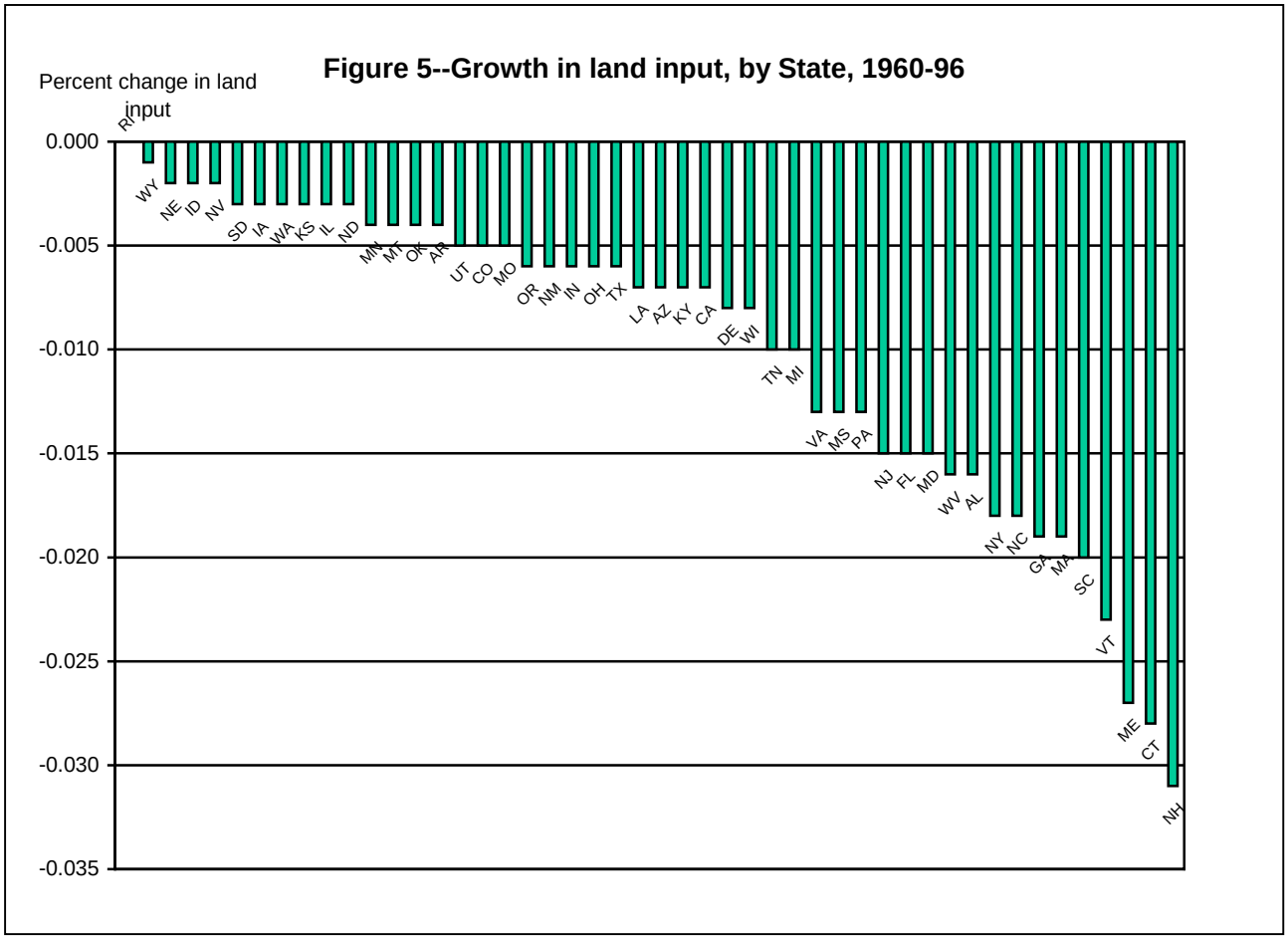


Land Input

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).[14] 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).[15] 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

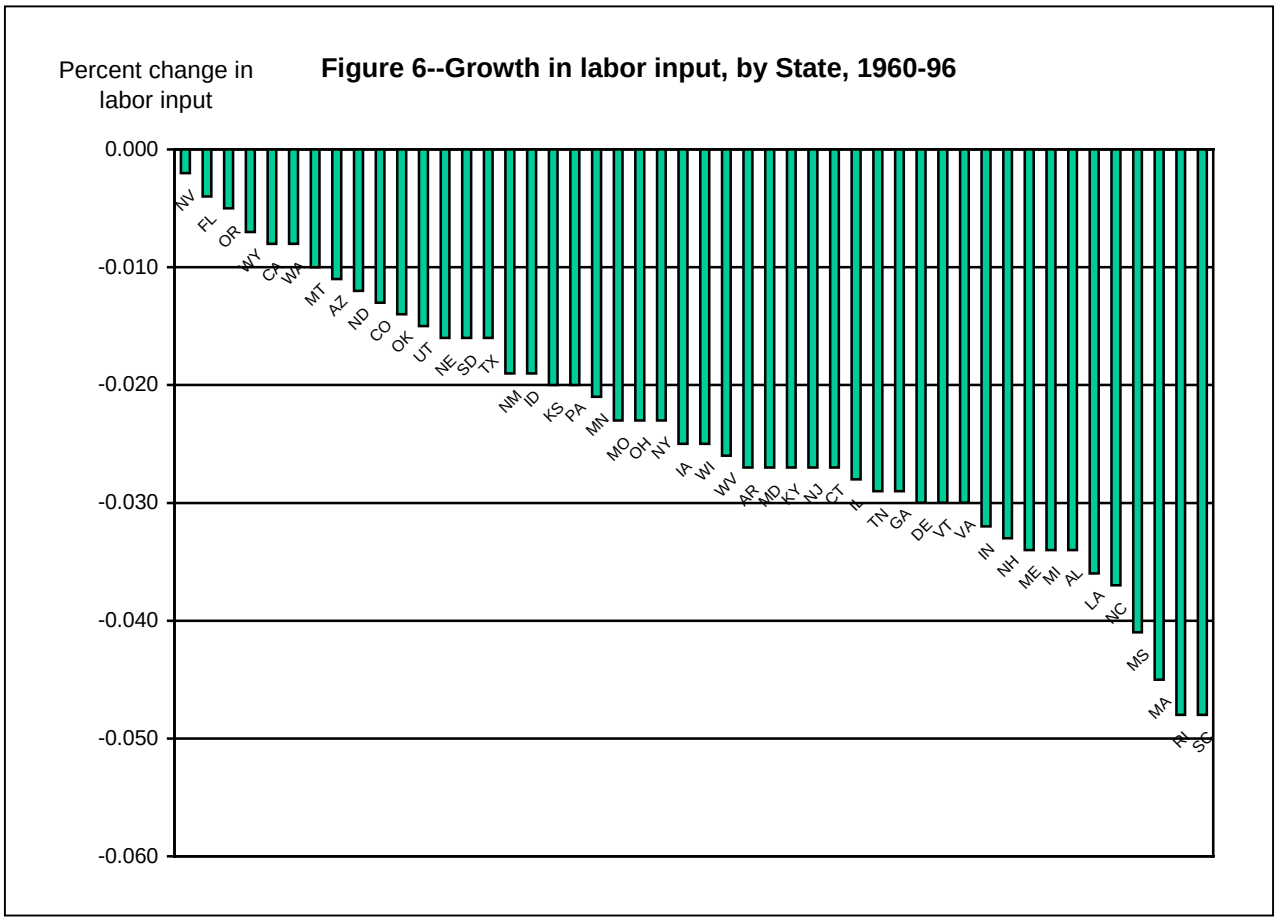


Figure 6--Growth in labor input, by State, 1960-96

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).[16] 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 20th to 1st, Georgia rose from 14th to 3rd, and North Carolina rose from 22nd to 4th. In contrast, Iowa fell from 1st to 5th, Wisconsin fell from 3rd to 14th, and Colorado fell from 4th to 21st 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.

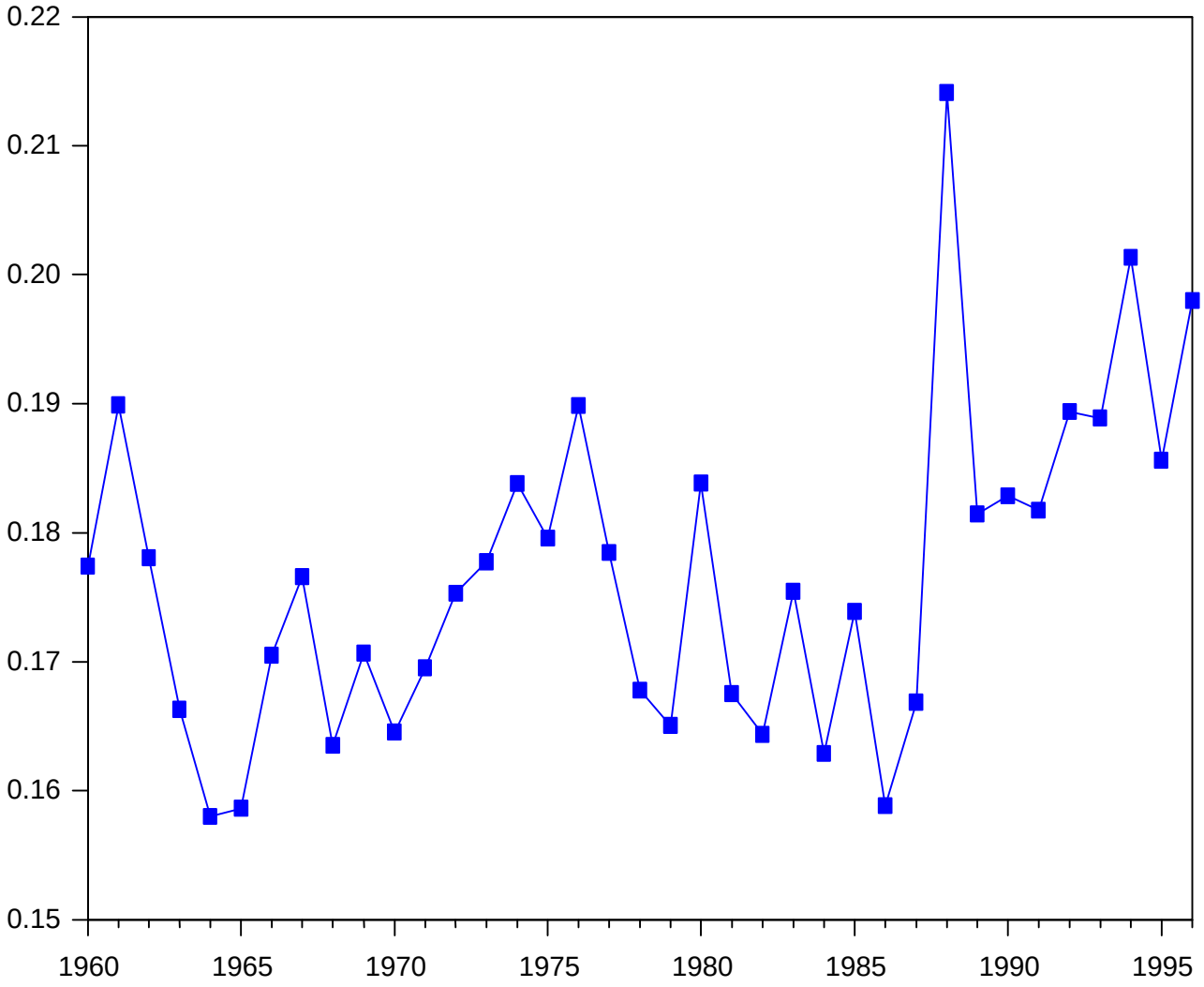
Figure 1 provides details for the intervening years. It plots for each year the coefficient of variation (the ratio of the standard deviation to the mean) of productivity levels for all 48 States. We use these coefficients to show that there was some narrowing of the range of levels of productivity between 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 percipitation. 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 8--Growth in output, by State, 1960-96

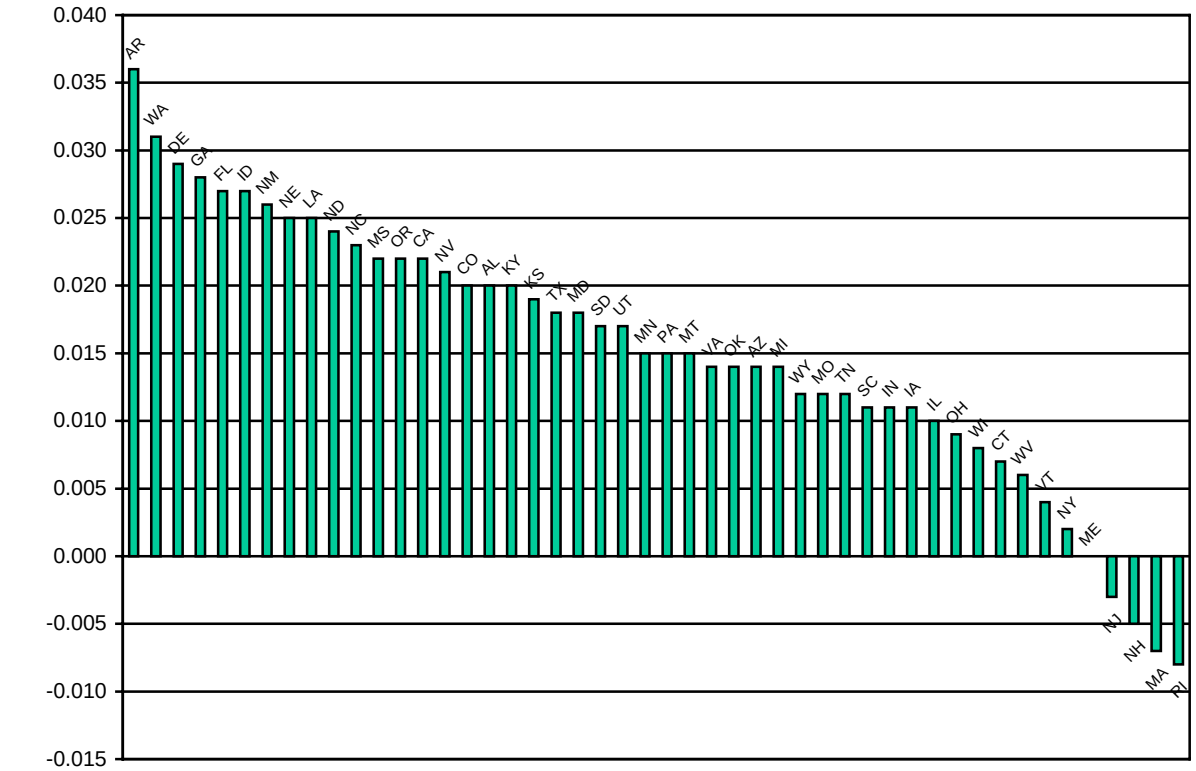


Figure 9--Growth in inputs, by State, 1960-96

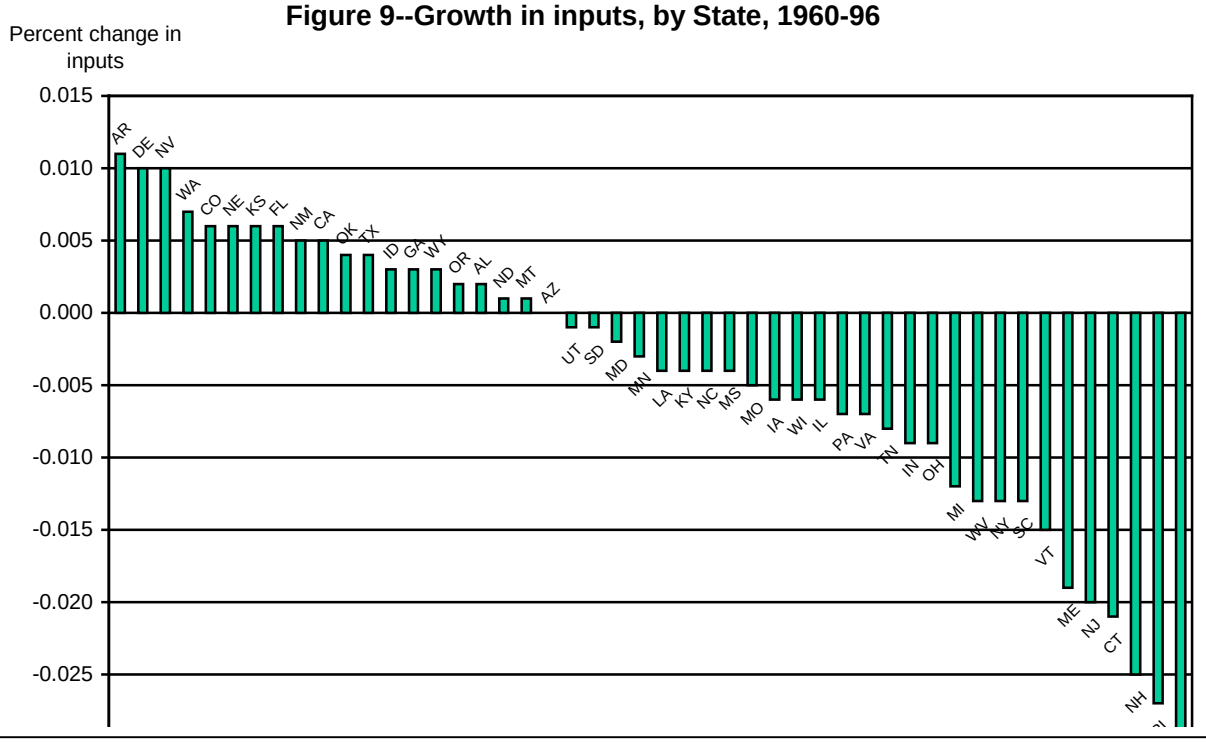
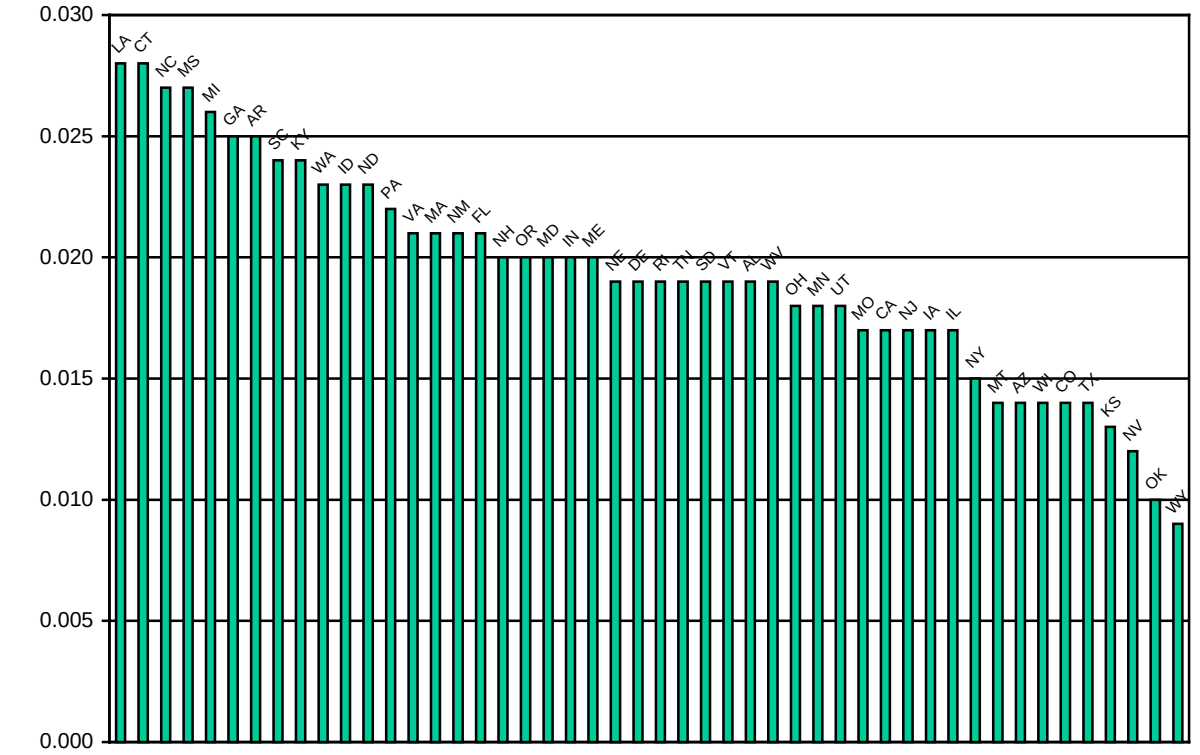


Figure 10--Growth in total factor productivity, by State, 1960-96



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:

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

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 ε_{it} is a stochastic error term. The circumflexes (^) 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 $\hat{TFP}$	Five-year averages $\hat{TFP}$
Constant	-0.007*	-0.007**
	(2.10)	(2.09)
ln TFP	-0.186**	-0.127**
	(24.54)	(25.71)
$\left(\hat{K}/L\right)$	0.107**	0.089**
	(4.63)	(4.47)
$\left(\hat{M}/L\right)$	0.018	0.017
	(0.84)	(0.85)
R^2	0.504	0.546
$\sqrt{MSE}$	0.023	0.014
F Value	16.74**	19.74**
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.

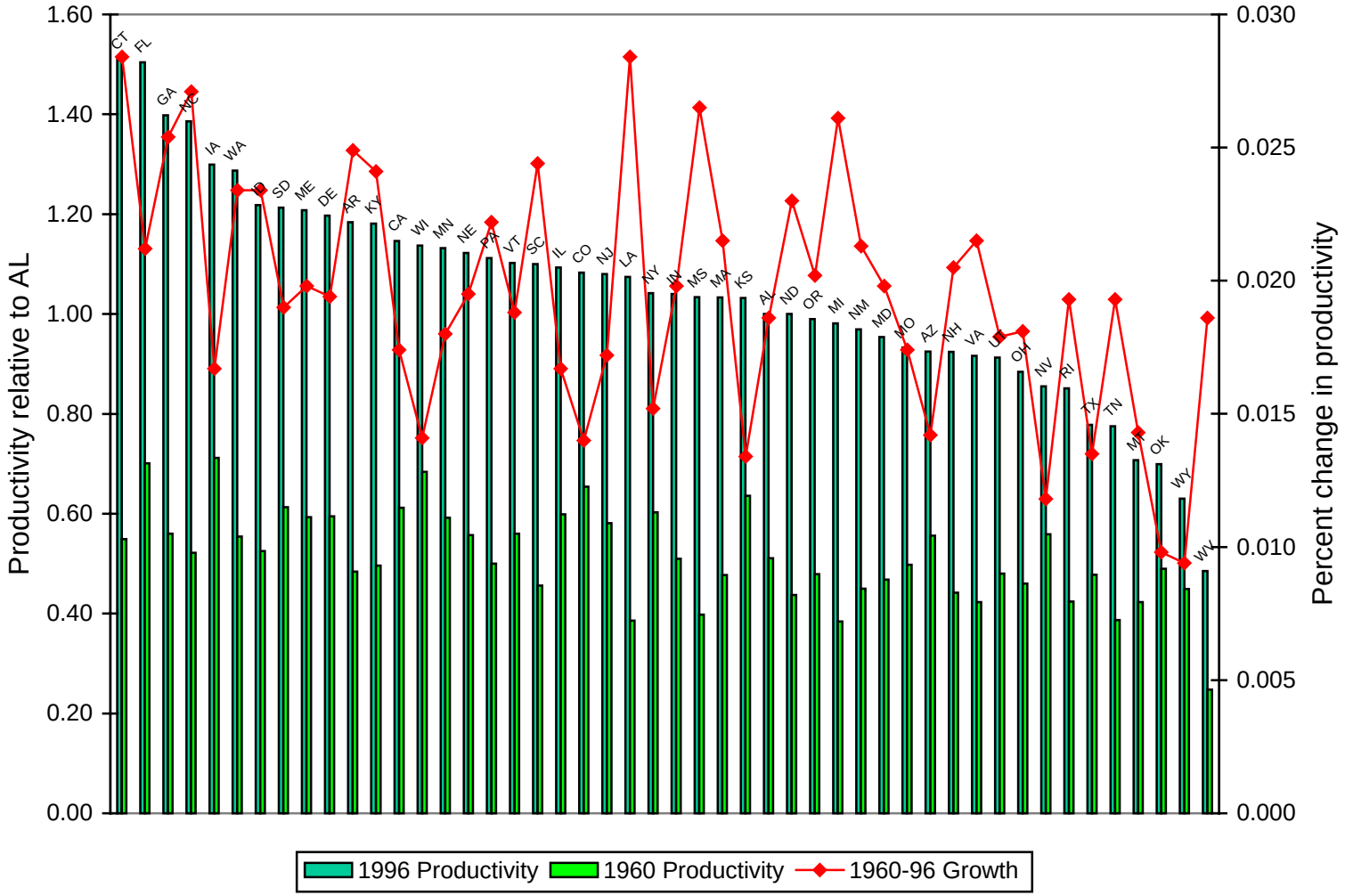
Summary and Conclusion

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



References

Ball, V.E. "Output, Input, and Productivity Measurement in U.S. Agriculture, 1948-79," *American Journal of Agricultural Economics*. 67(1985):475-486.

Ball, V.E., J-C Bureau, R. Nehring, and A. Somwaru. "Agricultural Productivity Revisited," *American Journal of Agricultural Economics*. 79(1997):1,045-1,063.

Ball, V.E., F.M. Gollop, A. Kelly-Hawke, and G.P. Swinand. "Patterns of State Productivity Growth in the U.S. Farm Sector: Linking State and Aggregate Models," *American Journal of Agricultural Economics.* 81(1999):164-179.

Coen, R. "Investment Behavior, the Measurement of Depreciation, and Tax Policy," *American Economic Review*. 65(1975):59-74.

Denison, E. *Accounting for Slower Economic Growth*. Washington, DC. The Brookings Institution, 1979.

Diewert, W.E. "Exact and Superlative Index Numbers," *Journal of Econometrics*. 4(1976): 115-146.

Elteto, O., and P. Koves. "On a Problem of Index Number Computation Relating to International Comparisons," *Szatistikai Szemle*. 42(1964):507-518.

Federal Reserve Board. *Moody's BAA Seasoned Corporate Bonds*. Washington, DC, monthly.

Fisher, I. *The Making of Index Numbers*. Houghton Mifflin, Boston, 1922.

Gerschenkron, A. "Economic Backwardness in Historical Perspective," *The Progress of Underdeveloped Areas*. (Bert F. Hoselitz, ed.), University of Chicago Press, 1952.

Jorgenson, D., F. Gollop, and B. Fraumeni. *Productivity and U.S. Economic Growth*. Cambridge, MA: Harvard University Press, 1987.

Jorgenson, D., and F. Gollop. "Productivity Growth in U.S. Agriculture: A Postwar Perspective," *American Journal of Agricultural Economics*. 74(1992):745-750.

Jorgenson, D., and Z. Griliches. "The Explanation of Productivity Change," *Review of Economic Studies*. 34(July 1967):249-283.

Kendrick, J.W., and E.S. Grossman. *Productivity in the United States, Trends and Cycles*. Baltimore: The Johns Hopkins University Press, 1980.

Palmer, W.D. "Meteorological Drought." U.S. Department of Commerce, Weather Bureau, Research Paper No. 45, 1965.

Penson, J.B., D.W. Hughes, and G.L. Nelson. "Measurement of Capacity Depreciation Based on Engineering Data," *American Journal of Agricultural Economics*. 59(1977):321-329.

Romain, R., J. Penson, and R. Lambert. "Capacity Depreciation, Implicit Rental Prices and Investment Demand for Farm Tractors in Canada," *Canadian Journal of Agricultural Economics*. 35(1987):373-378.

Szulc, B. “Indices for Multiregional Comparison,” *Przeglad Statystyczny*. 3(1964):239-254.

Teekens, R., and J. Koerts. “Some Statistical Implications of the Transformation of Multiplicative Models,” *Econometrica*. 40(1972):793-819.

U.S. Department of Agriculture. National Agricultural Statistics Service. *Agricultural Land Values Survey*. annual.

_____. *Agricultural Prices*. annual.

_____. *Producer-Owned Grain Stocks*. 1979.

U.S. Department of Commerce, Bureau of the Census. “Geographic Area Series, State and County Data,” *Census of Agriculture*. Volume 1. 1959, 1964, 1969, 1974, 1978, 1982, 1987, and 1992.

_____. “Characteristics of Population,” *Census of Population*. Volume 1. 1960 and 1970.

_____. “Detailed Population Characteristics,” *Census of Population*. Chapter D. 1980.

U.S. Department of Commerce. *Fixed, Reproducible, Tangible Wealth of the United States, 1925-1994*. 1999.

U.S. Department of Energy, Energy Information Administration. *Monthly Energy Review*. monthly.

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 δ_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 β is unity. This corresponds to the one-hoss shay form of depreciation. As the value of β approaches zero, decay occurs at an increasing rate over time. If β is zero, the function corresponds to the formula for straight-line depreciation. Finally, if β 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	0.001	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	0.657	0.732	0.799	0.677	0.795	0.595	0.723	0.606	0.660	0.581
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

	1996		1960		Average annual growth of productivity 1960-96	
State	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

National Agricultural Library Cataloging Record

Ball, V. Eldon
U.S. agriculture, 1960-96 : a multilateral comparison of total factor productivity.
(Technical bulletin (United States. Dept. of Agriculture) ; no. 1895)
1. Agricultural productivity--United States--States--Evaluation.
I. Butault, J. P. II. Nehring, Richard.
III. United States. Dept. of Agriculture. Economic Research Service.
IV. Title.
S441